

**BIODIVERSITY PLANNING SUPPORT PROGRAMME
(UNEP/UNDP/GEF)**

**INTEGRATING BIODIVERSITY CONSERVATION INTO THE
TOURISM SECTOR IN TRINIDAD AND TOBAGO – A CASE OF
EFFECTIVE LOCAL COMMUNITY PARTICIPATION**

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EXECUTIVE SUMMARY

Tourism development in Trinidad and Tobago has traditionally been afforded low priority because of the strength of the hydrocarbon sector. However, with the vulnerability of the economy to fluctuations in oil prices and the increasing viability of the tourism industry world-wide more attention has been given to diversifying the economy away from hydrocarbon towards tourism and other types of non-oil development. Over the last five years, cruise ship tourism has grown dramatically while ecotourism continues to be specially targeted for development, given the rich inventory of natural and cultural assets in this small island developing state (SIDS).

Side-by-side with the development of ecotourism has been the preparation of a National Biodiversity Strategy and Action Plan under the auspices of the Environmental Management Authority. One of the principal strategies incorporated in the plan is the institutionalising of public participation in the development of government policy for the conservation and management of biodiversity.

The application of this strategy, albeit from the bottom up, to a proposed major tourism development in the village of Toco in Northeast Trinidad has rescued the country from a serious threat to biodiversity. Government plans were in an advanced state for the establishment of a large industrial port for, among other things, cruise ship tourism, a development which was seen by the local community to have serious consequences for the marine ecology and a proposed national park in the area.

The local community organised themselves into a pressure group called Stakeholders Against Destruction (S.A.D.) for Toco and demanded meaningful public participation in the process. The Government, forced into observing its own strategy of public participation in policy development, arranged for a genuine process of public consultation. S.A.D. convinced the Government that lower-intensity ecotourism was the better option for the region and for biodiversity conservation. The port project was officially cancelled by Cabinet decision in October 2000 and the associated Land Acquisition Orders rescinded the following month.

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1 INTRODUCTION

The nations of the world have come to recognise that the diversity that occurs among living organisms - at the levels of genes, species and ecosystems – is of vital importance to human well being. Accordingly, the United Nations Environmental Programme (UNEP) became instrumental in the establishment of the United Nations Convention on Biological Diversity (CBD), which entered into force in December 1993. Article 6 of the Convention calls upon subscribing nations to develop national strategies and plans for biodiversity conservation and to integrate biodiversity concerns into relevant sectors of the economy.

Under the leadership of UNEP, a Biodiversity Planning Support Programme (BPSP) has been established to strengthen national capacity to prepare and implement national Biodiversity Strategies and Action Plans (NBSAPs). The BPSP will, *inter alia*, develop guidelines, training modules and facilitate dissemination of “best practice” experience developed during the course of NBSAP preparation. The BPSP will also address the mainstreaming of biodiversity into sectoral and economic development and planning.

The BPSP is engaged in eight thematic studies, one focussing on the tourism sector. This is a fast growing economic sector with a large global ecological footprint, which gives it great potential to influence biodiversity conservation in both positive and negative ways. The Parties to the CBD have acknowledged that sustainable tourism is of major concern and at a recent Conference in Nairobi, Kenya, a decision was taken that Parties should submit case studies of best practices in sustainable tourism.

BPSP is thus carrying out a study of the integration of biodiversity into the tourism sector with a specific focus on how best to incorporate “global best practice” into NBSAPs. In addition, 12 case studies in selected countries will be used as a basis for developing best practice guidelines to help national biodiversity planners move towards effective integration of biodiversity into the tourism sector. The best case studies will be presented at a workshop to be held in Mexico City in March 2001.

Trinidad and Tobago has been selected for one of the case studies. This Caribbean Small Island Developing State (SIDS), rich in natural and cultural assets, has targeted the tourism sector, particularly ecotourism and cruise ship tourism, for special stimulation. Side by side with the development of these tourism sectors has been prepared a NBSAP for Trinidad and Tobago. One of the principal strategies incorporated in the plan is to institutionalise public participation in the development of government policy for the conservation and management of biodiversity. The case study will show how the bottom-up application of this strategy to a proposed major tourism development in the village of Toco in Northeast Trinidad has rescued the country from a serious threat to biodiversity.

2 OVERVIEW OF PRESENT STATE OF TOURISM DEVELOPMENT

2.1 Relative importance in national economy

Trinidad and Tobago is a twin island Republic located just off the coast of South America, 10 km from Venezuela. The islands cover an area of approximately 5,148 square kilometres with a population of about 1.3 million people. The economy is hydrocarbon-based. Historically, oil production, and to some extent, oil refining, have dominated the overall economy. In recent years, however, the natural gas sector has grown in importance and with major gas finds in 2000 and the ongoing establishment of Liquefied Natural Gas (LNG) plants, this sector will assume even greater prominence.

It is not surprising, therefore, to find that the tourism sector has always been eclipsed by the hydrocarbon sector. Even though a Trinidad and Tobago Tourist Board was established in 1946, very little official encouragement was given to the development of the tourist industry. This is still very much the case today. Whereas, the hydrocarbon sector accounts for about 30% of GDP, a mere 2-3% is attributed to the tourism sector. It should be noted, however, that the unification of Tobago with Trinidad in one Republic obscures the greater importance of tourism in Tobago relative to Trinidad. Whereas Trinidad is an industrialised island, Tobago, with its superior beaches, is a typical Caribbean winter beach tourism destination. It is roughly estimated that tourism accounts for about 20% of Tobago's GDP, which is the average for the Caribbean.

Successive Governments, mindful of the vulnerability of a hydrocarbon-dominated economy to the vicissitudes of fluctuating oil prices, have made attempts to diversify the economy away from hydrocarbon to such sectors as manufacturing and tourism. The tourism sector in Trinidad and Tobago as a whole has been receiving greater official attention in recent times. Tourist arrivals are on the increase and according to the Tourism and Industrial Development Company (TIDCO); visitor arrivals have increased at an average rate of 6.4% over the past five years. In 1999 stayover arrivals stood at 358,836 visitors, while cruise ship passenger arrivals reached 63,251 visitors.

Tourist expenditure in Trinidad and Tobago is gauged by expenditure under the head of Hotels, Restaurants and Guest Houses in the national accounts. Tourist expenditure on such items as souvenirs, ground transportation and tour guiding are not picked up in the national accounting system. Given this limitation in the accounts, the following figures from the Central Bank shows tourist expenditure over the period 1994-1998. The markedly increasing trend is evident.

YEAR	US\$ MILLION	%CHANGE (over previous year)
1994	81.3	18.3
1995	67.9	-16.6
1996	102.8	51.4
1997	125.8	22.4
1998	184.9	47.0

2.2 Relative priority in national planning policy

National Planning Policy has traditionally made passing reference to tourism through a lofty statement or two. Government's 1993-1995 Medium Term Policy Framework (MTPF) document TPF states that "of all the sectors, tourism has the potential to generate significantly increased employment opportunities within a short period of time."

The 1994-1996 MTPF spoke of the preparation of a Tourism Master Plan and the development of tourism infrastructure with IDB assistance. A Tourism Master Plan was indeed completed in 1995. This very comprehensive plan addressed a national tourism vision and policy, market potential, marketing strategies, preparation for tourism, environmental considerations, product development and economic feasibility. Out of this plan was developed another IDB project called the Short Term Programme of Support for the Development of the Tourism Industry.

The 1997-1999 MTPF devoted an unusually large space to tourism as it described the implementation of the IDB Short Term Programme. The aims of this programme were stated in that document as to:

- Strengthen the institutional capacity for developing, managing and monitoring the tourism industry;
- Carry out specified small scale development works, and some feasibility studies for other infrastructure investment projects;
- Undertake a number of environmental management and ecotourism related activities;
- Develop and implement a Community and Public Awareness Programme for the tourism industry.

The document also stated that the programme was to be implemented by TIDCO. TIDCO prepared a comprehensive Strategic Plan for the period 1998-2000. This plan formulated for the institution as a whole a Mission Statement, a Vision Statement, values and guiding principles, goals and strategies for their achievement. For the Tourism Division, the Mission was:

"To be the catalyst for the development of Trinidad and Tobago as a globally competitive tourism destination of choice, thereby ensuring future profitability and sustainability of the industry and an enhanced quality of life for our citizens."

The 2001-2003 MTPF contained the Government's pledge to continue to establish policies and implement programmes to facilitate the development of tourism in a sustainable manner. Special mention was made of the new Tourism Development Act and the undertaking of Government to establish systems and procedures to ensure the effective implementation of the provisions contained in that Act.

The priority given to tourism within the national planning and policy framework, however, is more in word than in deed. Annual budgetary allocations betray a continuing neglect of the tourism sector. In the 2001 estimates, 0.3% of the recurrent budget was allocated to the Ministry

of Tourism while 1.5% of the Public Sector Investment Programme funding was channelled to this Ministry.

2.3 Institutional structure of government planning and policy in tourism

The function of government economic and physical planning is housed in the Ministry of Integrated Planning and Development where a 7-yr National Strategic Planning Framework is in preparation. The tourism input for this Planning Framework is being provided by the Ministry of Tourism.

The main functional areas of the Ministry of Tourism are Policy Formulation and Advice, Monitoring and Control, and Research. It is through the Policy Formulation and Advice function that the Ministry formulates draft policies for tourism, taking into consideration the policy proposals submitted by TIDCO and other agencies.

The Ministry of Tourism does not yet operate with a definitive tourism policy. In the mid 1980s a draft tourism policy statement was formulated for Trinidad and Tobago and sent out for public comment in November 1987 but it was never finalised and formally accepted. A Tourism Master Plan (TMP) was prepared in 1995. The TMP did venture into the formulation of some preliminary policy statements and for all practical purposes; this document currently serves as the tourism policy document for the Government of Trinidad and Tobago. The TMP will be revisited and revised this year.

The Ministry of Tourism in 1998 undertook an exercise to prepare a Strategic Review Document. A stakeholders' consultation was held in October 1998 for which a Discussion Paper for a National Tourism Policy for Trinidad and Tobago was prepared. No final policy document emerged from that consultation.

In terms of policy and strategy for tourism, TIDCO sees its core roles as advocacy of policy for tourism, representation in appropriate centres of decision-making and influencing the legislative framework governing tourism. TIDCO's Division of Government Policy and Special Projects has a special function in the area of policy and planning. TIDCO has been assigned responsibility for a group of internationally funded projects that are of strategic importance for the competitiveness of the tourism industry, and has designated the Government Policy and Special Projects Division to handle this responsibility. Under the direction of this Division, for example, an IDB-funded Carrying Capacity Study was undertaken to provide the basis for policies and plans for tourism development on the North Coast of Trinidad.

Through the development approvals process, the Town and Country Planning Division of the Ministry of Integrated Planning and Development exercises control over the physical planning aspects of the development of tourism facilities. Ports and airports, however, constitute a special case in that the Ministry of Infrastructure plays a major part in the planning of these facilities.

Although the Minister of Tourism is responsible for tourism development in the unitary state of Trinidad and Tobago, the Chief Secretary of the Tobago House of Assembly (THA) subscribes

to the view that tourism development on the island of Tobago is the business of the THA. Accordingly, they developed their own tourism policy document in August 2000. Whereas, therefore, tourism development in Tobago is governed by a fresh policy document, the same cannot be said for Trinidad, which still relies on *ad hoc* reference to a dated TMP.

2.4 Dominant types of tourism practised

2.4.1 Conventional Tourism

Winter beach tourism dominates the conventional segment, mainly in Tobago with its superior beaches and sea bathing water quality, and to a much lesser extent in Trinidad. Weddings and honeymoon tourism is being developed as an adjunct to beach tourism in Tobago.

Both islands are being developed as destinations for the following other types of conventional tourism:

- **The meetings and conventions** niche intends to capitalise on the fact that an agreement with the US allows expenses for meetings and conventions held in Trinidad and Tobago to be claimed as tax deductible.
- **The gaming industry** is slated for development, with a foundation in private casinos already firmly in place. The strategy here is to use a regulated quality gaming industry as a draw card for general tourism development.
- **Sports tourism** of a distinct nature, namely golf tourism, is being promoted in Tobago. This is centred on the high standard of golfing facilities that the island boasts. In terms of water sports, Tobago is already attracting increasing numbers of game fishermen and yachtsmen. Large numbers of yachtsmen also drop anchor in Trinidad to escape the hurricane ravages of the northern Caribbean and to take advantage of the excellent boat maintenance facilities that have been developed on the Chaguaramas peninsula.

2.4.2 Ecotourism

This fast-growing segment is receiving more official attention and will capitalise on the country's rich biodiversity. Ecotourism in Trinidad and Tobago includes the following activities:

- Soft adventure, e.g. on the North Coast trail between Matelot and Blanchisseuse; Nariva Swamp.
- Bird watching, e.g. at the Asa Wright nature Centre.
- Turtle watching, e.g. at the Grande Riviere Beach
- Educational ecology tours, e.g. at the Pointe-A-Pierre Wildfowl Trust
- Community experiences, e.g. in the Brasso Seco Village
- National Park visits, e.g. at the Caroni Swamp National Park
- Nature-based activities – nature trails, diving, camping

The principal strategy for the development of ecotourism lies in the establishment of a proper National Parks System. Such establishment was well underway under a World Bank National Parks and Watershed Management Project. The project had been prepared for presentation for readily available funding from the Bank. However, there now appears to be some Government hesitation to borrow money for this purpose and there has been talk of financing from local resources. This does not augur well for national park development since national park establishment, like tourism, is relegated to a low priority in national budgeting.

2.4.3 Cultural tourism

This type of tourism is centred on the world famous Trinidad Carnival. Although, the festival attracts foreign visitors from around the world, the cultural tourism programme specially targets 2nd and 3rd generation Trinidad and Tobago national living abroad. This thrust will include the development of the capital city, Port of Spain, as the intellectual and cultural capital of the Caribbean. The Tobago Heritage Festival, featuring a typical country wedding, is the centrepiece of cultural tourism in the sister isle.

2.4.4 Cruise Tourism

Because of hurricane activity in the wider Caribbean area, Trinidad and Tobago, which lies outside the hurricane belt, has been receiving more and more visits from cruise ships. TIDCO has recognised the employment opportunities that could be generated for day activity operators and small businesses. The company has worked steadfastly over the past five years to have the international cruise lines consider Trinidad and Tobago as a potential stop for their tours. TIDCO, in conjunction with the Port Authority of Trinidad and Tobago, has consistently attended the major cruise promotional shows. These have included the Florida Caribbean Cruise Association. Cruise ship passenger arrivals skyrocketed from 31,880 in 1997 to 63,251 in 1999.

Cruise Ship Tourism has become an area of special focus for the Tourism Task Force of the World Commission on Protected Areas primarily because of their potential to pollute the seas. The disgorging of masses of passengers of cruise ships in ecologically sensitive terrestrial areas is also of some concern. Such a threat and how it was handled is the subject of the case study.

2.4.5 Sectoral and stakeholder participation in the tourism process

As the captain of the tourism process, the Government is acutely conscious of involving all stakeholders on an interactive basis. Thus, stakeholders participate fully in all planning activities for tourism. A wide section of stakeholders were consulted during the preparation of the 1994 TMP and the separate 1998 strategic planning exercises of the Ministry of Tourism and the THA.

In terms of day-to-day tourism activity, the various operators carry on their business fairly independently, but within the legislative and institutional framework laid down by the Government. A description of the roles of sectors and stakeholders follow.

2.4.6 Public sector

The Ministry of Tourism develops policy and plans and helps with the drafting of applicable laws. The principal law governing the activities in the tourism industry is the Tourism Development Act, 2000. This intent of this Act is to facilitate the development of tourism by providing incentives and concessions to investors.

TIDCO administers the incentives and concessions obtainable under the Act and implements the Ministry's policies and plans. TIDCO's Tourism Division implements action plans in three functional areas:

- Marketing
- Product Development and Consumer Relations
- Destination information and administration

TIDCO's Division of Government Policy and Special Projects has engaged in a number of tourism infrastructure developments. These include:

- Enhancement and development of beach and river facilities
- Construction of Caroni Swamp National Park Headquarters
- Refurbishment of visitor facilities at the Pitch Lake

2.4.7 Private sector

The principal role of the private sector is in the ownership and operation of tourism facilities. These include accommodation facilities (hotels, guesthouses, ecolodges), marinas, water sport facilities, charter boats, transportation, convention centres and golf courses.

Destination management and ground tour operations companies also belong to the private sector.

2.4.8 NGOs

The principal role of NGOs lies in the work of advocating sustainable tourism. The Caribbean Forest Conservation Association, for example, lobbies for the conservation of forest ecosystems as a basis for sustainable ecotourism. Environment Tobago performs the role of environmental watchdog over tourism development projects. The Crusoe Reef Society and Fishermen and Friends of the Sea are NGOs with a special interest in the conservation of the marine environment.

Apart from advocacy work, two NGOs stand out as ecotourism operators. The Pointe-A-Pierre Wildfowl Trust has made a success of developing a wetland into a site for captive breeding of avifauna, and a highly visited tourism and environmental education centre. The Asa Wright Nature Centre operates a highly successful lodge that is frequented by international bird watchers.

2.4.9 Local communities

The most visible local community activity in the tourism process is the protection of turtle beaches. Nature Seekers Inc. has won international awards for their turtle protection work on beaches on the east coast of Trinidad. The Grande Riviere Environmental Awareness Trust (GREAT) has also gained recognition for their work in protecting turtles on the beaches of the north coast. Both these groups also engage in guided tours of turtle beaches during the nesting season between March and September.

TIDCO has sponsored a thrust to have local communities profitably manage their tourism resources through a Community Tourism Action Programme. This thrust has led to the creation of a number of Tourism Action Committees which are now grouped under an umbrella body called the Foundation for Sustainable Community Tourism (FOSCOM).

The newest community group with a passionate interest in sustainable tourism development is Stakeholders Against Destruction (S.A.D.) for Toco. This group was born out of a threat to the tourism resources of the area by the development of a large industrial and cruise ship port on the Northeast coast of Trinidad. The story of this conflict will be elaborated in Section 6 below.

2.5 Education and training for tourism

The principal in-country institution for tourism education and training is the Trinidad and Tobago Hospitality Training Institute. This Institute, the successor to the Trinidad and Tobago Hotel School, was set up in 1996 with an IDB grant administered by the Trinidad and Tobago Hotel, Restaurants and Tourism Association. The Institute has a campus in Trinidad and one in Tobago. It offers Associate Degrees in Tourism Management and Hospitality Management and Certificate Programmes in Food and Beverage Supervision, Culinary Arts, Customer Service, Front Office Operations and Travel Operations. The Institute, after evaluation, also grants Certificates to Tour Guides trained by a private sector operator, Tours Incredible.

The Institute has entered into arrangements with tertiary educational institutions in North America to have their certification accredited and applicable to higher education in these institutions.

TIDCO's Division of Government Policy and Special Projects has put on special courses, including one on Sustainable Tourism Best Practice. The Division also imparted training for communities in tourism planning and education.

Other tourism trainers include:

- SERVOL - hospitality at the vocational level
- UWI Faculty of Social Sciences – Hotel Management
- UWI Institute of Business (under contract to TIDCO) – Service excellence, management development, training of trainers (for personnel in public agencies)

- UWI School of Continuing Studies – Small Hotel and Institutional Management; Tourism Management and Development
- Youth Training Employment Partnership Programme (tour guiding)
- Forestry Division (nature interpretation and turtle beach guiding)
- Asa Wright Nature Centre (in-house tour guide training).

The Caribbean Forest Conservation Association has executed a special nature tour guide training programme for local communities adjacent to the proposed Matura National Park in Northeast Trinidad.

2.6 Application of best practice for sustainable tourism

At the level of tourism-related activities, sustainable tourism can be compromised by improper design and construction of tourism plant, unsatisfactory operation of tourism facilities, and the recreational behaviour of the tourist. Best practices to minimise impacts in all these areas are well documented and available to private sector owners and operators of tourism plant. However, there is no mechanism in place to enforce compliance with best practice standards. Such compliance is left to the tourism enterprises in whose interest it would be to generate their own benefit and productivity through maintaining a satisfied tourist clientele. These enterprises have not traditionally put a high priority on observing best practice standards.

New tourism facilities are subject to the development approval process of the Town and Country Planning Division (TCPD), which invariably demand an Environmental Impact Statement (EIS). The TCPD insists on appropriate mitigation measures that incorporate best practice elements, but they have no follow-up procedure to monitor compliance with the undertakings of the EIS. The environmental assessment process will shortly be overseen by the Environmental Management Authority (EMA). New tourism developments will need a Certificate of Environmental Clearance from this Authority, but hotels of up to 60 rooms will be exempt from this procedure. Under the enabling legislation that established the EMA, provision has been made for follow-up environmental compliance auditing.

At the level of government policy and planning, best practice guidelines for sustainable tourism are in a state of evolution. The Tourism Task Force of the World Commission for Protected Areas (WCPA) of the IUCN has made an attempt to develop approaches and practice for the sustainable use of biological resources in the tourism sector. A paper to this effect was presented at the fourth meeting of the Convention on Biological Diversity Subsidiary Body on Scientific, Technical and Technological Advice in June 1999. In this paper, the IUCN cautioned that sustainable tourism represented one of a suite of regimes under which the biological resources of a country may be used in a sustainable manner. It follows, therefore, that best practice for sustainable tourism at the policy and planning level could very well be applicable to other economic sectors.

The IUCN approaches for the sustainable use of biological resources in a tourism regime might be termed best practice guidelines for integrating biodiversity into tourism planning. Expressed as critical conditions that enhance the sustainability of biodiversity uses, they are:

- Institutional structures for appropriately scaled management and control that provide both positive incentives, negative sanctions and good governance;
- Management and control systems that take account of land tenure, access rights, regulatory systems, traditional knowledge, and customary law;
- Local peoples' participation in all phases of the operation from planning to implementation;
- Equitable sharing and greater *in situ* concentration of benefits;
- Effective monitoring and feedback mechanisms; and
- Capacity to adjust management in light of monitoring results.

None of these conditions have really received serious consideration from tourism planners in Trinidad and Tobago. A possible exception is willingness to accommodate local peoples' participation in all phases of tourism operation, from planning to operation. It will be seen in the case presented in Section 6 that the application of this principle, albeit driven from the bottom up, had a major effect on a proposed tourism development.

2.7 Main ecotourism attractions

Trinidad and Tobago offers a unique diversity of ecotourism potential. Together they contain some of the most spectacular scenery, birds, other wildlife, and natural attractions in the Caribbean, providing a greater diversity of terrestrial ecosystems than any of the other Caribbean islands. These include herbaceous swamps, mangrove swamps, climax rain forests, cactus and thorn scrub forests and savannahs. Many of the species of flora and fauna originate from the South American mainland and are not seen elsewhere in the Caribbean.

Existing ecotourism in Trinidad is currently focussed on the following attractions:

- **Asa Wright Nature Centre**
Located in the Arima Valley of the Northern Range of mountains, this world famous nature resort has functioned both as a wildlife sanctuary and nature lodge since its inception in 1967. This rainforest retreat has been the haunt of the world's leading ornithologists and naturalists. Of the 418 0 birds recorded in Trinidad, as many as 170 have been sighted here. Asa Wright has become a model for sustainable development and ecotourism projects in the Caribbean; its pioneering example recognised by the prestigious Islands Magazine Ecotourism Award. This private sector facility is operated as a non-profit trust by a board of management with international representation.
- **Caroni Swamp Bird Sanctuary**
Covering an area of 5,000 hectares, the Caroni Swamp represents the most outstanding example of a mangrove swamp ecosystem in the country. It provides the only habitat in the country for the Scarlet Ibis, one of the nation's national birds as well as numerous other wildlife species. It is an important and recreational and educational resource within easy reach of 75% of the country's population and is also an important economic fishing area as well as a nursery ground for fish. The Caroni Swamp, which now boasts a modern

Visitors Centre, enjoys legal status as a Forest Reserve and is designated to become one of the country's national parks. Visits to the Scarlet Ibis nesting area by organised boat tours are strictly controlled by the Forestry Division

- **Nariva Swamp**

Located on the east coast, the Nariva Swamp represents the largest freshwater ecosystem within the country and provides a habitat for a large number of wildlife species, including 171 species of birds and 55 species of mammals. It also represents the best remaining examples of the bloodwood and crappo-guatecare forest type within the country. The area lends itself to kayaking. Like the Caroni Swamp, the Nariva Swamp is a legally constituted Forest Reserve and is earmarked for national park status.

- **Pointe-A-Pierre Wildfowl Trust**

This 33-year-old Trust is a non-governmental non-profit organisation whose base encompasses two lakes in a 26-hectare area nestled in the heart of oil refinery lands. This is perhaps the best known environmental education centre in the country. The Trust also has active programmes in research, captive breeding and reintroduction of wetland birds to the wild.

- **Pitch Lake**

This natural landmark covers about 36 hectares and is located in the oil belt of the south. It is a geologically unique phenomenon and is reputed to be the world's largest source of natural asphalt. It is also historically important dating back to the early 1500's when Sir Walter Raleigh reportedly landed and caulked his ships with material from the lake.

- **Matura and Grande Riviere turtle beaches**

During the nesting season of the leatherback turtle between March and September, these beaches in the Northeast are flooded with visitors. The Forestry Division has had to step in and facilitate the development of community-based organisations to control the local situation – Nature Seekers Inc. in the case of Matura and Grand Riviere Environmental Awareness Trust (GREAT) in the case of Grande Riviere. These organisations not only patrol the beaches to protect the turtles from human predators, but also conduct organised tours for both local and foreign visitors.

- **Waterfalls : Maracas, Paria, Rio Seco**

The waterfalls of the Northern Range are visited, not only for the enjoyment of scenery, but also for the bathing in the fresh water pools at the feet of the falls. The Maracas falls fall within the proposed Maracas National Park, the Paria within the sphere of influence of the Brasso Seco-Paria Tourism Action Committee, and the Rio Seco within the proposed Matura National Park.

Tobago is diversifying its tourism product away from winter beach tourism towards ecotourism. Ecotourism attractions in Tobago include the following:

- **Buccoo Reef**
Buccoo Reef at one time represented the most outstanding example of coral reefs in the country. The system consists of a large shallow reef lagoon bordered by the Bon Accord Lagoon and mangrove swamp landward, and an arc of five reef flats. The fauna of the reef flats is composed mainly of elkhorn coral, finger coral, fire coral, and sea carpet. Entry to the Buccoo Reef is by glass-bottomed tour boats. The reef has been considerably degraded by visitors walking on the formation and helping themselves, in spite of prohibition, to samples of coral life.
- **Speyside**
The reefs in this area are fringing reefs allowing easy access to the reef shallows from the shore. Seaward, the reefs slope to depths as great as 35 metres from where the surface ripples are still visible. Stony corals, octocorals, sponges, marine algae, and reef fishes are the most common species occurring here. The area is very popular for snorkelling and scuba diving.
- **Main Ridge Forest Reserve**
This area was declared a Forest Reserve in 1765, making it one of the oldest natural protected areas in the Western Hemisphere. It contains a central chain of mountains that run Northeast to Southwest and extends to two-thirds of the length of the island. The Rain Forest that covers the mountain chain attracts many visitors who gain access to the area via two main spine trails on opposite sides of the main Roxborough – Parlatuvier Road. An IDB Project to develop a trail system for this proposed National Park was aborted by the THA for unstated reasons.

3 OVERVIEW OF PRESENT STATE OF BIODIVERSITY CONSERVATION AND PLANNING

3.1 Relative priority in national policy formulation and planning

At the level of the disinterested political directorate, biodiversity conservation does not enjoy a high priority. During the NBSAP country exercise, a special session was arranged in January 1998 for briefing of Members of Parliament on the project and on the importance of biodiversity conservation. Only two Ministers could find the time to attend. It is not surprising, therefore, to find biodiversity conservation *per se* enjoying little or no attention in national developmental policy formulation or planning.

At the government agency level, however, some thought has gone into policy formulation and planning for biodiversity conservation. The EMA published a National Environmental Policy (NEP) in June 1998 after its acceptance by Government. The NEP formulated policy *inter alia*, for:

- The designation and protection of Environmentally Sensitive Areas;
- The designation and protection of Environmentally Sensitive Species;
- The conservation of representative samples of all coastal and marine ecosystems;
- The protection of primary natural forest from conversion to other forms of land use; and
- The preservation of representative examples of all wetland types in the country.

In terms of plans for biodiversity conservation, a draft National Environmental Action Plan (NEAP) prepared for the EMA in July 1998, listed *inter alia* the following actions:

- Development and Implementation of the NBSAP;
- Establishment of national parks;
- Establishment of a coral reef monitoring programme; and
- Inventory, development and monitoring of wetland resources.

Except for the development of the NBSAP, which was driven by the UNDP, the EMA has not been able to stimulate a start on any of the actions listed above. This is because the NEAP is still in draft form and requires a stakeholders' workshop to finalise the action plan. The establishment of national parks was being undertaken by the Ministry of Agriculture under a separate World Bank Project, which is now in abeyance.

3.2 Institutional structure of government policy formulation and planning for biodiversity

As the co-ordinating agency for environmental management in Trinidad and Tobago, the EMA is the principal institution engaged in government policy formulation and planning. This it does through the Conservation and Planning Services Department. The department is responsible for co-ordinating environmental and natural resources planning and management, identification of environmentally sensitive species and areas, and the development of the National Environmental Management Plan and the preparation of the NBSAP. The EMA has not been entirely successful in its co-ordination function. Much of this has been as a result of protection of turf by the established agencies such as the Forestry Division and the Fisheries Division.

Original planning for terrestrial biological resources is undertaken by the Forestry Division of the Ministry of the Environment. This planning was basically completed decades ago through the system of forest reservation where tracts of forestland were protected primarily for watershed management purposes. Protected areas planning for ecological purposes commenced in 1980 under this agency. The Forestry Division as a whole was not particularly active in the more detailed national parks planning of the World Bank project, having being marginalised by the Planning Division of the then Ministry of Agriculture. This marginalisation perhaps contributed to the stalling of that project.

Planning for marine biological resources falls within the purview of the Fisheries Division of the Ministry of Food Production and Marine Resources. A statutory body, the Institute of Marine Affairs, performs the research function associated with policy formulation for coastal and marine resources.

Tobago handles its own policy formulation and planning for biological resources through the Secretary for Planning in the THA. A tense political relationship between the THA and the Trinidad-based central government has interfered with smooth planning and implementation. The two parties have different interpretations of the autonomy accorded the THA under the Tobago House of Assembly Act.

3.3 Country participation in the Convention on Biodiversity

On behalf of the Government of Trinidad and Tobago, the Minister with responsibility for the environment signed the CBD at the Earth Summit in Rio de Janeiro in 1992. The country ratified the Convention in August 1996. Initially, the EMA was the agency responsible for fulfilling the obligations of the country under the Convention but a representative has never attended the Conferences of the Parties (COP). A Ministry of Agriculture representative, however, has attended two COPs. The Ministry of the Environment has now abrogated unto itself the role of focal point for the CBD and has attended two COPs. The present EMA co-ordinator of the NBSAP Project has attended COPs, but in her capacity as an official of the Ministry of Agriculture. She is thus able to translate benefits of attendance into the work of the NBSAP Project. Trinidad and Tobago does not attend SBSTTA meetings.

Altogether, Trinidad and Tobago has attended six COPs. These COPs have served to enrich the capacity of the country for biodiversity conservation and to strengthen the output of the NBSAP Project. Attendance at the COPs has also served to expose Trinidad and Tobago delegates to the views of other Caribbean islands so that solutions to common problems could be formulated and a regional perspective achieved.

In compliance with Article 6 of the CBD, Trinidad and Tobago completed the preparation of a NBSAP in 2000.

3.4 Role of NGOs and local communities in biodiversity conservation

There is a wide variety of NGOs and community-based organisations participating in biodiversity conservation, including service clubs, environmental organisations, trusts, and community groups. Many of the environmental organisations belong to an umbrella group known as the Council of Presidents of the Environment (COPE), which facilitates collaboration amongst its members.

Under the principal constraint of inadequate funding, NGOs and CBOs are engaged in biodiversity conservation through initiatives in research, species and ecosystem management and education. The T&T Field Naturalists' Club has a long tradition of scientific research on the biota of T&T, and has contributed significantly to the knowledge base. Several organizations have contributed knowledge regarding their specific interest floral or faunal group, for example orchids, game fish, horticultural species, and birds. The Zoological Society of T&T and the Pointe-a-Pierre Wildfowl Trust conducts ex-situ species management. Species protection within its habitat is conducted by the Fishing Pond Environment and Community Group, GREAT,

Nature Seekers Inc. and the Toco Foundation. Ecosystem management is conducted by the Asa Wright Nature Centre on their forested lands in the Arima and Aripo Valleys. The Caribbean Forest Conservation Association has been involved in biodiversity planning as World Bank consultants on a project to establish pilot national parks.

3.5 Overview of System of National Parks and Protected Areas

3.5.1 Legal basis

There are no genuine legally constituted National Parks or other Protected Areas in Trinidad and Tobago. National parks exist in name only. A System Plan was drawn up with assistance from the Organisation of American States in 1980 but legislation to give effect to this plan was never enacted. As part of a 1994 World Bank National Parks Project, and with assistance from the World Conservation Union, special law was drafted and laid in Parliament but this was subsequently withdrawn. This law provided for the creation of an autonomous National Parks and Wildlife Authority, and this was met with resistance in certain quarters where the preference was for keeping the national parks administration within the National Parks Section of the Forestry Division. The argument was advanced that there was no need for a new institution since the National Parks section could do as good a job if it had the funds earmarked for that institution. The establishment of three pilot national parks at Maracas, Matura and Main Ridge (Tobago) through the World Bank Project has been put in abeyance.

Protected areas in Trinidad and Tobago, such as they are, receive the legal protection that is afforded under the inappropriate Forest Reserve and Prohibited Area provisions of the Forests Act.

3.5.2 Administrative structure

The National Parks Section of the Forestry Division has been evolving in response to changing needs for protected area management in T&T, but has not been afforded a legitimate structure within the Division. Their general objective in accordance with that of the World Conservation Union (IUCN) is “to protect in perpetuity those areas of the country which represent significant examples of the country’s natural heritage in such judicious ways and means which will leave it unimpaired for the benefit of future generations.” However, the areas under management have generally been the smallest areas of recreational and historic interest, with high public usage. A primary focus has been environmental education and sensitization in schools and communities particularly in the north east region, and the development of interpretive centres in the areas under its direct management.

The National Parks Section obtains its staffing complement from the main Forestry Division, as Foresters and Forest Rangers, who then have to be oriented to the different functions of these sections. Manpower deployment plans within the Division are insensitive to the particular skills that the Section needs and the necessary retraining programmes are not in place to make this transition smoothly.

A number of minor natural areas fall under the administrative control of a range of other government agencies.

3.5.3 Operational budget

The National Parks Section operates on a shoestring budget. There are inadequate funds to provide for a proper complement of visitor and interpretative centres, parking areas, rest-rooms, trails, signage, recreation areas, refreshment concessions, true park rangers, tour guides, educational activities, community development, and all the other infrastructure that contribute to the enjoyment of natural areas.

The 2001 budget for the National Parks Section amounts to US\$386,000. Of this sum, US\$238,000 comes from the Tourism Development Facility of the Ministry of Finance to manage four urban/suburban historic sites divested from the Tourism Development Authority in 1990. The meagre balance of US\$148,000 is used for the management of natural areas. This represents a mere 2.5% of the total budget of the Forestry Division.

3.5.4 Main protected areas

There are a number of natural areas in Trinidad and Tobago where a tradition of organised visitation has been established and that could form the basis of a more developed ecotourism industry. Though not strictly protected by law, or properly managed to achieve specific conservation objectives, the National Parks Section currently provides some rudimentary management in the following natural areas that were identified in the 1980 System Plan:

- **Cleaver Woods Recreation Park**
This park partly covered with forest of the crappo-guatecare association. It presents a typical example of a secondary tropical rain forest and affords opportunities in an urban setting for educational and recreational opportunities in a semi-urban area. The park is located approximately one kilometre from the Borough of Arima, the settlement most associated with the indigenous Carib population. A Visitors Centre in the park displays detailed information on the Carib culture.
- **Aripo Savannahs Scientific Reserve**
This area is visited by research-based tourists. It is a unique ecosystem representing an outstanding example of a marsh formation which includes marsh forest, palm-marsh and savannah. It contains plant and animal species which are threatened with extinction in the country. Representing the only remaining example of this vegetative association, it is a valuable part of the natural heritage and an extremely important scientific and educational resource.
- **Quinam Recreation Park**
This park provides a good southern beach area in the southwest peninsula of Trinidad where public recreation potential could be lost through expansion of private home development.

- **San Fernando Hill Natural Landmark**

Located in the centre of the City of San Fernando, the industrial capital, it is the most prominent landscape feature for miles around and represents the most outstanding example of a variety of geological features. Although disturbed to a considerable extent, it is the only remaining natural landscape in the area. A recently constructed Visitors Centre makes the San Fernando Hill a popular recreational area for the inhabitants of that crowded southern city.

- **Palmiste National Park**

Recently developed and wrongly designated as a national park, this recreation park is located about 5 kilometres south of San Fernando. It comprises about 20 hectares beautifully landscaped with mostly samaan trees and a small pond. The rolling topography and scenic landscape has provided the opportunity to develop a variety of recreational activities.

- **Matura National Park**

This national park in name only is actually part of the Matura Forest Reserve, and a priority area identified by the World Bank project for the establishment of a true National Park. Located in Northeast Trinidad, where Toco village is the principal settlement, it represents the greatest ecotourism potential for the future. This area contains the largest contiguous block of undisturbed habitat in the country, including the only remaining examples of relatively undisturbed seasonal and montane forest associations. It also contains examples of high forest birds not found elsewhere in the country, some fresh water fishes that have become extinct in South America, and South American primates such as the Red Howler Monkey and the White-Fronted Capuchin Monkey.

Natural areas, already described, and managed by entities other than the National Parks Section are Caroni Swamp Bird Sanctuary (managed by the Wildlife Division), Buccoo Reef Marine Park and the Main Ridge Forest Reserve, both managed by the THA. Other areas not managed by the National Parks Section include:

- **Manzanilla Nature Conservation Reserve**

Managed by the Wildlife Section, the area represents the only example of the palmiste-balata faciation. The beach area provides a habitat for nesting of sea turtles especially the leatherback. Turtle watching activity is controlled in conjunction with the local communities. Matura Beach, where nature Seekers Inc. operates, falls within this Reserve.

- **Caura River Recreation Park**

Managed by the Watershed Management Section of the Forestry Division, the area is located along the Caura River at the site of an abandoned reservoir project. The area is heavily used for river recreation with emphasis on swimming in pools along the river.

The river originates on the upper slope of the Northern Range with several small streams feeding the Caura River above the site.

- **Chaguaramas National Park**

This former U.S. naval base is managed by the under-funded National Parks Department of the autonomous Chaguaramas Development Authority. Located close to the capital city of Port of Spain, the area represents the most outstanding terrestrial and marine ecosystem in the country. It provides a unique habitat for a number of species that are rare and threatened. The rugged terrain coastlands and small islands are the most scenic landscape in the country. The vegetative cover on the small islands and on the peninsula is the only remaining of this sample of this vegetation type in the country. Coral formations in Macqueripe Bay and around the islands are the only of its kind in the country.

- **Laurier Road Recreation Park**

Managed by the SouthWest Conservancy of the Forestry Division, the area is located east of Palo Seco in the southern lowlands. The area contains a small pond formed by the impoundment of a stream flowing through the acurel-moussara-jiggerwood forest type. Fishing and picnicking are presently carried on within the area.

4 OVERVIEW OF LINKS BETWEEN TOURISM DEVELOPMENT AND BIODIVERSITY CONSERVATION AND PLANNING (BCP)

4.1 Present interaction of NBSAP and the tourism sector

The NBSAP has only recently been completed so that its application to the activities of the tourism sector will of necessity be in a state of infancy. However, the process of consultation between the NBSAP Project and the tourism authorities has already begun. It is perhaps fortuitous that a tourism policy has not yet been finalised since an opportunity is now afforded for biodiversity concerns to be incorporated into tourism policy. Much will depend on the attitude of TIDCO towards such concerns. Interviews with key players indicate that there is growing a more highly developed commonality of interest between the tourism and the biodiversity sectors.

4.2 Problems and constraints with NBSAP and the tourism sector

4.2.1 Political

The tourism portfolio is gaining a higher political profile. It had fallen from being a Ministry linked to the powerful Ministry of Finance to a stand alone Ministry with an out-of-favour Minister. Recently, however, the Ministry of Tourism has been placed under a powerful Minister who also has responsibility for Enterprise Development, Trade and Foreign Affairs. Tourism development, therefore, is expected to get a boost.

The same cannot be said for biodiversity and environmental matters generally. The Ministry of the Environment has now been handed to the same out-of-favour Minister who held the Tourism portfolio, and there is a general impression that the Ministry of the Environment is one where the weaker Ministers are placed. This is keeping with a public perception that the Government is not particularly sensitive to environmental matters. It is a government with a strong bias towards development, often at the expense of the environment. There are many instances of Town and Country Planning technocrats being overruled by the Minister of Integrated Planning and Development on questionable tourism projects.

The local case study that is described in this paper is an example of political preference for development over environment. The Government backed a project for the establishment of a large industrial port (that would also serve for cruise ship tourism) in an ecologically sensitive area. The Government was prepared to accept a patently weak Environmental Impact Statement and give the green light to the project. Those plans were scrapped when the Government was confronted by vigorous objection by the local community after they demanded genuine public consultation.

The attitude of the political directorate towards the environment is not expected to change. However, with the coming on stream of the Environmental Commission, the EMA now has the required teeth to force more serious consideration of biodiversity concerns into the tourism sector.

4.2.2 Economic

The economic policies that have been implied in the operations of the various sectors of the economy primarily target development. No planning for the environmental consequences of economic development policy takes place. Economic incentives are in place for the development of tourism but there is a need to ensure that the incentive scheme is applied in a manner that would ensure sustainable tourism development. There is also a need to develop a regime of disincentives aimed at discouraging unsustainable tourism practices.

The use of financial instruments as management tools is an area in dire need of attention, to achieve the aims and objectives of the CBD, and, nationally, for the conservation and sustainable use of biodiversity. Financial instruments can play a significant role in facilitating conservation efforts through demonstrating the monetary value of ecosystems and their components.

It is, therefore, vital to quantify the contribution biodiversity makes to the national economy, if its management and sustainable use is to become a national priority. The inability to value biodiversity at a macro-economic level, makes it a low priority when it comes to the sharing of national resources for its management and sustainable use, and the understanding of its loss and destruction. Unfortunately, the present information, research and data collection systems, do not permit the measurement of its contribution with any degree of accuracy.

Financial instruments have not been more widely utilised for a number of reasons, and these have contributed to attitudes and values about these resources that have encouraged wasteful

practices and over-exploitation. There are serious “hidden costs” that are passed onto the society through the over-exploitation and destruction of biodiversity, due in part to the under-valuing of these resources. Flooding, due to the destruction of forests and watersheds, and the extreme pollution of rivers by industry, from which the population accesses potable water, are two obvious examples. These have serious and expensive repercussions on other agencies that manage and maintain infrastructure and public utilities.

It has been agreed among sector specialists, stakeholders and communities that there is little or no obvious economic incentive to conserve biodiversity and to use it sustainably in T&T, and that this omission has had a number of repercussions on the use of the resources and their management. Financial instruments that do exist have often been to the detriment of biodiversity and continue to result in over-exploitation of resources (e.g. fisheries subsidies). The NBSAP is commissioning a study to look at the economic value of biodiversity with the aim of developing financial instruments that could be used for its conservation and sustainable development.

4.2.3 Social

Although a fair measure of environmental apathy exists in Trinidad and Tobago, there is a distinct environmentally conscious civil society sector. There are several active non-governmental organisations and community based organisations, involved in environmental and biodiversity conservation issues. Their focus is as varied as the groups themselves and range in scope from public education and advocacy for changing national legislation for conservation; projects that affect wildlife populations or habitats; lobbying and developmental groups for specific user groups, e.g. fishermen; promoting practices that lessen the impacts of our activities on the environment, like organic farming; organising communities to take advantage of low impact environmental activities, e.g. tourism and tour guiding, user groups, e.g. hunters associations and logging interests.

However, most of these organisations are relatively small and traditionally have had their operations funded by member contributions and donations. Such funding mechanisms are being superseded in some groups through active pursuit of environmental consultancies, grant funding, and participation in ecotourism. These groups need to take a more vigorous approach to funds acquisition, if they are to have a larger impact on conservation.

The general view among the groups is that their efforts are not appreciated, they are often not consulted and are perceived as a nuisance by the state managers. Several have complained of the lack of support by the state when they have reported illegal activities. Their own growth and capacity in terms of biodiversity conservation is also constrained by the lack of support by the state for their contributions, and this limits the effectiveness of their engagement on these issues.

This NGO/CBOs community has great potential to contribute to the conservation of biodiversity of the country. They represent a committed constituency that could form productive partnerships with the state institutions. Their continued growth and strength is bound up with the state perception and engagement of them. The capacities of state agencies and NGOs to jointly

manage and conserve biodiversity are inextricably linked. Strengthening the linkages between these sectors would benefit the country's biodiversity resources.

There needs to be a genuine recognition and respect of each sector's contribution and potential to address the biodiversity issues that we face. Neither the state agencies nor the non-governmental organisations will ever have the resources to manage biodiversity independently. It requires the mutual development and support of stakeholders and their institutions to build the country's capacity to manage biodiversity in its broadest sense. The capacity of public agencies to manage and conserve biodiversity is inextricably linked to the growth and development of private organisations - NGOs and CBOs. Communication and co-operation within and between agencies, and with their stakeholders, is vital to build joint capacity for implementation of the strategies and actions recommended in this document.

4.2.4 Technical (managerial)

Much of the legal responsibility for the conservation of biodiversity in Trinidad and Tobago resides with the government agencies such as the Ministry of Agriculture, Land and Marine Resources, the Environmental Management Authority, and the Tobago House of Assembly. These agencies lack the financial, personnel or in some cases, the legal and policy instruments to actively manage biodiversity. They, therefore, cannot achieve their objectives effectively. This is a result of a combination of factors, including:

- The persistent trend to minimise and reduce the public service, which continues to affect the country's ability to manage biodiversity.
- The lack of adaptability of these institutions to changing environmental, social and economic circumstances.
- Their inability to keep abreast with changing global trends in management.
- Weak collaborative efforts between agencies (public sector, private sector, NGOs, CBOs, research institutions).
- Resistance to change in sectors of the public service.

This resistance/inability to change is reflected in:

- Poor staffing levels, motivation and personnel commitment
- Low training levels, gaps and approaches to training
- Low levels and deployment of financing
- Organisational inefficiency
- Poor prioritisation within departments
- Continued non-participatory methods of planning and management
- Insensitivity to community needs

One of the greatest challenges to implementing any plan for the country's biodiversity lies in the inadequacy of public sector capacity.

4.2.5 Biodiversity conservation *per se*

The Tourism Sector Report of the NBSAP identified the following threats to biodiversity from tourism development in Trinidad and Tobago:

- **Impacts of Tourism Construction**

The construction of tourism infrastructure such as hotels and resorts, marinas, golf courses and cruise ship facilities, as well as facilities constructed in protected areas, has contributed to:

- loss of forests
- destruction of natural habitats, especially wetlands
- water pollution and watershed destruction
- reduction of ecosystems

In many islands as in the case of Trinidad and Tobago, a number of plant and bird species are disappearing. Impact is also being felt on mangrove and wetland ecosystems, in terms of its variety and productivity. Tourism construction has been known to reshape entire coastlines and the building of groynes to protect beaches and limit public access create disruption of tidal flows and algae growth. Resort development and major tourist infrastructure projects often attract non-indigenous causal labour. This can give rise to the development of rural slums, squatting and unsightly urban development. Sandmining, landfilling and drainage works are other negative impacts of tourism development.

- **Some Impacts of Operating Tourism Facilities**

Some of the negative environmental impacts linked to the operation of tourism facilities are:

- solid waste disposal;
- waste water and greywater discharge from boats and hotels;
- chemical pollution from use in the cleaning and painting of yachts;
- damage to reefs from anchoring;
- damaging of reefs by siltation;
- Noise pollution from operation of jet skis disturbing nesting sea birds; and
- the use of pesticides in landscaping and the maintenance of golf courses
- cruise ship anchoring;
- garbage disposal;
- harvesting of reefs for coral and souvenirs pose additional problems.
- heavy draw down on fresh water supply
- excessive energy usage
- alteration of the ecology through the introduction of exotic species which disaffects the natural biodiversity

The advent of nature base tourism has forced authorities to examine ways to protect the environment. One of the most pressing issues for administrators is how to cope with increasing

tourist visitation while protecting those ecosystems that attract tourists but cannot support heavy disturbances.

Inadequate waste disposal contributes to excessive growth of algae, which develop in waters where sewerage effluents empty, killing off reef organisms and posing a health hazard. Tourist activities such as hiking, horseback riding and mountain biking cause a loss of ground cover on trails and the disruption of bird life. Clearing of areas for campsites and picnic spots even if done with care can also affect biodiversity through the loss of ground cover when erecting facilities and tourist traffic.

- **Public Utilities.**

In the cases of unplanned development the provision of utilities such as electricity as well as roads and excavations create aesthetic scars on the vistas. Power lines as well as support facilities for tourists include residential accommodation roads and car parks, water supplies and waste disposal facilities also destroy vegetation. Roads for example often act as barriers and disorient animals.

4.2.6 Examples of bad practices and failures (Tobago)

The following examples of bad practices and failures are cited in the Tourism Sector Report of the NBSAP:

- **Hilton Hotel project on Lowlands Estate Development**

- Impacts upon the Petit Trou Wetlands through changes in hydrology (catchment ponds)
- Habitat fragmentation and removal of vegetation (buffer) surrounding the mangrove swamp. The mangrove is now bordered by a roadway to the East, North and West.
- Impacts upon the wetlands and marine habitats of the golf course (fertiliser and pesticides)
- Sewage effluent from hotel, villas and marina impacting negatively on the marine environment.

- **Golden Grove Estate and Pigeon Point Development**

A large-scale resort was proposed for the area of Golden Grove Estate bordering the Bon Accord Lagoon (Buccoo Reef Marine Park) and Sheerbirds point. This resort has received outline planning approval from the Town and Country Planning Division but its present status is not clear since there were serious objections from several quarters in Tobago. The views of one Non-Government Organisation, Environment Tobago which mirror the objections of concerned citizens include:

- Negative impacts upon Buccoo Reef and Bon Accord Lagoon of sewerage effluent from the development

- Destruction of the mangrove forest at Sheerbirds point and fringing the lagoon with the consequent impact upon wildlife.
- Impact of the marina proposed for Bon Accord Lagoon. This lagoon is considered to be an important fish nursery for SouthWest Tobago.

- **Crown Point Airport Expansion**

The proposed expansion of Crown Point airport involves extending the runway through the Kilgwyn wetlands and resting the terminal building to the immediate North of the wetlands. The development, if allowed to proceed could affect the fishing industry and consequently lead to the destruction of wetlands which are nurturing site for young fish.

5 PROPOSED STRATEGIES AND SOLUTIONS

The following sections present some of the priority strategies for the improvement of biodiversity integration into all sectors, including tourism, as stated in the NBSAP.

5.1 Education and Awareness

- Build Education and Awareness Programmes in biodiversity conservation on existing initiatives and fill gaps in formal approaches.
- Foster greater collaboration between conservation and education agencies and other stakeholders.
- Promote the sensitisation of communities to biodiversity concerns through shared planning and management of these resources.

5.2 Legislation and Enforcement

- Make legislation and regulations more effective management tools, through harmonisation, and by incorporating the use of new technologies and stakeholder involvement.
- Improve law enforcement success rate and utilise it as an important tool for management and sensitisation on biodiversity conservation

5.3 Capacity

- Establish an adequate means of sharing information, training and experiences amongst agencies and their stakeholders.
- Develop advocacy tools for building consensus on biodiversity issues at the highest political levels.

- Strengthen NGOs and CBOs to play a greater role in the conservation and management of biodiversity towards sustainable livelihoods.

5.4 Information and Research

- Prioritise research needs in collaboration with research institutions and the private sector.
- Encourage collaboration with government and other research institutions and the private sector. This could be achieved by:
 - Encouragement of close collaboration between research institutions (IMA, UWI) and the management agencies. (EMA, Ministry of Environment), to develop an applied research programme that will provide the information required for more effective management.
 - Research institutions, to consider their role in fulfilling the research needs for biodiversity.
 - Establishing clear links with industry as partners in research. Industry could assist in funding research, especially in areas that are of concern to industry and their effects on biodiversity.
 - Addressing the protection of information and other intellectual property rights.
- Broaden access to, and provide opportunities for, sharing information, consideration being given to the cost of information and the need for cost-sharing in acquisition of information

5.5 Policy and Commitment

- Integrate policy objectives for biodiversity conservation into policy statements for all sectors. This could be achieved by:
 - Establishing a National Commission for Sustainable Development to integrate Trinidad and Tobago's obligations under the Convention on Biodiversity (and other agreements) into the country's policies.
 - Organising ministerial workshops to discuss integration of biodiversity concerns into sectoral policies, and discuss their implications to plans, programmes and projects of all Ministries.
 - establishing interagency policy planning teams.
 - Initiating a systematic review of Government policies, which affect biodiversity conservation and make policy interventions to ensure biodiversity concerns are addressed.
 - Conducting an assessment to determine how institutions can be strengthened to enable development of an integrative policy process.

- Develop a clear policy process for adoption by Government entities (incl. National Budgets) and ensure that strategic action plans of these entities incorporate implications on biodiversity conservation and the environment as a whole
- Make sectoral interventions to increase the sensitivity of policy to biodiversity.
- Institutionalise public participation in the development of government policy for the conservation and management of biodiversity.

It should be pointed out that the first phase of the NBSAP project was only completed last year and that none of the above strategies have yet been translated into projects for purposeful implementation in the tourism sector. It is understood that action plans through project profiles will be developed in the next phase of the NBSAP project, which is about to commence.

The strategies that have been developed are very broad and applicable to biodiversity conservation in general. The NBSAP did not address strategies and solutions for biodiversity conservation *per se* at the three distinct levels of ecosystems, species, and genes. The broad strategies are also applicable to all the sectors covered by the NBSAP. They have not been generated by tourism-specific biodiversity objectives. For these strategies to have practical applicability in the tourism sector, they would have to be refined with tourism/biodiversity objectives in mind. For example, the last strategy listed above, when applied to the tourism sector could be refined to read:

“Involve local communities, who live adjacent to and depend on important biological resources, in the preparation of any tourism infrastructure projects that might threaten these biological resources.”

Thus stated, the public participation strategy outlined in the NBSAP takes on a dimension more easily applied to the case that is detailed in the following section.

6 EXAMPLE OF BEST PRACTICE OF LINKING TOURISM DEVELOPMENT AND BCP

This example illustrates how the final strategy listed under policy and commitment, when properly applied to tourism development, could result in the re-thinking of a project and the protection of biological resources. This is not really the application of a best practice element that enhanced a tourism development project in terms of biodiversity. It, however, is an example of the serendipitous application of a best practice strategy, which resulted in the total abandonment of an undesirable tourism development project – A Port and Ferry Service.

6.1 Name of Project or development

The Project might be described as the “NO to Toco Port and Ferry Project.”

6.2 Location

The location of the proposed port was at Toco Bay on the edge of which sits the village of Toco, the main town of the Northeast hinterland. In terms of biodiversity, the bay hosts coral reef communities and Toco is the gateway to the proposed Matura National Park, home of the most pristine rainforests of the country. The area has been designated as an ecotourism node in the TMP.

6.3 Project Evolution

6.3.1 Antecedents

The question of an improved ferry service between Trinidad and Tobago is an old one with important historical milestones:

- In 1974, the National Planning Commission undertook a survey of transportation between the two islands over the period 1965-71. This survey focussed on the existing service between Port of Spain in Trinidad and Scarborough in Tobago and its improvement.
- In 1978/79, two route studies were undertaken by the Mitsui Group and the OAS at the height of the petroleum boom. The Mitsui study analysed two additional ferry routes from Trinidad to Tobago – Balandra on the East coast of Trinidad and Chaguaramas, the northwest peninsula of Trinidad. The OAS study only considered Balandra.
- In 1988, two studies were undertaken by the Institute of Marine Affairs (IMA) and a private sector consortium of consultants, which included the consulting engineering firm of Lee Young and Partners. The IMA study introduced a systematic treatment of the comparative aspect of site selection, thereby throwing into relief the criterion of *least cost*. The Newel Lewis study expanded the perspective to encompass both ferry link and route considerations as well as the matter of port development and site selection. Both pieces of work located the ferry terminal in the context of a multipurpose port capable of servicing the requirements of fishing in particular; and both studies took as their point of departure the notion that the introduction into the Northeast region of a port facility could be a catalyst for wider development of economic life embracing such sectors as tourism, agriculture and again, fishing.
- In 1990, under contract to the Industrial Development Consortium, an expanded consortium of private sector consultants, called the Sea Bridge Team, and still including the firm of Lee Young and Partners, produced a Feasibility Study for the establishment of a multi-purpose port in the Northeast region of Trinidad and a ferry link from the Northeast region to Tobago. This study identified Toco Bay as the best site for the port to accommodate a ferry terminal, a fishing depot, a marina, a Coast Guard facility and associated amenities.

6.3.2 Revived Project

In 1999, a new government enjoying its first term revived the project for a Toco Port and Ferry Service to Scarborough. The Government used a state enterprise, the National Insurance Property Development Company Limited (NIPDEC) to invite proposals on the project.

NIPDEC issued a Request for Proposals to develop the port on a BOOT (Build, Own, Operate and Transfer) basis. In keeping with the principle of community participation in development, a community representative was appointed to the proposal evaluation team. This representative, however, was selected by the Ministry and not by the Community. He, therefore, did not have a mandate from the local community to represent them. Nor did he attempt to bring the community into the process as each time he held update meetings with them he was unable to reveal detailed information on the grounds of confidentiality.

While proposals were being evaluated, the Minister held meetings with persons in the Toco area as a form of consultation. These meetings were organised by the leader of the Toco Foundation, a supposedly developmental NGO, which turned out to be a highly Government-backed NGO. (The leader of the Toco Foundation was the ruling party candidate for the Toco area in the General Elections of December 2000). The consultations organised by this person gave the Minister the impression that the project, details of which the Minister did not fully disclose, was welcomed by the people of Toco.

The engineering firm of Lee Young and Partners, was judged to have submitted the most acceptable proposal and became the preferred developers of the port and ferry project. Their proposal identified the need to optimise the development along the following lines:

- Fishing and fish exporting industries including by-products.
- International shipping re-fuelling.
- Tourism and internal traffic linkage between Trinidad and Tobago.
- Ecotourism and cruise ship traffic.
- Tourist attraction package for forest trail and ecotourism.
- Service centre for the offshore operation of gas and oil.
- Marina facilities

The shipping re-fuelling and the cruise ship elements were new elements, which the preferred developer maintained were essential for the financial viability of the project. These additions to the original concept made the Toco port a massive undertaking that would entail the compulsory acquisition of private land.

The firm was required to prepare an Environmental Impact Statement, given the concerns expressed about the threat to the coral reefs of Toco Bay by major reclamation works. There was also concern about the environmental impact of mass cruise ship tourism on the biological resources of the area and social impact with respect to the compulsory acquisition of land.

6.3.3 Local Community Response

On 17 June 2000, a group of about 30 concerned Toco community members met at the Anglican Church in Toco. They came together to discuss two documents which had come into their possession:

- A Land Acquisition Notice published in a daily newspaper on 6 June, announcing the compulsory acquisition by the state of 17 hectares of land in the centre of Toco village.
- A scale drawing showing the layout of the proposed port and a list of the facilities to be constructed under Phase 1 of the development.

The group reviewed the available information with great alarm. They felt that the community had been deliberately kept in the dark about the enormous scale of the project, and the dire effects it would have on the natural and social environment. It was agreed that certain actions should be taken on an urgent basis. The wider community was to be made aware of the issues raised by the documents, and steps were to be taken to halt the development process until further information was made available.

A wide range of community members and other stakeholders were encouraged to attend a public meeting with the developers on June 24th to review the port proposal. The community was far from satisfied with the outcome of these discussions, and called a press conference at the Anglican School in Toco on July 8 to air its concerns. This was attended by over 100 community members, the vast majority of whom expressed strong opposition to the port proposal.

A decision was taken to set up a committee immediately to represent the interests of the affected communities. This committee became known as Stakeholders Against Destruction (S.A.D) for Toco.

6.4 Management and Co-ordination

At the July 8 meeting, individuals were nominated from the floor for the formation of the Committee which comprised representatives of the various economic interests (agriculture, fishing, ecotourism), the churches, long-term residents, new residents, residents whose property was due to be forcibly acquired, land-owners, and representatives of other villages between Matura and Matelot. The Committee included some of the most educated and articulate members of the local community.

The Committee established connections, including by e-mail, with sympathetic national professionals and NGOs. These latter included Fishermen and Friends of the Sea, The Caribbean Forest Conservation Association, The Tropical Re-Leaf Foundation and Nature Seekers Incorporated.

6.5 Description of main objectives, achievements and constraints

6.5.1 Objectives

The Committee was mandated to halt the forcible acquisition of land, to oppose the granting of a final contract to the preferred developers, to seek proper consultation and transparency, and to put forward a more appropriate plan for the Toco area. S.A.D's long-term objective was for the Toco region to become known locally and internationally as a leader in the preservation and promotion of a healthy environment and as the green and clean corner of Trinidad.

In order to achieve their immediate objective, it was necessary for S.A.D. to expose the Minister to the true feelings of the Toco community through genuine local community participation in the decision-making process. Accordingly, they embarked on an intensive mobilisation exercise to make sure that the entire Toco community came out to any future public meetings. In the meantime, they engaged a professional environmentalist to conduct a review of the developers' Environmental Impact Statement.

6.5.2 Achievements

The preferred developers called a meeting for July 28, 2000 to which the Minister was invited. This meeting took place at the Toco Composite School to a packed house. The print and electronic media, including a representative of the Associated Press, were in full attendance. The meeting was chaired by a former employee of TIDCO who had been engaged by the developers as a community relations consultant. This person faced constant abuse from the audience for she was regarded as a traitor, she having worked with the Toco community before in TIDCO's sustainable community tourism programme.

The developers made a presentation, accompanied by state-of-the-art computer-generated graphics, to convince the community about the benefits of the project. They were assisted by TIDCO's Vice-President of Government Policy and Special Projects, who delivered an address supportive of the project. Handpicked members of the community supportive of the project made presentations amidst a barrage of heckling.

When it was S.A.D's turn to speak, they first presented to the gathering their environmental consultant who made a devastating presentation on the deficiencies of the EIS. Three members of S.A.D then delivered articulate and impressive statements of condemnation of the project. S.A.D. was prepared to support a viable ferry service that would be beneficial to the physical, social and cultural environment. However, they took strong objection to the ferry service being used as a "Trojan horse" to introduce into Toco heavy industrial projects designed to benefit outsiders but which were strongly opposed by the local people.

The Minister was visibly shaken by the very vocal opposition to the project from a wide cross section of the community. He had to admit that what passed for public consultation before was counterfeit and he declared that meeting to be the first genuine consultation with the local

community on the port project. He invited S.A.D. to present their own Alternative Development Plan for the Toco area.

6.5.3 S.A.D's Alternative Development Plan

At a public meeting on September 30, 2000, S.A.D. presented its written Alternative Development Plan to the Minister of Works and Transport. In this plan it was acknowledged that the people of Toco appreciated the importance of the nation's major industrial and commercial centres. They did not, however, wish Toco to become an industrial port. The strong preference was for community participation in sustainable development that would maintain and enhance the natural, social and cultural environment, while offering opportunities to all the people of the community for growth and prosperity.

S.A.D's Alternative Development Plan contained the following elements:

- Traditional local tourism and recreational activity.
- Community-based ecotourism, including nature tourism and adventure tourism
- Revitalisation and modernisation of agriculture and agricultural processing, including exploitation of developing niche markets for speciality products, both locally and internationally.
- Revitalisation and modernisation of the fishing industry.
- Consolidation and expansion of Toco as a centre of sporting excellence.
- Cultural and social activities.

The Plan re-affirmed S.A.D's commitment to promoting the rich biodiversity of the Toco area through a holistic, environmentally sensitive approach to all development activity in the area so that Toco would remain the "green and clean" corner of Trinidad.

6.5.4 Aftermath

The port project was officially cancelled by Cabinet decision in October 2000 and the Land Acquisition Orders rescinded in November 2000. In its annual national awards, the Daily Express of Trinidad and Tobago named S.A.D as the community group or organisation which made the most significant contribution to community development, for its work in mobilising the people of Toco against development deemed not to be in their interest.

6.6 The lesson of the case

The case of the Toco Port and Ferry Service is a classic case of the conflict between environment and development. It is also a case of the conflict between outside investment interests versus local interests. Under normal circumstances, the power of development and outside capital usually prevails over local interests, be they environmental or otherwise. In this case the local interests prevailed because they were genuine, well organised, well connected, well informed and articulate. It was a case of people power at its most potent.

The case also points a way for the successful conservation of biological resources in the face of tourism and other threats. The most important biological resources are invariably located in the rural hinterland where the most proximate human beings are in the adjacent rural settlements. This case shows that the conservation of these resources could be achieved if the local communities are appropriately empowered. There exists a great deal of scope for national NGOs to work with local communities everywhere to catalyse them into a state of readiness for the application of the best practice principle of meaningful local consultation in policy formulation and developmental planning.

6.7 Other examples of best practices linking tourism development and BCP

As indicated earlier, it is difficult to find examples in Trinidad and Tobago where anyone has deliberately sought, as a matter of policy, to apply a best practice element to biodiversity conservation in the tourism sector. The case described above occurred because people rather than policy makers drove the process. There are, however two other cases where government officials took the lead in applying a best practice strategy, the same strategy in both cases. This strategy does not explicitly appear in the NBSAP. Simply stated it is to:

Apply the principle of sustainable livelihoods to the users of biological resources

One case in Trinidad revolves around the protection of turtles and the other in Tobago around the protection of a coral reef.

- **The turtles of Matura Beach**

The annual slaughter of the leatherback turtles at Matura Beach by subsistence hunters during the nesting season became too much for the understaffed Wildlife Section of the Forestry Division to handle. They decided, therefore, to enlist the support of members of the local community who would be willing to patrol the beach and protect the turtles. They could not afford to pay them salaries so they had to devise a means of rewarding the patrollers financially. By drawing on the strategy cited above, the Wildlife authorities had to link the turtle protection with a sustainable livelihood. It occurred to them that if they organised the local community and provided them with appropriate training, they could combine their patrolling with dollar-earning tour guiding. They therefore catalysed the formation of the group called Nature Seekers Incorporated which has received international recognition for its work. This group has a vested interest in making the beach safe for turtle nesting since their livelihood depends on it. Today, the turtles of Matura Beach nest without disturbance and the group is going from strength to strength.

- **Buccoo Reef**

Tours of Buccoo Reef have been taking place since its discovery in the 1930s. More than 40% of Tobago's hoteliers offer organised tours of the reef and an estimated 60% of all visitors participate in a reef tour at Buccoo reef at least once during their stay. The main type of visitor

usage of the reef is via glass-bottom boat tours for snorkelling, reef viewing and walking. This usage over the years has resulted in severe degradation of the reef.

A comprehensive study of the reef was commissioned by the THA in 1989 and conducted by the IMA between 1989-1992 and updated in 1994. The study, which included detailed biological investigation, water quality baseline survey, a legislative review, a socio-economic survey and public education and awareness surveys, was used as a basis for the preparation of a management plan.

One of the key elements of this plan is to persuade the glass-bottom boat operators to be more vigilant about tourist damage to the reef formations. It has now been brought home to them that if the reef became degraded beyond a certain point, visitor interest would wane and their business would suffer. They finally grasped the sustainable livelihood point. Today, there is much more responsibility displayed by the boatmen and the reef is on the road to recovery.

BIBLIOGRAPHY

ARA Consulting Group Inc. *Trinidad and Tobago Tourism Master Plan*. . Prepared for the Government of the Republic of Trinidad and Tobago. August 1995.

Caribbean Forest Conservation Association. *National Parks and Protected Areas: Seminar Proceedings*. Institute of Marine Affairs, Chaguaramas, Trinidad and Tobago, August 20, 1994.

Caribbean Forest Conservation Association. *Report on National Parks and Protected Areas Design: Site Prioritisation*. Prepared for the Government of Trinidad and Tobago World Bank National Parks and Watershed Management Project. April 1996.

Caribbean Forest Conservation Association. *Draft Management and Physical Plans*. Prepared for the Government of Trinidad and Tobago World Bank National Parks and Watershed Management Project. October 1998.

Caribbean Futures. *Draft Tobago House of Assembly, Tourism Industry Review*. September 1997

Ceballos-Lascuráin, Héctor. *Tourism, ecotourism, and protected areas: The state of nature-based tourism around the world and guidelines for its development*. IUCN, Gland, Switzerland and Cambridge, U.K., 1996.

EMPAL: Environmental Management and Planning Associates Limited. *National Environmental Action Plan*. Prepared for Environmental Management Authority NEP. NEAP, NEMP Project. July 1998.

Environmental Management Authority. *National Environmental Policy*. June 1998.

Environmental Management Authority. *Biodiversity Strategy and Action Plan for Trinidad and Tobago*. 1999.

Garraway, Jasmine. *National Biological Strategy and Action Plan (NBSAP): Tourism Sector Report (Second Draft)*. Prepared for the Environmental Management Authority of Trinidad and Tobago. April 1999.

Global Environment Facility Project Document. *Trinidad and Tobago National Biodiversity Strategy, Action Plan and First Report to the CBD*. 1997.

Government of the Republic of Trinidad and Tobago. *The Tourism Development Act, 2000*.

IUCN. "Development of Approaches and Practice for Sustainable Use of Biological Resources – Tourism". Paper presented at the Fourth Meeting of the Subsidiary Body on Scientific, Technical and Technological Advice of the CBD. Montreal, Canada, June 21-25, 1999.

Kenny, Julian; Paul Comeau and Leslie-Anne Katwaru. *A Survey of Biological Diversity: Trinidad and Tobago*. United Nations Development Programme. Port of Spain, Trinidad and Tobago, February 1997.

Laydoo, Richard S. *A Guide to the Coral Reefs of Tobago*. Institute of Marine Affairs. September 1991.

Lee Young & Partners. *Proposal for Toco Port and Ferry to Scarborough: Volume I – Short and Long Term Development Plans*. March 1999.

Management Systems International. *National Human Resource Management Information System – Final Report*. Ministry of Labour and Co-operatives, Government of Trinidad and Tobago. October 1999

Miller, Kenton, R. and Steven M. Lanour. *National Biodiversity Planning: Guidelines Based on Early Experiences Around the World*. World Resources Institute, United National Environment Programme and The World Conservation Union (IUCN). Washington, D.C.; Nairobi, Kenya, and Gland Switzerland, 1995.

Ministry of Finance. *Medium Term Policy Framework 1993-1995, 1994-1996, 1997-1999, 2001-2003*. Government of the Republic Trinidad and Tobago.

Ministry of Tourism. *Strategic Review Document*. Government of the Republic of Trinidad and Tobago. July 1998.

Ministry of Tourism. *Discussion Paper for a National Tourism Policy for Trinidad and Tobago*. Government of the Republic of Trinidad and Tobago. October 1998

Nelson, Howard; Jasmine Garraway and Carol James. *Ecotourism as a Strategy for Sustainable Development: The experience of the Asa Wright Nature Centre, Trinidad and Tobago*. United Nations Development Programme. Port of Spain, Trinidad and Tobago. 1999.

S.A.D. For Toco. "Critique of the Proposal for Toco Port and Ferry to Scarborough submitted by Lee Young and Partners in March 1999." July 2000.

S.A.D. For Toco. *Alternative Development Plan*. September 2000.

The Sea Bridge Team. *A Feasibility Study for the establishment of a Multi-purpose Port in the North-East Region of Trinidad and a Ferry link from the North-East Region to Tobago*. Prepared for the Trinidad and Tobago Industrial Development Corporation. February 1990.

Thelen, K.D. and S. Faizool. *Plan for a System of National Parks and Other Protected Areas in Trinidad and Tobago*. Forestry Division, Ministry of Agriculture, Lands and Fisheries. May 1980.

Tourism and Industrial Development Company of Trinidad and Tobago Limited (TIDCO). *Trinidad and Tobago Eco Adventure: The Soft Adventure Guide of Trinidad and Tobago*. Quesnel and Inglefield Limited, Port of Spain, Trinidad and Tobago, 1999.

Tourism and Industrial Development Company of Trinidad and Tobago Limited (TIDCO). *Discover Trinidad and Tobago: The Official Publication of the Trinidad and Tobago Hotel and Tourism Association (Tobago Chapter) and the Trinidad Hotels, Restaurants & Tourism Association*. Media and Editorial Projects Ltd. (MEP), Port of Spain, Trinidad and Tobago, 2000.

Tourism and Industrial Development Company of Trinidad and Tobago Limited (TIDCO). *Strategic Plan 1997-2000*.

Tourism and Industrial Development Company of Trinidad and Tobago Limited (TIDCO). *Report of our Stewardship 1995-1999*

United Nations Conference on Environment and Development. *Convention on Biological Diversity*. Rio de Janeiro, Brazil, June 3 – 14, 1992.

Wheatley, Nigel. *Where to watch birds in South America*, Princeton University, 1995