National Wetland Policies -- Trinidad and Tobago

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NATIONAL POLICY AND PROGRAMMES

ON

WETLAND CONSERVATION

FOR

TRINIDAD AND TOBAGO





National Policy and Programmes on Wetland Conservation for Trinidad and Tobago, National Wetlands Committee, January 2002.

Cover Photographs of Scarlet Ibis Eudocimus ruber, and scenes at Nariva Swamp by Stephen Broadbridge, Caribbean Discovery Tours: (www.caribbeandiscoverytours.com)

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INTRODUCTION

Trinidad and Tobago acceded to the Convention on Wetlands (Ramsar, Iran, 1971) in 1993 April 21. This international Convention with 130 Contracting Parties at present is an inter-governmental treaty, which aims to conserve wetlands of international importance.

The accession of Trinidad and Tobago to the Convention on Wetlands signaled to both the national and international communities the country's commitment to the promotion of wise use of our wetlands.

In meeting our obligations under this Convention, the Forestry Division was appointed as its focal point and a National Wetlands Committee under the Chairmanship of the Director of Forestry was established in 1995. The membership comprised highly experienced and technical personnel drawn from a cross-section of authorities with an interest in the conservation of wetlands.

In keeping with its Terms of Reference, the 1995 Committee as one of its first tasks decided on the preparation of a National Wetland Policy. This document is the first of its kind for Trinidad and Tobago and represents the culmination of considerable time and effort expended by members of the Committee: Chairman, Selwyn Dardaine and members; Gerard Alleng, Karilyn Shephard, Sylvia Kacal, Nadra Nathai-Gyan, Peter R. Bacon, Grace Les Fouris, Arthur Potts, Robert Salandy and Robyn Cross.

The document was revised following consultations at the local and national levels and reviewed by the 1997 National Wetlands Committee. This final draft was presented to Cabinet in 1999 for approval and following the incorporation of comments of the Minister of the Environment, was approved by Cabinet in July 2001 (Cabinet Minute No. 917 dated July 11, 2001).

The National Wetland Policy for Trinidad and Tobago provides a rational framework through which the wise use of our wetlands can be achieved. These principles are also consistent with fulfilling our obligations under the Convention on Wetlands.

ACKNOWLEDGEMENTS

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CHAPTER I: RATIONALE FOR A WETLAND POLICY

Wetlands are an integral part of the natural environment of Trinidad and Tobago. They have played, and continue to play, an important role in our social history and economy. With proper management they can be expected to contribute to our economic development well into the future.

A wide range of resources is derived from the State's swamps and marshes. These provide employment and income to large numbers of people, particularly at the level of the traditional subsistence economies and village communities. Directly exploitable resources include timber, charcoal, tannins, honey, medicinal plants, fish, oysters, mussels, conch and shrimp - the hunting of ducks and other waterfowl centres on wetland areas, as does much of the sport fishing. Wetlands support commercial marine fisheries indirectly by providing nursery habitat for juveniles, they help maintain the integrity of coral reefs through biotic and nutrient linkages, as in the Buccoo Reef/Bon Accord mangrove complex. Some of the nation's wetlands play important roles in floodwater retention and in groundwater

aquifer recharge, which have subsidiary economical benefits, and some of the most popular are important reservoirs of tropical biodiversity.

Despite their obvious value, more than 50% of the original wetland area of Trinidad and Tobago has disappeared. The resources of the surviving wetlands are severely degraded, through misuse and over exploitation, and there is conspicuous conflict of interest among the wide variety of resource users. The results of poor or absent management are declines in the quality and productivity of the wetlands and deterioration in living standards of the resource users and their families.

The manner in which land is utilized can impact significantly upon the life of wetland ecosystems. The reclamation of land in the Nariva Swamp for rice cultivation has exacted a toll upon the ecology of that wetland. Rice farming has also been carried out at Fishing Pond and South Oropouche with similar consequences.

Large areas of high-value wetland in Port of Spain and the urbanized areas to the west of the city, most recently at Westmoorings, have been irretrievably lost to built developments including port development on reclaimed lands at Sea Lots in Port of Spain.

Wetlands in Caroni have been similarly affected by the development of Point Lisas Industrial Estate. Portions of the Caroni and South Oropouche Swamps have been used for land filling of solid waste. Remaining wetland areas in many parts of the country are under severe pressure for development of various purposes including agriculture and resort development. In Tobago, the highly valued Bon Accord Lagoon is under threat from proposed resort development in the southwest of the island.

Apart from these direct impacts, wetlands have been affected by land-use activities undertaken outside of their boundaries. Water-borne pollution from agricultural, industrial, mining, quarry, and domestic activities carried out at distant locations have had almost as much impact as the filling, alteration and development of wetlands as outlined above.

The indiscriminate and excessive application of agro-chemicals to agricultural lands has impacted unfavourably upon wetland ecosystems at

Caroni, Nariva and Oropouche. Organic waste from poultry and livestock farms is also washed into wetlands via rivers and drains.

The unplanned and unregulated use of land for industrial purposes has also resulted in the discharge of harmful effluent including heavy metals and other toxic waste into wetlands. Oil spilled onto land or leaked from defective pipelines drains into the South Oropouche Swamp via the South Oropouche River. Silt from wash plants associated with quarry operations has been proven to affect plant and animal life at Fishing Pond and Caroni Swamps.

With respect to domestic sources of pollution, malfunctioning sewage treatment plants installed to service residential developments in Trinidad and Tobago have discharged inadequately treated sewage into drainage channels which flow into wetlands at Caroni and Bon Accord. Household solid waste disposed into watercourses is also transported into wetlands to the detriment of their ecoysytem.

The potential impact of the manner in which land is used, whether the wetlands themselves or land outside of their boundaries, is sufficiently significant to dictate specific attention to land use policy in formulating a national policy on wetland conservation.

There is an urgent need, therefore, for a clear policy for wetland conservation, which will direct efforts at the protection and wise use of the nation's wetland resource heritage. The policy will address both aspects, in order that wetlands will be protected in perpetuity while their resources are used and enjoyed by the greatest possible number of people.



Tour by Buccoo Marsh, Tobago by



Tour of Caroni Swamp by Wildlife Section,

CHAPTER 2: THE RESOURCE

The islands of Trinidad and Tobago both have a wide variety of wetlands of varying sizes which produce a range of resources of considerable economic and cultural value.

BOX 1 DEFINITION OF WETLANDS

For the purposes of this policy, wetlands are defined according to Article 1 of the Convention on Wetlands, which has been widely followed throughout the world, viz:

"Wetlands are areas of marsh, fen, peatland or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, including areas of marine water the depth of which at low tide does not exceed six metres."

Interpretation:

· Substrate types may be rock, gravel or sand, or soil dominated by undrained hydric soils, i.e. where the soil in its undrained condition is saturated, flooded or ponded for long enough to develop anaerobic conditions which favour the growth of hydrophytes.
· Vegetation may be dominated by hydrophytes, i.e. plants adapted to life in inundated habitats, and particularly emergent hydrophytes, which are those in which a major part of the vegetative structure grows above the water surface.
· "Swamps" are where the emergent vegetation is dominated by trees.
· "Marshes" are where the emergent vegetation is dominated by herbaceous plants.
· Inundation may be tidal, seasonal or of more permanent duration, and may be with water that is fresh, brackish or salt.
· Man-made wetlands (such as reservoirs, fish ponds, farm ponds) are included in the definition if they function even periodically as indicated in the definition.

· Wetlands also include deepwater habitats, such as lakes and the sea- coast, where if hydrophytes are present they are not emergent. In marine situations only those waters shallower than 6m at low tide are included.

2.1 Inventory of Wetlands

Although an inventory of the Nation's wetlands has not been completed, some 71 sites have been identified to date, which are thought to contain over 25,000 ha of swamps, marshes and ponds.

A preliminary list of these is given in Appendix I. This list does not include as yet the large number of sand and gravel/quarry ponds, fish- ponds, other man-made wetland sites and coral reefs, which remain to be inventoried.

Descriptions of some of the major wetland sites are given by Bacon (1970), Bacon et al (1979), Ramcharan et al (1982), James et al (1986) and James (1990) and the information presented in the list comes mainly from these reports.

2.2 Wetland Resources

Goods

Our wetlands produce a number of directly exploitable products, which are used by families at the subsistence level or are marketed throughout the country. These include such things as fish, crabs, shrimp, oysters, mussels, conchs, palm heart, thatch materials and timber. A major part of our fish production comes from inland and coastal wetlands. Almost all local rice production and much of the vegetable and watermelon crops come from wetland areas, many of which are cultivated during the dry season.

Some of the resources can be found only in the wetlands, for example, the cascadura and black conchs from Nariva Swamp, oysters, which occur almost entirely on mangrove roots and mangrove bark which is used in tanning leather and fishing nets. Loss of these wetland sites would mean extinction of these resource organisms and consequent economic losses

Services

As well as providing goods to the marketplace, Trinidad & Tobago's wetland perform important 'services' both ecologically and economically. Wetlands, such as mangrove swamps, are highly productive and, in addition to supporting biota internally, they export considerable quantities of organic matter downstream or out to sea. This is important because it supports the food chains, which produce coastal fisheries and even sustain coral reefs, such as the Buccoo Reef in Tobago.

Of great importance also is the "nursery" function of mangroves and other coastal wetlands; which provide safe habitat to the larvae and juveniles of fish, shrimp, lobsters and conchs that will be caught later by our fishermen. Without these critical wetland habitats our fisheries production would be greatly reduced.



Mangrove roots by Stephen Broadbridge, Caribbean Discovery Tours

Some of the Nation's wetlands play important roles in floodwater retention and supply of water, include recharge of groundwater aquifers, and buffering/dilution of pollutants. These benefits have considerable socio-economic significance.
National Wetland Policy The Resource

Attributes

Wetlands in Trinidad, and to a lesser extent Tobago, are used heavily for recreation, education, wildlife appreciation and other aesthetic purposes. The



intricate mix of spectacular scenery, fascinating plant and animal species including the national bird of Trinidad, the Scarlet Ibis (*Eudocimus ruber*) and adventure provide hundreds of people (both locals and visitors) with pleasure and intellectual stimulation, as well as benefits to the national economy each year. Wetlands also feature greatly in our history and culture as a considerable number of people have for many years gained their livelihood from use of wetland resources. The quality of life of the people of Trinidad and Tobago is enhanced by our wetland heritage and will continue to be so once these important ecosystems are properly protected and managed.

Threats to Wetlands

A threat to a wetland can be considered as an action or activity, which diminishes the value of the goods, services or attributes featuring in, or provided by that wetland.

The major threats to wetlands in Trinidad and Tobago include: land reclamation/conversion, pollution, alteration to hydrology and over-exploitation of biological resources, illegal hunting/poaching and fires.



Machinery clearing mangroves at Cuesa River, Chaguaramas by IMA

CHAPTER 3: POLICIES AND STRATEGIES

Wetlands of Trinidad and Tobago will be protected, managed and restored in order to sustain and enhance their ecological and socio-economic values and function for current and future generations.

WETLAND POLICIES

1. The Government of Trinidad and Tobago will **promote awareness and understanding** of the wetland resources in Trinidad and Tobago and actively **encourage participation** of landowners, non-governmental organizations and institutions in wetland conservation.

2. The Government of Trinidad and Tobago, in keeping with the wise use principle as defined under the Convention on Wetlands, will **develop exemplary practices in support of wetland conservation** and sustainable wetland use when it designs and implements government programmes **on publicly owned land and waters**.

3. The Government of Trinidad and Tobago will **preserve outstanding examples** of all wetland types in Trinidad and Tobago by including them in a system of national parks and other protected natural areas.

4. The Government of Trinidad and Tobago will be an **active partner in cooperative activities**, which promote wetland conservation in Trinidad and Tobago and the Caribbean region.

5. The Government of Trinidad and Tobago will **support and promote the development**within Trinidad and Tobago of the **scientific and technological expertise** needed for wetland conservation and ensure that this expertise is accessible to planners, managers, regulators and other decision-makers.

6. The Government of Trinidad and Tobago will **identify weaknesses** in the present**institutional and organizational structures** relevant to wetland conservation and will develop activities for their improvement

EDUCATION, PUBLIC AWARENESS AND TRAINING PROGRAMME

OBJECTIVE 1: To develop a National Wetland Awareness Campaign, which communicates the values of wetlands.

ACTIVITIES:

1.1 Design and implement a national awareness campaign using all aspects of the media (audio-visual, radio, print, music and drama) in cooperation with the stakeholders. This should be targeted at all levels.
1.2 Promote development of targeted wetland education and outreach materials.
1.3 Develop and promote an annual Wetland Awareness Week, including special activities within wetland sites in Trinidad and Tobago, if possible coinciding with World Wetlands Day, February 02.
1.4 Promote the wise use of wetlands to communicate their values.
1.5 Highlight the pollution of the country's wetlands from non-point sources in collaboration with the Environmental Management Authority.

OBJECTIVE 2: To produce a regular report on the status of wetlands in Trinidad and Tobago in a form which will be easily understood by the general public.

ACTIVITIES:

2.1 Publish a report on the status of wetlands in Trinidad and Tobago on a regular basis to keep the general public informed. Ensure that the format used is dynamic and easily understood.
2.2 Disseminate and present this report using all forms of media to ensure the widest possible outreach.

OBJECTIVE 3: To provide information on the sustainable use of wetlands to interested members of the public.

ACTIVITIES:

3.1 Produce a report summarizing technical information on the wise use of wetlands targeted to special interest groups, including landowners, farmers, fishing interests, industries, community groups, hunter and leisure/tourism interests.
3.2 Undertake workshops on a regular basis to present technical information targeted to special interest groups.

OBJECTIVE 4: To provide opportunities for the public and community-based organizations (CBOs) involved in wetland conservation.

ACTIVITIES:

4.1 Encourage participation by the public and CBOs in scheduled wetland awareness activities.
4.2 Develop guidelines and prepare avenues to encourage active participation by the public and CBOs in wetland conservation programmes.
4.3 Provide suitable opportunities for public review and evaluation of wetland conservation programmes.

OBJECTIVE 5: To promote wetland conservation in the formal education system

ACTIVITIES:

5.1 Develop components relating to wetlands within the national education curriculum and throughout the formal education system.
5.2 Provide suitable resource materials to assist in implementing this objective.

OBJECTIVE 6: To provide requisite training and capacity- building.

ACTIVITIES:

6.1 Conduct a training and capacity needs assessment across relevant Government agencies with responsibilities for implementing aspects of the policy.
6.2 Draw up a costed and prioritized programme for phased provision of training and capacity-building.

MANAGEMENT PROGRAMME FOR PUBLICLY-OWNED WETLANDS

OBJECTIVE 7: To encourage actions which enhance wetland functions on publicly owned lands and waters.

ACTIVITIES:

a. (for statelands under the control of the Forestry Division)

7.1 Prepare, in consultation with all stakeholders, an individual management plan for each wetland, taking note of relevant guidance adopted under the Convention on Wetlands, and ensuring compatibility with the General Wetland Management Plan for Trinidad and Tobago.
7.2 Implement each management plan in conjunction with all stakeholders, and undertake monitoring and review as appropriate.

b. (for statelands and other lands under the control of other state and parastatal agencies)

7.3 Cooperate with such agencies and stakeholders in the preparation, implementation, monitoring and review of their wetland management plans.

OBJECTIVE 8: To commit all levels of government to a goal of no net loss of wetlands and their values and function, on publicly-owned lands and waters.

ACTIVITIES:

8.1 Establish conservation objectives for relevant wetlands, including definitions of favourable conservation status and restoration targets where appropriate.
8.2 Encourage all government and parasatal agencies with wetlands under their control to put such lands under wise use management, utilizing Memoranda of Understanding (MoUs) as appropriate.
8.3 Where it is necessary to change land use away from wetlands, then alternative wetlands are to be provided and maintained under a suitable management regime by the relevant government or parastatal agency.
8.4 Promote public awareness of wetland values and functions.

OBJECTIVE 9: To develop guidelines for mitigation of wetland conversions on publicly-owned lands and waters through restoration of equivalent wetlands.

ACTIVITIES:

9.1 Restore damaged but important wetlands.

OBJECTIVE 10: To carry out initiatives for the restoration and enhancement of wetland ecosystems in addition to those for which this may be required under Objective 9.

ACTIVITIES:

10.1 Identify priority areas for restoration and enhancement initiatives.
10.2 Define agreed objectives for each such initiatives.
10.3 Undertake feasibility studies and, where indicated proceed to carry out restoration and enhancement works.
National Wetland Policy Policies and Strategies

OBJECTIVE 11: To expand and enhance government policies, programmes and regulations which have a positive effect on wetland conservation.

ACTIVITIES:

11.1 Prepare programmes and projects on wise use of wetlands for government implementation in partnership with stakeholders.
11.2 Provide the relevant implementing agencies with the human and other resources to enable them to implement these programmes and projects effectively.

OBJECTIVE 12: To eliminate or reduce government policies, programmes and regulations, which have a negative effect on wetland conservation.

ACTIVITIES:

12.1 Provide government planning agencies with guidelines on minimizing conflict with the government wetland conservation programme.
12.2 Encourage relevant government agencies to demand Environmental Impact Assessments on all projects (government or private), whether or not required by law, as part of the planning/approval process.

PROTECTED WETLANDS PROGRAMME

OBJECTIVE 13: To draw up an inventory of wetlands in Trinidad and Tobago identifying those which are of national significance.

ACTIVITIES:

13.1 Establish and assist in the maintenance of inventories for all wetlands including those under private ownership.
13.2 Develop criteria or identifying national significance of wetlands to cater for all types of wetlands represented in Trinidad and Tobago.
13.3 Draw up an official list of wetlands of national significance including details of wetland type, sub-types, site boundaries, components, attributes and functions, and highlighting socio-economic values.
13.4 Draw up an official list of wetlands of international importance, and consider nominating further sites for the Ramsar list.

OBJECTIVE 14: To encourage the public protection of outstanding examples of wetlands, which are in private ownership.

ACTIVITIES:

14.1 Pursue the use of all suitable mechanisms including recourse to acquisition and other existing measures, controls and incentives; and new measures such as "debt-for-nature swaps" and eco-tourism development, to secure the protection of outstanding examples of wetlands or sections of wetlands which are under private ownership.
14.2 Rally public support for the protection of outstanding examples of wetlands under private ownership.

OBJECTIVE 15: To include outstanding examples of each type of wetland in Trinidad and Tobago in the national system of national parks and other protected areas, and as Environmentally Sensitive Areas under the Environmental Management Act.

ACTIVITIES:

15.1 Ensure that wetlands of national significance are included in the system of national parks and other protected areas and designated as Environmentally Sensitive Areas.
15.2 Promote the management of all secured wetlands of national significance to ensure sustainability.

OBJECTIVE 16: To encourage the management of all privately owned wetlands to promote the protection of their functions.

ACTIVITIES:

16.1 Assess and demonstrate the management potential of wetlands for promoting the protection of privately owned wetlands.
16.2 Identify the private owners of key wetland areas that are of special importance.
16.3 Maintain regular contact with these key owners to sensitize them to the critical factors necessary for the maintenance of the functions and values of these wetlands and to identify threats to them.
16.4 Encourage the formulation of agreed management plans or statements of management objectives.
16.5 Develop and implement a programme of incentives to encourage private landowners to manage their wetlands.
16.6 Provide technical assistance including training, planning and information to private wetland owners/managers to enhance their capabilities as wetland managers.

OBJECTIVE 17: To promote the use of publicly protected wetlands as demonstration examples for environmental monitoring, scientific research, education and public awareness in so far as this is compatible with the primary conservation objective.

ACTIVITIES:

17.1 Establish and maintain publicly protected wetlands of all types for use as demonstration examples for environmental monitoring, scientific research , education and public awareness.

OBJECTIVE 18: To ensure and integrated approach to the management of wetlands, including the management of watersheds and catchment areas.

ACTIVITIES:

18.1 Urge all government agencies whose functions enable influence or control over relevant activities to exercise such function so as to prevent adverse impact on wetlands.

COOPERATIVE WETLAND PROTECTION PROGRAMME

OBJECTIVE 19: To participate in regional and international programmes, which will enhance the conservation of wetlands in Trinidad and Tobago.

ACTIVITIES:

19.1 Promote the Caribbean as a distinct sub-region within the Ramsar Neotropic Region.
19.2 Take a lead role in encouraging Ramsar membership especially in our sub-region.
19.3 Establish partnerships with other regional and international organizations involved in wetland conservation.

OBJECTIVE 20: To cooperate with non-governmental organizations to enhance the conservation of wetlands in Trinidad and Tobago.

ACTIVITIES:

20.1 Ensure the involvement of non-government organizations (NGOs) and community based organizations (CBOs) in the planning process as well as management of wetlands and policy review.
20.2 Establish partnerships with national, regional and international NGOs involved in wetland conservation.

WETLAND STUDIES PROGRAMME

OBJECTIVE 21: To encourage research which is directed towards advancing wetland conservation and sustainable use of resources and ensuring that the results of such research are effectively integrated into decision-making.

ACTIVITIES:

21.1 Identify information gaps and problem areas, which need to be addressed.
21.2 Formulate a programme of research which focuses on critical issues in wetland conservation.
21.3 Establish a database of resource personnel and researchers in the field of wetland conservation.
21.4 Establish a wetland research committee in Trinidad and Tobago, which will promote and coordinate wetland research in collaboration with the Institute of Marine Affairs.

OBJECTIVE 22: To establish national standards and guidelines for assessing the quantity and quality of wetlands in Trinidad and Tobago.

ACTIVITIES:

22.1 Determine factors influencing quality of wetland habitats and acceptable levels of human impact.
22.2 Establish the environmental quality required for wetland sustainability.
22.3 Determine the types of wetland habitats, which should be included in a protected areas programme.
22.4 Determine the size of each wetland habitat, which is required to maintain ecological integrity and critical species.
22.5 Produce an evaluation system, which includes guidelines for achieving standards.
22.6 Estimate original natural extent and characteristics of all wetland sites.
22.7 Identify historic and current stressors and potential threats, and means of mitigating these.

OBJECTIVE 23: To support research on ways to restore damaged wetlands to their natural extent and quality.

ACTIVITIES:

23.1 Determine the likelihood of natural recovery taking place.
23.2 Where natural recovery is unlikely to occur, determine the most appropriate method for restoration and continued management of wetland sites, with respect to extent and quality.

OBJECTIVE 24: To monitor the quantity and quality of wetlands in Trinidad and Tobago and activities, which may threaten them, using established standards and guidelines.

ACTIVITIES:

24.1 Establish a monitoring capability (field personnel, laboratory analysis) in relevant activities.
24.2 Activate evaluation systems in all agencies involved in wetland regulation.
24.3 Set up a review panel to ensure the quality of data from monitoring processes.
24.4 Establish a system of regular public reporting on the quality and quantity of the nation's wetlands, and feed results into the appropriate review processes.

OBJECTIVE 25: To promote research on the creation of artificial wetlands for useful purposes.

ACTIVITIES:

25.1 Formulate a programme of research, which focuses on the uses and benefits of artificial wetlands.
25.2 Encourage the utilization of artificial wetlands to augment and complement waste water treatment systems as opposed to use as alternatives to mechanical waste water treatment systems.

INSTITUTIONAL AND LEGAL PROGRAMME

OBJECTIVE 26: To assign responsibilities in relation to implementation of the National Wetland Policy.

ACTIVITIES:

26.1 Identify a lead agency for overseeing implementation of the Policy, and provide a high-level politically- endorsed description of its mandate in this regard.
26.2 Draw up more detailed terms of reference for the lead agency in

relation to the Policy; including its function as a focal point for providing advice/information/expertise on wetland conservation to all other sectors of government.
26.3 Draw up a schedule detailing responsibilities and jurisdiction of all other relevant agencies and bodies, with comments on geographical relationships e.g. to water catchments.
26.4 Draw up a timetable for implementation of each of the activities listed in the Policy working with the agencies and bodies identified as having relevant responsibilities.

OBJECTIVE 27: To review compatibilities, complementarities and conflicts with this Policy across all other sectoral areas of government policy.

ACTIVITIES:

27.1 Conduct a summary review of compatibilities, complementarities, conflicts and gaps in legislation and policy, sector by sector (including economic, development, agricultural production, infrastructure enhancement, non-point source pollution, etc.) and report on significant gaps and areas of conflict.
27.2 Draw up and implement recommendations for resolving any gaps and conflicts identified.

OBJECTIVE 28: To assess funding requirements.

ACTIVITIES:

28.1 Conduct an implementation cost assessment for each section of the Policy.
28.2 Identify budget-lines and project and programme clusters which will deliver the funded efforts required.

OBJECTIVE 29: To monitor and review the implementation of the Policy.

29.1 Draw up schedule of targets, performance indicators and success criteria for each of the Objectives in the Policy.
29.2 Draw up and implement a plan for monitoring the implementation of the Policy against the parameters identified under 29.1 and the timescales

identified under 26.4 and for provision of summary reports on progress through the National Wetlands Committee.
29.3 Take action as appropriate to make adjustments to delivery in light of any underperformance or other problems identified under 29.2.
29.4 Check on annual basis whether there is a need to make any amendments to the Policy, making recommendations through the National Wetlands Committee as appropriate.
29.5 Conduct a full-scale review of the Policy within ten (10) years.

APPENDIX 1

Preliminary List of Wetland Sites

Available in PDF format

APPENDIX II

RELEVANT LEGAL AND INSTITUTIONAL FRAMEWORK

Background to Policy:

There is no written Government Policy with regard to wetlands in Trinidad and Tobago. The only clear statements of policy are the facts that Trinidad and Tobago became a Contracting Party to the Convention on Wetlands in December 1992, with effect from April 1993, that Nariva Swamp was designated for inclusion in the Ramsar List of Wetlands of International Importance, and the appointment of the National Wetlands Committee in 1995.

Otherwise, policy and intentions must be inferred from political manifestos, draft legislation, ministerial speeches, and recent government actions.

The election manifesto of the United National Congress (1995) refers to concerns for natural resources as a crisis. It refers to "the continued degradation of our physical environment and the wasting of our natural

resources continue to increase…" and implies that this has been a result of a lack of caring in policy implementation, and a tendency to "….'cook deals' which are inimical to our society."

It states an intention to focus on policies and programmes to target, amongst other factors, "improvements of the physical and natural environment to support sustainable development for current and future generations."

Tourism is important, including "the development of inland and marine parks, nature trails, inland and coastal aqua-sports enclaves and resorts…" for eco-tourism. The section on Environment states "Proper management of our natural resources and environment is absolutely essential…" and pledges the UNC to "develop attitudes which will encourage sustainable utilization…" It relies on the Environmental Management Authority "to play a key role in formulating policy, regulation and public awareness on environmental issues."

There is however, no policy statement on wetlands or any other aspect of Forestry Division's mandate.

Other indications of policy on wetlands are to be found in current draft Forest Resources and National Parks legislation, and the Buccoo Reef Management Plan, which incorporated management of the reef and part of the wetland and sea grass area. However, these have not yet become firm reality.

Present Legal Framework:

The Government of Trinidad and Tobago has signaled its intention to protect wetland areas in Trinidad and Tobago by becoming a Party to the Convention on Wetlands (Ramsar, Iran, 1971) and designating Nariva Swamp as a Ramsar Site; also in the appointment of the National Wetlands Committee to formulate a national policy for wetlands, leading to the drawing up of management plans. The legal framework gives only partial help, as there is no single law providing for the management or regulation of wetlands, and no legal instrument focusing on wetlands.

In general application the most important Acts on the law books relevant to wetlands at this time are the Forests Act, the Town and Country Planning Act, the State Lands Act and the Environmental Management Act (EMA). Of these, the first two are due to be replaced by new legislation shortly, and the EM Act is a piece of umbrella legislation which still lacks detailed regulations.

The commonality is that most wetlands are on state lands, and therefore under the jurisdiction of the Commissioner of State Lands, whose office now falls under the Ministry of Agriculture, Land and Marine Resources. The Town and Country Planning Act gives the power to make decisions regarding land development to the Minister of Planning and Development.

There are certain overlapping areas. For example the Town and Country Planning Act, Chapter 35:01 empowers the Minister, in the interests of amenity, to make provision for the preservation of any tree, trees, or woodlands through a tree preservation order, although no such orders have yet been made. However, the earlier Forests Act had allotted this duty to the Conservator of Forests, and this has not been rescinded.

The Town and Country Planning Act provides for Statutory Development Plan for broad land use planning, and protected or prohibited areas or wildlife sanctuaries may be established under the Forests Act, the Wildlife Act, or the Marine Areas (Preservation and Enhancement) Act. Marine or coastal protected areas may be established under the Marine Areas (Preservation and Enhancement) Act.

At present the only wetland in Trinidad and Tobago under some form of management is Caroni Swamp, and there is no wetland area in Trinidad and Tobago which is regulated and managed under one single piece of legislation or under one single Government agency.

A summary of the most relevant laws and conventions follows:

Legislation with Influence on the Management of Wetlands in Trinidad and Tobago:

International Conventions

International conventions to which the Government of Trinidad and Tobago has become a Party are still without legal status nationally, as none of the provisions have yet been voted into domestic legislation. Therefore, although there may be some international pressure to uphold them, they cannot be enforced.

International conventions can be incorporated into national laws:

a) by reference - an Act cites the Convention stating that it has the force of law in the national system.
or b) by repetition - the Act simply repeats all the terms of the Convention directly into a national law.

Convention signed and ratified by Trinidad and Tobago

1. Convention on International Trade in Endangered Species of Flora and Fauna (CITES), 1973

This limits all international trade in endangered species, and refers to species of flora and fauna imported as well as exported.

2. Convention on Wetlands (Ramsar, Iran, 1971)

The Nariva Swamp area has been accepted as the flagship project for Trinidad and Tobago's participation in the Ramsar Convention. It is expected that other wetlands will be drawn in eventually.

3. Convention for the Protection and Development of the Marine Environment of the Wider Caribbean (Cartagena, 1983)

This Convention involves protection of marine ecosystems, to the welfare of which coastal wetlands also contribute.

4. Protocol for Specially Protected Areas and Wildlife (SPAW)

SPAW is aimed at the establishment of legally protected areas and national parks, particularly for the protection of wildlife.

National Legislation

There is as yet no national legislation providing for the establishment and management of national parks and other protected areas, although this has been recommended many times. The following are the laws, which most closely affect the conservation of wetlands.

1. State Lands Act, Chp. 57:01 (1969) and the Land Regulations and State Lands Forest Produce Rules.

The expectation is clear that State Lands, all kinds of forests and protected areas are administratively linked. The power to declare a forest reserve is vested in the Commissioner for State Lands (Lands Regulations made under the State Lands Act), which office has recently been moved to the Ministry of Agriculture, Land and Marine Resources. Forest Officers have the power to prosecute squatters for forest offences on the reserves, but not on other State Lands.

2. Forests Act, Chp. 66:01 (No. 42 of 1915, amended by 4 of 1922, 29 of 1925, 5 of 1933, 37 of 1933, 148/1995)

"Forest produce" is defined as
a) trees and all parts or produce of such trees
b) plants not being trees, and all parts of produce of such plants.
"Tree" include palms, bamboos, stumps, brushwoods and canes.

The Forests Act relates to production forestry and the removal of timber and Balata gum from Forest Reserves and State Lands. It provides for establishing Forest Reserves on State Lands, and Forest Officers are authorized to arrest and bring charges against offenders. However, only the Commissioner for State Lands has the power to evict squatters.

Section 23 © (42 of 1915) gives the Minster power, subject to affirmative resolutions by Parliament, to make rules providing for the preservation of trees remarkable for size, rarity or beauty.

Section 8 (f) states that it is an offence to enter a prohibited area.

"Prohibited area" is defined as a specified area being part of a Forest Reserve or State Lands declared by the President by proclamation to be a prohibited area. However, no provisions are made for management of such areas.

The areas specified in Subsidiary legislation, Forests (Prohibited Areas) Order declares as prohibited areas from dates from 1954 to 1966, a total of just over 800 acres of Caroni Swamp.

In 1989, Bush Bush Wildlife Sanctuary was declared a Prohibited Area. In 1993 the proposed National Park and Scenic Landscape components of the Nariva Swamp Ramsar site was declared a Prohibited Area under Section 2. (Legal Notice No. 78 of 1993). The Ortoire Nariva Windbelt Forest Reserve was also declared.

3. Conservation of Wildlife Act. Chp. 67:01 (Act 16 of 1958)

Section 3 provides for establishment of "Game Sanctuaries" in which it is unlawful to hunt, and for the regulation of hunting. There is no provision for protection and management of wildlife habitat, nor any direct prohibition of activities leading to habitat loss.

The Bush Bush Wildlife Sanctuary and the Caroni Swamp Game Sanctuary are the only sanctuaries with an emphasis on wetlands.

The schedules of protected animals, birds and cage birds include several species found in wetland areas, with a special amendment added to protect the Scarlet Ibis. No mention is made of any flora species.

The law is under review.

In 1968 the Bush Bush Sanctuary was declared.

4. Town andCountry Planning Act, Chp. 35:01 (Act 29 of 1960, amended by 13 of 1974, 49 of 1977).

The Act provides for the orderly and progressive development of land, and for the grant of permission to develop land.

Part II makes provision for statutory Development Plans indicating for which purposes the minister proposes that land be used. Part IV of the Second Schedule to the Act list amenities for which provision may be made as:

Item 3: Allocation of lands for

a) Communal parks
b) Game and bird sanctuaries
c) Protection of marine life

Item 5: Preservation or protection of forests, woods, trees, shrubs, plants and flowers.

Item 8: Prohibiting, regulating, and controlling the deposit or disposal of waste material and refuse, the disposal of sewage and the pollution of rivers, lakes, ponds, gullies and the seashore.

Part III pertains to the control of the development of land. Section 20 provides for the consent of the Minister. In this regard the Minister may make a "tree preservation order" with respect to any such tree, trees or woodlands. It does not, however, make any reference to or rescind powers in this sphere allotted to the Minister responsible for forests under the Forests Act.

5. Agricultural Fires Act, Chp. 63:02 (Act 20 of 1965)

"forest" is defined in the Act as the plant cover on any land and consists of trees, shrubs, plants or grass, whether living or dead.

This Act provides comprehensive regulations regarding agricultural fires between 1st December and 30th June the following year. It concerns fires which may cause danger to life, property or any crop of forest.

Section 20 (1) states that a person who plants or caused to be planted any annual crop on any land upon which an illegal fire has been set is guilty of an offence.

6. Land Acquisition Act, Chp, 58:01

The Land Acquisition Act authorizes the acquisition of land for public purposes and sets out procedures and laws governing the acquisition.

7. Marine Areas (Preservation and Enhancement) Act Chp. 37:01 (Act 1 of 1970

This Act provides for protection of the marine environment, which includes the submarine areas within the Territorial Seas and includes any adjoining land or swamp areas which form with certain submarine areas a single ecological entity.

Section 3 (1) states that the Minister may by Order designated any portion of the marine areas as a restricted area where he considers that special steps are necessary for:

(a) preserving and enhancing the natural beauty
(b) the protection of the flora and fauna in respect of such areas
(c) the promotion of the enjoyment of the public
(d) the promotion of scientific study and research

The Minister for Agriculture, Land and Marine Resources has jurisdiction for enactment of this Act, including regulations for use of the protected areas (Section 6). Permits for various types of activities must be granted by the Minister a person authorized by him.

Subsidiary Legislation Marine Areas (Preservation and Enhancement) Regulations

Amongst other things these regulations state (Section 3) that no fish, bird or mangrove may be removed from a restricted area without permission. Section 5 states that Minister may, by Notification, designate any part of a restricted area an anchoring area of a walkway.

8. Fisheries Act, Chp. 67:51

The Fisheries Act regulates the exploitation of fish, referring to all rivers as well as the Territorial Sea, and includes oysters, crabs, shrimps, turtle, turtle eggs… and any other marine fauna as well as specifying the classes of net, length of fish, shellfish, crab or shrimp to be taken, and specifies certain prohibited areas. However, the Act does not provide a framework for the protection or management of habitat or inland fisheries.

Protection of Turtles and Turtle Eggs Regulations

These regulations fall under the Fisheries Act, and affect beach areas included in wetland management. They protect female turtles within 1000 ft. of the high water mark and turtle eggs, and set a closed season. Jurisdiction falls under the Fisheries Officers up to the low water mark, and under the Game Wardens of Wildlife Section above the low water mark. Male turtles are not protected.

9. Environmental Management Act, 2000

The title of the Act states that it provides for management of the environment within Trinidad and Tobago. One of the aims is to establish an effective regulatory regime which will protect, enhance and conserve the environment.

"Environment" is defined as all land, area beneath the land surface, atmosphere, climate, surface water, groundwater, sea, marine and costal areas, seabed, wetlands and natural resources within the jurisdiction of Trinidad and Tobago.

The functions of the Environmental Management Authority include the identification of the ecological and other balance required for the conservation of natural resources, elements or areas of the environment needing special protection, and the indicators, parameters or criteria which will be used in measuring environmental quality, as well as undertaking an evaluation of the written laws and various programmes which address environmental issues, and developing a draft Environmental Code.

Pollution will be addressed and regulated, and the Authority will consult with the agencies responsible for various aspects of environmental

management with the object of establishing integrated management programmes, as well as having certain powers of implementation.

The Authority may designate "environmentally sensitive areas" and "environmentally sensitive species" requiring special protection, and provide specific limitations for their use.

The Authority and the Environmental Court will have the power to prosecute and judge environmental matters.

However, two and three years are the time periods allowed for preparing the groundwork, so that it will take a considerable period for all new legislation, rules, regulations and management plans to be put into place.

10. Chaguaramas Development Authority Act, Chp. 35:02

This Act gives the Authority a wide jurisdiction over the peninsula. Section 24 (1) states that the Authority shall ensure that development is carried out in conformity with the Town and Country Planning Act. Otherwise the land is vested in the Authority (Section 16). Section 28 states that the Minister may make restrictions on use of any land.

However, there is no specific section which deals in any way with conservation or protection.

11. Regularization of Tenure (State Lands) Act, Act No. 20 of 1986

This Act provides for regularization of tenure of State Lands.

12. Territorial Seas Act, 1969

This Act established a twelve mile territorial sea within which the State enjoys sovereignty over all resources including fish.

13. Continental Shelf Act, 1969, Chp. 1:52

This Act established the continental shelf of the State and exclusive rights of exploitation.

14. Archipelagic Waters and Exclusive Economic Zone Act, Act No. 24 of 1986

This Act establishes the right of the State to manage the living resources of the EEZ, including scientific research other than nationals.

15. National Trust of Trinidad and Tobago Act, 1991

This Act establishes a National Trust whose functions include listing and acquiring property of interest. Property of interest is defined as any monument and any fossil, place or site of natural beauty or national, historic, scientific or archeological interest. However, this Act has yet to be proclaimed and no board has yet been appointed to manage the Trust.

Other Connected Legislation

1. Pesticides and Toxic Chemicals Act, Act No. 42 of 1979

2. Plant Protection Act, Act No. 13 of 1975

3. Mines, Borings and Quarries Act, Chp. 61:02

4. Oil Pollution of Territorial Waters Act, Chp. 37:03 (19)

5. Public Health Ordinance; Chp. 12 No. 4, Section 105

The Public Health (Yellow Fever) Regulations, 1979

6. Petroleum Act, Chp. 62:01

7. Water and Sewage Act, Chp. 54:40

8. Slum Clearance and Housing Act, Chp. 33:02

9. Litter Act, Chp. 30:52 (Act No. 27 of 1973, amended by 10 of 1981)

The Act prohibits littering, inter alia, of public places. Forest land is included in the definition of public places.

10. Motor Vehicle and Road Traffic Act

11. Civil Aviation Act

Common Law

There has also been some reliance on the Common Law, but little environmental case law has been built up in Trinidad and Tobago (or regionally). The precedent most relevant to wetland issues may be the Rylands vs. Fletcher ruling, which touches upon escapes of undesirable substances which may become a legal nuisance. However, there is little evidence of application of this ruling anywhere in the Commonwealth Caribbean.

Examples Of Regional Legislation

Some countries in the Commonwealth Caribbean already have legislation concerning national parks and protected areas: Dominica, Antigua and Barbuda, British Virgin Islands, St. Lucia, Barbados, Jamaica, but none which specifically deals with wetlands alone.

APPENDIX III

OBLIGATIONS OF CONTRACTING PARTIES

The principal obligations of States which join Ramsar are:

· To designate at least one wetland of international importance (Article 2.1), and to promote the conservation of listed wetlands (Article 3.1)

· To formulate and implement planning so as to make 'wise-use' of wetlands, whether or not they are included in the List (Article 3.1); the Conference of the Contracting Parties has approved guidelines on how to achieve wise use.

· To consult with other Contracting Parties about implementation of the Convention, especially as regards transfrontier wetlands, shared water systems, shared pecies, and development aid for wetland projects.

· To establish wetland reserves and provide for their wardening.

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GLOSSARY

CONSERVATION The wise use of wetlands.

CONVENTION A formal agreement or treaty between states.

DEBT-FOR-NATURE-SWAP Mechanism by which an interested party (usually an NGO) buys a portion of the commercial debt of a country's national banks so as to pay back the full face value of the debt in local currency.

ECOLOGICALINTEGRITY The well-being of an ecosystem.

ECOTOURISM Tourism which involves traveling to relatively undisturbed or uncontaminated natural areas with the specific object of studying, admiring and enjoying the scenery with its wild plants and animals as well as existing cultural areas.

ENVIRONMENTAL IMPACT ASSESSMENT (EIA) The process by which predictions are made of the environmental consequences of development activity. Its aim is to ensure that potential environmental risks are foreseen and necessary measures to avoid, mitigate or compensate for damage are identified.

MITIGATION Actions taken during the planning, design, construction and operation of projects or programmes to alleviate potential adverse effects on the ecological integrity of a wetland.

MONITORING The process of measuring changes in the ecological character of any natural area over time.

NEOTROPICAL Geographical region covering South America, Central America, the Caribbean and a large part of Mexico.

PROTECTED AREA A legally established land or water area under either public or private ownership that is regulated and managed to achieve specific conservation objectives.

PROTOCOL The first or original draft of the opening or an agreement to a treaty.

CONVENTION ON WETLANDS The Convention on Wetlands is the first of the modern global inter-governmental treaties on conservation and wise use of natural resources.

REHABILITATION Action taken to assist in the recovery of specific ecosystem services in degraded ecosystems or habitat.

RESTORATION To permit the return of ecosystem or habitat to its original community structure, natural complement of species and natural functions.

STRESSORS Natural or foreign perturbations which impact on the structure and function of ecological systems.

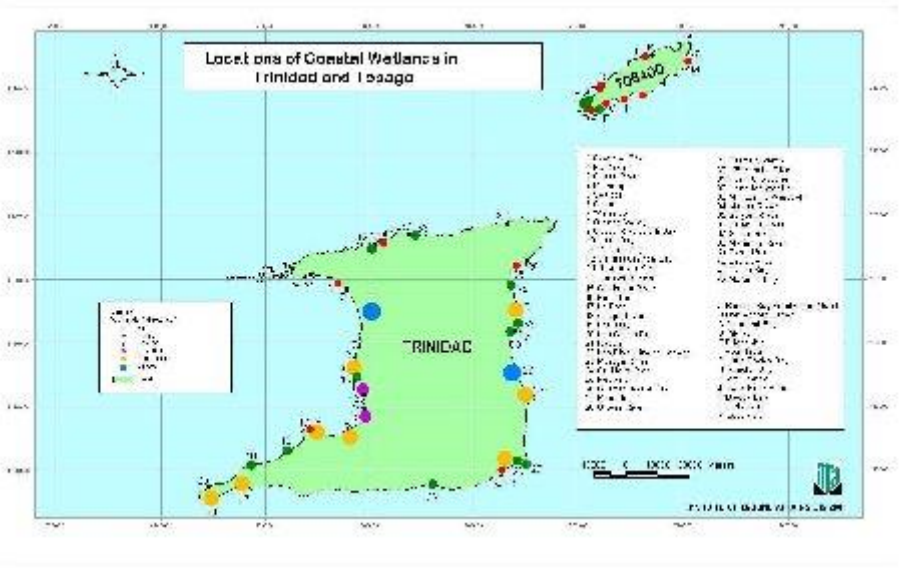
WETLAND FUNCTIONS The interactions of physical, biological or chemical components within a wetland to perform certain roles such as flood control, storm protection, nutrient retention, etc.

WETLAND SUSTAINABILITY The management of a wetland so as to ensure that the ecological and socio-economic functions of the wetland are maintained in a sustainable manner.

WETLAND VALUES The benefits, usefulness or importance of the characteristic wetland.

WISE USE A definition of wise use of wetlands was agreed at the 1987 Conference of Ramsar Parties, as follows:

> "The wise use of wetlands is their sustainable utilization for the benefit of mankind in a way compatible with the maintenance of the natural properties of the ecosystem."
>
> "Sustainable utilization" of a wetland is defined as "human use of wetland so that it may yield the greatest continuous benefit to present generations while maintaining its potential to meet the needs and aspirations of future generations."
>
> "Natural properties of the ecosystem" are defined as those physical, chemical and biological components, such as soil, water, plants, animals and nutrients, and the interactions between them."
>
> Guidelines for the implementation of the concept were adopted by Recommendation 3.3 of the 1987 Conference, and expanded by subsequent Conferences, in 1990 (Recommendation 4.10) and 1993 (Resolution 5.6).



National Wetlands Committee
Forestry Division
Ministry of Public Utilities and the Environment