IMPROVING FOREST AND PROTECTED AREA MANAGEMENT IN TRINIDAD AND TOBAGO

Ecotourism

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IN
TRINIDAD AND TOBAGO**

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Executive Summary

There are several definitions of "ecotourism" but critical components are:-
- nature-based along with any associated cultural features,
- benefits to conservation of the natural (and cultural) resources it relies on,
- benefits to and involvement of, local communities
- environmental education and interpretation
- environmental management
- low visitor impact

The rich natural resources and associated cultural heritage of the twin island Republic of Trinidad and Tobago provide a strong basis for development of ecotourism in the country. Several private sector and community-based entities are taking advantage of the opportunities for ecotourism. The national system of protected areas however, requires strengthening with respect to improved conservation of the flora and fauna and specifically with respect to ecotourism development and management.

With respect to improved conservation of biodiversity and other natural resources, there is an urgent need to address the overlapping and cumbersome system that currently exists and also to place more focus on practical action for biodiversity conservation. The National Tourism Policy (MOT, 2010) identified environmental degradation as one of the threats tourism faces and the tourism stakeholders interviewed expressed concern about the state of the country's natural resources.

With respect to ecotourism development and management, a number of issues will need to be addressed and the establishment of the National Forest and Protected Area Management Authority (NFPAMA) along with the proposed GEF Project and associated projects will be critical. The National Ecotourism Policy and Strategy should be finalised jointly by the Ministry of Tourism and the Ministry of Environment and Water Resources and its agencies along with civil society organisations. In addition to the need to address improved management of the National Protected Area System, the key issues constraining ecotourism development in Trinidad and Tobago are:-
- Lack of a user fee system
- Limited involvement of tour operators in conservation
- Inadequate facilities & services
- Inadequate regulation of numbers/activities
- Limited capacity for ecotourism/visitor management
- Limitation of tour guides
- Limited national level marketing

The full report of the Ecotourism Specialist provides significant detail including templates and information that can be used in establishing ecotourism in the new Protected Area System for Trinidad and Tobago. In Chapter 1, the report details the potential, opportunities and inadequacies for the establishment of ecotourism in the Trinidad and Tobago Protected Area System. This chapter also recommends strategies for the establishment of ecotourism including a user fee system and provides an overview of locally adaptable best practices and a list of useful documents is provided within the References. Chapter 2 provides information to guide Ecotourism Development and Management within the System generally and within the two selected sites specifically. Chapter 3 addresses Barriers, Risks and Threats along with Mitigation Strategies and Chapter 4 deals with Capacity Needs and recommendations. The following are key recommendations to make ecotourism operational within the two selected protected areas within the context of establishment of ecotourism within the wider system of national protected areas.

Key Recommendations for Implementation under the GEF Project - General

The following summarises key recommendations for the establishment of ecotourism in the national system of protected areas, starting with pilot projects at two sites – Caroni Swamp in Trinidad and the Main Ridge in Tobago. It should be noted that there is strong potential to establish ecotourism within all the sites explored with the exception of Trinity Hills, but that Caroni and Main Ridge would require least additional work. The third most feasible site would be the NE Tobago site, however the marine protected area is not yet declared and dive and other fees would need to be established, ideally within that context, but possibly before. The set of manuals, training, knowledge and experience gained from this process will provide the basis for the development of ecotourism throughout the system. The two selected sites will serve as models to emulate in the development of ecotourism across the Protected Area System, with lessons learned guiding improvements within the sites and other areas.

1. Assist Ministry of Tourism to complete the Draft National Ecotourism Policy and prepare a National Ecotourism Strategy and Action Plan, including ensuring the involvement of the Ministry of Environment and Water Resources and its agencies, especially the NFPAMA along with civil society participation, which is critical for success.

2. Ensure the policy and implementation frameworks are supportive of collaborative management from planning through "on-the-ground" management – to allow for stakeholder participation and public-private-civil society collaboration. This should include establishment of a National Advisory Committee and local Protected Area Advisory Committees for all sites (starting with the two selected sites).
   This component links with Outcome/Output 2.1.1, Activity 4 (see Appendix 4).

3. Facilitate training of a core team of ecotourism professionals within the relevant agencies and civil society organisations, and covering key competencies (see Section 4 for details), through:-
   (i)   Study tour to Costa Rica National Park System (and arrangements for mentoring)
   (ii)   Certification through online training with The International Ecotourism Society (TIES)
   (iii)   Certification of Interpreters through the National Association of Interpreters (NAI)
   (iv)   Attendance at relevant TIES or other conferences
   This core team will then provide site specific training for tour guides (see Section 4 for details).
   This component links with Outcome/Output 2.1.1, Activities 5 and 9 (see Appendix 4).

4. Provide technical assistance to prepare Ecotourism Development and Management Plans, inclusive Business Plans (see Section 2) for the two selected protected areas (Caroni Swamp and Main Ridge Forest Reserve).Where possible, ensure involvement of core team of ecotourism professionals.
   This component links with Outcome/Output 2.1.1, Activity 2 (see Appendix 4).

5. Provide technical assistance for the design and development/upgrading of visitor facilities in the 2 selected Protected Areas (see Section 2). Where possible, ensure involvement of core team of ecotourism professionals.
   This component links with Outcome/Output 2.1.1, Activity 1 and 3 (see Appendix 4).

6. Provide technical assistance to develop interpretation strategies and materials e.g. signs, tour guides, brochures for the two selected protected areas. Where possible, ensure involvement of core team of ecotourism professionals.
   This component links with Outcome/Output 2.1.1, Activity 8 (see Appendix 4).

7. Provide technical assistance to develop a national brand and marketing strategy for the system, with a focus on branding and marketing for the two pilot sites. Work closely with the TDC on this activity and where possible, ensure involvement of core team of ecotourism professionals.
   This component links with Outcome/Output 2.1.1, Activity 7 (see Appendix 4).

Following the design, piloting and introduction of user fee systems in the two pilot sites along with the operation of ecotourism at these sites under Outcome/Output 3.2.3, the final two activities will need to be implemented:

8. Conduct surveys to assess visitor satisfaction in order to obtain feedback to improve the ecotourism facilities and programmes. By the time this stage is reached, the core team of professionals and technical personnel within the NFPAMA and co-management partners, should be responsible.
This component links with Outcome/Output 2.1.1, Activity 10 (see Appendix 4).
9. Assess the lessons learned and best practices from each of the pilot sites and along with research, use this information to help guide the establishment of ecotourism in the other protected areas on a phased basis. In addition, use the information to guide the development of new products to expand the offerings available at each site. This activity should be conducted by the core team of ecotourism professionals.
This component links with Outcome/Output 2.1.1, Activity 6 (see Appendix 4).

Key Recommendations for Establishing Ecotourism at Caroni Swamp
1. Re-design and establish new Entry inclusive:-
   - Sign
   - Small gazebo-style Visitors' Centre (say 12' in diameter) with interpretation
   - Boardwalk/Path looping to Main Visitors' Centre/Office with interpretation
   - Parking

2. Create site specific branding and marketing materials – based on the relevant strategies developed (consider the Red Mangrove and Scarlet Ibis). Market to schools (specialised school tours) and other local groups (build local pride by offering free tours to local community members)

3. Create site specific interpretive materials e.g. signs, exhibits, posters, tour guides – particularly for new Visitors' Centre, focusing on wetlands and mangroves in particular

4. Address user fee issue in collaboration with the tour operators and regularise and improve aesthetics of their operations at the entrance

5. Improve aesthetics and infrastructure of boat dock area and bridge located beside the Main Visitors' Centre/Office

6. Initiate community outreach (possibly working with a group like Nature Seekers, Veni Apwaan and CANARI for assistance) to enhance local pride in the area and to obtain greater involvement and benefits e.g. through provision of craft, meals etc. for sale as concessionaires. Consider the possibility of hosting events e.g. workshops and retreats (ensure noise pollution is not a problem caused by these events)

7. Consider establishment of a boardwalk through the mangroves, possibly starting at the "bridge"

8. Investigate issue of tower repairs and possibility of beach facility repairs

Key Recommendations for Establishing Ecotourism at Main Ridge
1. Design and erect sign at entrances with map showing trails, visitors centre

2. Create site specific branding and marketing materials (consider a forest tree and the White-tailed Sabrewing Hummingbird)

3. Create interpretive materials e.g. signs, exhibits, posters, tour guides – particularly for newly constructed Visitors' Centre (take advantage of large space)

4. Develop a plan for use of the Visitors' Centre including concessionaire booths.

5. Address user fee issue in collaboration with the tour guides and tour operators

6. Investigate feasibility of zip line tour and take steps e.g. trail guide brochure, safety features and interpretive signage, to encourage use of trails other than Gilpin. Ensure trails are only accessed with tour guides.

7. Link with activities in Speyside and environs for a "ridge to reef" ecosystem approach, which will assist with the establishment of user fees and marine protected area establishment.

Key Recommendations for Implementation under the GEF Project – Other
User Fee System
A system should be established addressing at least two components:-
1. Entry Fees – payable by all persons on entry to each site (inclusive visitors' centre)
2. User Fees – payable by all persons taking a tour with a tour guide/tour operator – the tour guide/tour operator can be responsible for paying these fees (passing on the cost to the visitor)
Monitoring will be required but a permit system similar to what already exists for the Turtle beaches can easily be implemented.

Table 1: Suggested start-up fees

These are fees that go to the PA System and ideally the individual PA for maintenance & conservation	Resident Adult (US$)	Non-resident Adult (US$)	Resident Child (US$)	Non-resident Child (US$)
Entry Fee (allows entry and use of facilities e.g. toilets, viewing interpretation e.g. Visitors' Centre)	1.00	3.00	0.50	1.50
Tour Fee (trail or boat tour etc. – to be a part of the tour fee charged by the tour operator)	0.50	1.00	0.25	0.50

Residents would pay in TT$

The User Fee System will need to be transparent and ensure accountability to the stakeholders, therefore it cannot return to central government but must be kept separately, in a Trust Fund established for the purpose. The details of the operation of this Fund will be determined within the project and should include input from the stakeholders. Operation of this Fund should allow for a percentage of funds to be provided for:-
- maintenance and operation of the ecotourism sites within the protected areas
- conservation of biodiversity within the protected areas
- registered civil society organisations operating in the area, for use for conservation and sustainable community development. Specific criteria will need to be developed regarding their receipt and use of funds. Capacity building will be required for some of the organisations in order that they can benefit from these funds and also to assist them in preparing proposals to the Green Fund and other donors to access matching funds as necessary.

NE Tobago
Speyside/Little Tobago area is a good contender for the second or third pilot site as the area has a lot more visitors than Main Ridge and it should be relatively easy to institutionalise a user fee system although the marine component of the site is not yet designated.

Community Involvement and Gender Mainstreaming
Community involvement and benefit sharing are important components of ecotourism. Therefore specific efforts must be made to ensure the involvement of all stakeholders and local community members in particular, ensuring equity, gender mainstreaming and involvement of stakeholders who may otherwise be marginalised.

It should be noted that community involvement is currently best developed in the Matura National Park with the Nature Seekers (a community-based organisation (CBO) playing a key role. Also, the non-government organisation (NGO) – Caribbean Natural Resources Institute (CANARI) has been very important in building the capacity of this and other CBOs and NGOs. Further, they are both strong in relation to the issue of mainstreaming gender in natural resources management and sustainable development e.g. ecotourism. Therefore, it is recommended that these two groups be involved in providing assistance in capacity building, particularly in relation to community involvement and benefits.

1. Ecotourism Potential in Trinidad and Tobago

There is significant potential for ecotourism development in Trinidad and Tobago and this has been identified and exploited by a variety of groups, few of which unfortunately, are actually practicing ecotourism. The Protected Area System of Trinidad and Tobago can form the core of a strong ecotourism product, but this will require careful planning and development.

1.1 Ecotourism

Ecotourism is a complex concept which is difficult to define without significant explanation, although there are a several relatively short definitions, some of which are more valuable for marketing purposes rather than ecotourism development. The definition used here is lengthy but particularly useful for the purposes of this Report which focuses on ecotourism a tool to support the management of the national Protected Area System:

"Ecotourism: a form of tourism with the following characteristics:
  (i)   all nature-based forms of tourism in which the main motivation of the tourists is the observation and appreciation of nature as well as the traditional cultures prevailing in natural areas
  (ii)   it contains educational and interpretation features
  (iii) it is generally, but not exclusively organized for small groups by specialized and small locally-owned businesses. Foreign operators of varying sizes also organize, operate, and/or market ecotourism tours, generally for small groups
  (iv)   it minimizes negative impacts on the natural and socio-cultural environment
  (v)   it supports the protection of natural areas by:
         ▪ generating economic benefits for host communities, organizations and authorities that are responsible for conserving natural areas
         ▪ creating jobs and income opportunities for local communities, and

> ▪ increasing awareness both among locals and tourist of the need to conserve natural and cultural assets"
>
> (World Tourism Organisation 2002, 3)

The United Nations World Tourism Organisation (WTO) notes the difference between nature tourism and ecotourism, stating, "Nature tourism: a form of tourism in which the main motivation is the observation and appreciation of nature". Hence, nature tourism is dependent on a market of people with some interest in nature, but does not involve the level of management that ecotourism requires, nor does it result in the level of support for conservation or local communities that ecotourism does.

Tourism as defined by the WTO is, "the activities of persons traveling to, and staying in places outside his or her usual environment for not more than one consecutive year, for leisure, business, and other purposes". Tourism and recreation are closely related and intertwined but the latter does not usually involve the travel and overnight accommodation requirements that tourism does. Tourism is often thought as something that involves foreigners and not locals however within the tourism industry, a resident travelling within her own country is considered a domestic tourist, once their trip includes an overnight stay. This Report therefore considers ecotourism as being relevant for both residents and non-residents, and in fact recommends that residents should be an important target market.

1.2   Ecotourism in Trinidad and Tobago: Current Situation Analysis

Based on the characteristics of ecotourism as defined by World Tourism Organisation (see above) and information from the literature review, site visits and interviews conducted by this Consultant, Trinidad and Tobago has significant ecotourism potential which is not currently being harnessed by the existing protected area system. There is an urgent need for a system to be established to develop and use ecotourism to assist in supporting biodiversity conservation and the management of the System of Protected Areas in Trinidad and Tobago. Table 2 summarizes the current situation as regards ecotourism in Trinidad and Tobago within the context of the characteristics and requirements of successful ecotourism. The sub-sections below provide more detailed information.

Table 2: Ecotourism in Trinidad & Tobago: Current Situation Analysis

Characteristics and Requirements of Successful Ecotourism	Trinidad and Tobago	
	PROS	CONS
Protected Natural Resources	• High biodiversity due to proximity of mainland South America –differentiates tourism product from rest of the Caribbean • System of protected areas – public and private	
Benefits to Conservation	There is some level of awareness amongst tour operators of the need for conservation of the resources they are using to generate and income	No User Fee System i.e. neither visitors nor tour operators pay to use the public PA System, however there are good examples of working systems in the private/NGO sector
Environmental & Visitor		There is no management of

Characteristics and Requirements of Successful Ecotourism	Trinidad and Tobago	
	PROS	CONS
Impact Management		visitors nor their impact
Education & Interpretation	There is very limited interpretation at a few of the public sites	Most interpretation occurs through tour guides who have no relationship with the protected areas
Benefits to Local Communities		There is very limited benefit to local communities except at Matura where ecotourism is operated by Community-based Organisations
Enabling Environment e.g. Policy, Protected Area System with Visitor Facilities and opportunities, User Fee System	There is a draft Ecotourism Policy (prepared by the Ministry of Tourism) There are examples of fees being paid which support conservation and communities e.g. turtle beach permits	The draft Ecotourism Policy does not recognize the full scope of the UN WTO definition of ecotourism.

1.2.1　Natural Resources

As ecotourism is nature-based (with related cultural assets), there must be significant natural resources of interest to support it. The Republic of Trinidad and Tobago is a twin island Caribbean nation located in the Lesser Antilles, south of Grenada and just north-east of Venezuela. The total area is 512,800 ha but Tobago to the north-east of Trinidad, is only 30,000 ha. The proximity of Trinidad and Tobago to Venezuela has given these islands a different flora and fauna from the rest of the Caribbean and closer to that of the mainland, South America. There are a wide variety of terrestrial, coastal and marine ecosystems, with the terrestrial ecosystems being particularly rich in biodiversity.

The National Forest Policy (GOTT, 2011a) reports there are several different types of terrestrial ecosystem including evergreen seasonal forest, montane forest, mangrove forest, palm marsh and marsh forest. This Policy also lists number of species as follows:
- Over 420 species of birds
- At least 600 species of butterflies
- Over 95 species of mammals
- 85 species of reptiles
- 30 species of amphibians
- 54 species of freshwater fish
- Over 2,100 species of flowering plants with endemism of about 2%

Whilst the beaches and coral reefs of Trinidad are not particularly exceptional, on Tobago, these resources provide good experiences for swimmers and divers. Though small, Tobago is the location of the oldest forest reserve in the Western Hemisphere (Grand Ridge). Together, Trinidad and Tobago have a strong natural resource base to support ecotourism.

1.2.2   Protected Areas

Simply having high biodiversity and beautiful scenery are not the only requirements for ecotourism as if these resources are not protected and managed for their conservation, their condition will become degraded and their ecotourism value will be reduced. In addition, if the target market is the "serious" ecotourist (who is knowledgeable about flora and fauna and ecosystem health) then the ecosystems must be in very good condition. A simple profit-driven business model is not suitable for ecotourism, as consideration needs to be given not just to maintaining a specific site and its facilities but also the wider ecosystem which provides habitat for the flora and fauna. Funds generated from ecotourism must return not only to the immediate business but also to conservation of the natural resources where the business is located. As it is unlikely that inflows from ecotourism alone will be sufficient for management and conservation of ecosystems, other funding sources for this purpose are essential. The foundation for ecotourism on a national scale is therefore, a national system of protected areas, although private protected areas can play a very important role.

Whilst there is some degradation of the natural resources outside protected areas, the latter play a key role in protecting resources from destruction and pollution caused by agriculture, quarrying, mining and squatting.

There are a wide variety of different types of protected areas in Trinidad and Tobago with numerous pieces of legislation and agencies responsible for their management. A number of Plans have been drafted to address this overlapping and duplication and the 2011 approval of the National Forest Policy and the National Protected Areas Policy are steps being taken to establish and effective and efficient Protected Areas System. The major types of Protected Areas are:-

- **Forest Reserves**

Forest Reserves are the main type of protected area in Trinidad and Tobago. Eighty percent of the forested area in Trinidad and Tobago is owned by the State and 54% of this is Forest Reserve (proclaimed and unproclaimed) while the remainder is "Other State Lands" (GOTT, 2011a).

The Main Ridge Forest Reserve in Tobago was established in 1765, making the twin-island republic of Trinidad and Tobago the location of the first Forest Reserve in the Western Hemisphere (GOTT, 2011). Singh and Sandy, 1997 report that the Main Ridge Forest Reserve was designated along the central mountain ridge of Tobago as, "woods for protection of the rain". The instructions to reserve the area were given by King George III in 1764 when Tobago was first being surveyed (GOTT, 2011). Other Forest Reserves were not designated until the twentieth century (between 1922 to the 1960s). Currently (GOTT, 2011) there are 35 proclaimed Forest Reserves (131,430 ha) and 8 un-proclaimed Forest Reserves (11,650 ha).

Most of the Forest Reserves are not under strict protection but rather were established to manage timber resources and regulate the extraction of high-grade timber species (GOTT, 2011). In the 1940s there was some conversion of original forest to Teak and Caribbean Pine to support production forestry (Singh and Sandy 1997). Despite this, Forest Reserves in Trinidad and Tobago provide important watershed services, including not only water supply but river and waterfall flows, as well as habitat for numerous species of flora and fauna.

- **Wildlife or Game Sanctuaries**

There are 13 Wildlife or Game Sanctuaries designated under the Conservation of Wild Life Act to protect wild animal species by restricting hunting and collection of animals in and from such Sanctuaries (GOTT, 2011b). Most of these Sanctuaries are located within or overlap with Forest Reserves, extending into other State Lands.

- **Prohibited Areas**

On land, 19 Prohibited Areas have been established, where there can be no public entry without a permit, whether all year long or for set periods. So, for example, several of the sea turtle nesting beaches are prohibited from entry during the nesting season from 1st March to 31st August annually. Some of the Prohibited Areas are within Forest Reserves, whilst others, like the sea turtle nesting beaches are not.

- **Marine Protected Areas**

The Fisheries Act provides for the declaration of prohibited areas to protect the spawning grounds for commercially important species but no such areas have been declared. Buccoo Reef in Tobago was designated under the Marine Areas (Preservation and Enhancement) Act to preserve and enhance the natural beauty, protect the flora and fauna, promote the enjoyment by the public and promote scientific study and research. Currently, management of the site is minimal.

- **Environmentally Sensitive Areas (ESAs)**

These sites are designated under the Environmental Management Act for the conservation and management of biologically significant areas. Most of these e.g. Nariva Swamp overlap with Forest Reserves or other types of Protected Areas.

Current Situation

Most of the protected areas are managed (in Trinidad) by the Forestry Division which has six regional Conservancies with responsibility for the Forest Reserves, a Wildlife Section with responsibility for conservation and control of wildlife, and management of Wildlife or Game Sanctuaries, and a National Parks Section with responsibility for protecting representative and significant examples of natural heritage within the island (Singh and Sandy, 1997). Most of the areas managed by the National Parks Section are not legally protected as the Forests Act does not provide for designation of areas as national parks or recreation sites, however these sites are either within Forest Reserves or other state-owned land (Singh and Sandy, 1997). In Tobago, the Department of Natural Resources and the Environment (DNRE) is responsible for managing the Main Ridge Forest Reserve and a number of Wildlife Sanctuaries whilst the Department of Marine Resources and Fisheries is responsible for managing the Buccoo Reef MPA (GOTT, 2011b).

There are a few civil society organisations which manage private protected areas or co-manage (informally) prohibited and other types of legally protected areas, including:-
- Asa Wright Nature Centre in the Arima Valley,
- Pointe-a-Pierre Wildfowl Trust in the Point-a-Pierre Refinery
- Nature Seekers in the Matura Beach area (nesting sea turtles)

For these civil society organisations, ecotourism is an important component of their conservation work, as it provides not only income to support site maintenance and conservation but also raises awareness and support from the public, for conservation.

In general, the national protected area system in Trinidad and Tobago needs to be strengthened in terms of institutional arrangements and operations in order to improve efficiency and management effectiveness. This is important for the development of ecotourism which is dependent on the health of the ecosystems and species which provide the attractions.

1.2.3   Benefits to Conservation

Income generated from ecotourism in any country, is not sufficient to cover all the costs for conservation and so grants for projects, donations and other funding sources are important. In the case of the National System of Protected Areas, it should not be expected that ecotourism will cover all the costs of

biodiversity conservation (much less all the costs for managing the System) but with careful management, ecotourism can make a significant contribution. In addition, through its educational and community outreach components, ecotourism can increase the level of indirect and/or non-cash support for conservation.

Current Situation
Currently benefits to conservation only accrue at privately owned and operated sites e.g. Asa Wright Nature Centre or where civil society organizations are involved in conservation in nationally protected areas e.g. Nature Seekers on Matura Beach. These organizations are actually using ecotourism (as it should be) as a tool to help support conservation.

In relation to fees, for ecotourism to be successful:-
- fees must be charged
- fees must return to management of the site (and not go to consolidated Funds)
- must be sufficient to cover maintenance of the site
- must be seen to provide value for money
- there must be several opportunities to generate income from multiple sources e.g. not just the entry fee and tour guide/tour fee but products and services e.g. souvenirs, refreshment, meals, accommodation

There is no contribution to conservation of the protected areas they visit from the tour operators, tour guides nor the visitors. This unfortunate situation has arisen as there is a view that legislation is required in order to charge fees and no legislation has been passed mainly because of the view that this would be "politically incorrect". Locals are used to visiting sites without having to pay and may feel that they are already contributing to conservation through their taxes. Unfortunately, it is likely that very little of the nation's taxes benefit conservation, although through the recently instituted Green Fund, the possibility for change exists. The fact is however, that conservation of the resources forming an attraction is essential in order to maintain the value of the resources and there is a cost to conservation. The tour operators are well aware of these facts and have noted the degradation of the resources which threatens to impact their product and services. All stakeholders supported the introduction of user fees of various kinds which would contribute to maintenance of facilities and conservation of the natural resources. The stakeholders expressed concern that the revenue would not return to conservation and therefore transparency and accountability will be critical to maintain a system of user fees once introduced. Despite the above-mentioned situation, fees are charged at some sites.

Table 3: Fees charged at some sites

Site and Attraction	Foreign	Local
Caroni Bird-watching Tour	TT$50	
Pointe-a-Pierre Wildfowl Trust, Trinidad (NGO) Entry fee (includes guided tour)	TT$15 (children – half price)	
Asa Wright Nature Centre, Trinidad (NGO) Entry and Guided tour	US$30 US$6 (Child)	TT$30 TT$10 (Child)
Matura Turtle Beach (CBO – Nature Seekers)	Tour: US$20	Tour: TT$20
	Permit: TT$5 (Adults) TT$2 (Child)	
Argyle Falls, Tobago (CBO) Entry and Climb the Falls with a guide	TT$40	TT$25
Pigeon Point Heritage Park, Tobago – beach (Govt. formerly private) Entry fee (includes use of all facilities)	US$3/£2	TT$18

1.2.4 Environmental Management and Low Visitor Impact

Visitors have an environmental and ecological impact on a site – noise, garbage, sewage, soil erosion, oil pollution from transportation etc. Visitors also use resources e.g. electricity and water. Therefore, there must be systems in place to manage the environmental and ecological impact of visitors. Environmental and ecological impacts overlap so e.g. solid waste pollution such as garbage from picnics has environmental impacts such as reducing aesthetic appeal of the site and encouraging pests whereas and ecological impacts from garbage could include death of animals e.g. sea turtles from consuming plastic bags and the eating of birds' eggs by rats attracted to the garbage.

An Environmental Management System will address water and energy conservation, pollution of various kinds e.g. sewage, grey water, garbage, use of chemicals e.g. for pest control.

Ideally carrying capacity for a site should be estimated but as it can be difficult to ascertain an exact number, a range can be decided on and a simple Limits of Acceptable Change (LAC) System can be instituted.

Current Situation

None of the sites except those managed privately have any limitation on numbers entering a site or on each tour. There is no regulation of visitor numbers and no plans in place to address environmental and/or ecological impact from visitors. This lack of visitor management threatens the potential for ecotourism and must be addressed. In addition, there is little environmental management and garbage is a problem at all the sites.

1.2.5 Education and Interpretation

An important component of ecotourism is that visitors (both local and foreign) should leave with a key message about the resources – why they should be protected and what the visitor can do to help. This requires interpretation – which is a combination of art and science in designing and delivering this message effectively to groups who are visiting for enjoyment and not necessarily education. Interpretation is of two kinds:-

- Personal e.g. guided tours (of a trail, a site, a Visitors' Centre)
- Non-Personal e.g. signs, brochures, exhibits

Interpretation is an approach to education that targets people who technically are not students e.g. visitors. For students of primary, secondary and tertiary institutions however, protected areas through ecotourism can provide excellent opportunities for scientific, environmental and other aspects of education. Unlike interpretation, education usually relates to a specific curriculum. Another approach can be "edutainment" where education is instilled but in an entertaining manner.

Current Situation

There is very limited non-personal interpretation in the six protected areas visited during the mission. Most of the tourism activities depend on personal interpretation by tour guides, however as there are no specific training nor standards related to protected area management, it is not clear what message if any, is being delivered that would aid in garnering support for conservation of the protected area. In addition, having personal interpretation only means that visitors must pay the additional amount for a tour guide, which depending on the safety issues, some resident visitors could do without.

1.2.6　Benefits and Involvement of Local Community

Community involvement and benefits are an important component of ecotourism as it seeks to ensure that local community members "buy-in" to conservation of the wider protected area. The local community can have significant negative impact on a protected area e.g. through illegal activities, but they can also have a positive impact if they are actively involved in conservation. This is only likely if they see the benefits to themselves, and ecotourism is a potential benefit. Community members can benefit from ecotourism through direct employment at the site e.g. tour guide, concessionaire or through employment (whether self-employed or to a company) in provision of accommodation, food and beverage, souvenirs etc to visitors. Community members can also benefit from employment in conservation and other protected area management programmes. In all this, they must understand the purpose for the protection of the site and realize that if the site is not properly managed then the value will be degraded and the number of visitors will decline.

Currently, whilst there are some efforts by the Government, at involving community members, this is almost on a personal basis, depending on the initiative of a particular Officer and there is no formal system, except at the sea turtle nesting beaches. The Environmental Management Authority (EMA) has embarked on a project in Nariva Swamp but is just in the early stages and has recognized that in order to involve community members and ensure they derive benefits, their capacity will have to be strengthened through training and mentoring over a period of years. The example of Nature Seekers clearly shows that community involvement and benefits whilst necessary is a slow, long-term process.

1.2.7　National Ecotourism Policy

A national policy on ecotourism under which the relevant government agencies collaborate to promote and support ecotourism is a very useful factor. Such a policy should address not only marketing including branding, but also product development in terms of infrastructure, facilities and services as well as training not just at the level of tour guides but also for management. The policy also needs to guide how income from ecotourism will be used to support conservation at the relevant sites as well as sustainable livelihoods for local community members. For the latter, the amount of funds being transferred directly from ecotourism income can be reduced by ensuring capacity building for local community members to assist them in becoming involved so that they obtain benefits directly e.g. through providing products e.g. craft for sale or services such as accommodation, meals or tour guiding. Community members are critical in supporting the conservation of the ecosystems and species within their environment and so must benefit from this support.

Current Situation

In addition to the mention of ecotourism as a targeted market niche in the National Tourism Policy for Trinidad and Tobago (MoT, 2010) there is a draft National Ecotourism Policy for Trinidad and Tobago (MoT, 2012). It will be critical for the Ministry of Tourism to liaise closely with the Ministry of Environment and Water Resources, the Tobago House of Assembly and the relevant agencies, because a National Ecotourism Policy is not just about tourism but must involve the Protected Area System. The draft Policy provides the following definition for ecotourism,

> "Environmentally and socially responsible travel to natural areas (and any accompanying cultural and historic features) that promotes conservation of the environment, has low visitor impact and improves the well-being of local people" (MOT, 2012)

The draft Policy lists guiding principles e.g. "direct revenue to the conservation of natural and protected areas" and objectives e.g. "to recognise and upgrade potential and existing ecotourism attractions and sites" and "to support the development of national parks with an emphasis on conservation and protection". It also states that ecotourism development will take place within the context of existing policies and legislative framework governing biodiversity and conservation of the environment.　A

collaborative approach to the finalization and development of this National Ecotourism Policy will be important to ensure the development of national ecotourism programme which supports the national system of protected areas. It will be necessary to prepare a National Strategy and Action Plan to address in a more detailed fashion, the development of Ecotourism in the nation's protected areas.

Tourism

Trinidad and Tobago differ from the rest of the Caribbean with respect to tourism dependency and the contribution of tourism to Gross Domestic Product (GDP). Tourism in Trinidad and Tobago is a small and emergent industry in comparison to the rest of the Caribbean, as the focus for economic development has been the petrochemical industry. This means there is scope for significant growth. For example, the National Tourism Policy (MOT, 2010) reports the following statistics.

Table 4: Contribution of tourism in comparison with other Caribbean islands

	% Contribution of Tourism to International Arrivals in the Caribbean	% Contribution of Tourism to National GDP
Trinidad & Tobago	10.9	1
Barbados	48.1	3
Grenada	24.4	No Information
Jamaica	25.4	8

The National Tourism Policy (MOT, 2010) identifies the unique place of Trinidad and Tobago in the market place, as "islands of contrast" with Trinidad having a major focus on business and cultural tourism (particularly for Carnival) and hence mainly visitors from the USA, Canada and the Caribbean whilst Tobago is promoted as an "idyllic island get-away" and has visitors mainly from England and Europe.

Cruise ship passengers (November - April) do the Caroni Swamp boat tours and there are bird-watchers from overseas who stay at the Asa Wright Nature Centre and participate in tours to other sites e.g. Nariva Swamp and the sea turtle nesting beaches. Domestic tourists flock rivers and beaches on weekends and public holidays and there is apparently (based on feedback from stakeholders) a growing interest in hiking and nature appreciation. In addition, residents take visiting family and friends to a variety of nature-based and ecotourism attractions.

2010 figures (Tourism Development Company/Central Statistical Office) report 473,687 visitors with 371,889 of that being stop-over visitors and the remainder cruise ship passengers. The same information reports 62.7% stating "holiday" as their reason for travel, which would amount to a total of 297,001 visitors on holiday in Trinidad and Tobago. 2010 figures for turtle beach visitors are 13,341 but this was a bad year for visitation (possibly because of two national elections reducing trips) however the 2011 figure was 17,490 (Turtle Permits and Visitor Counts, Forestry Division). If only one-third of visitors on holiday visit protected areas, this would be about 100,000. The majority of these make no contribution to the conservation of these areas.

1.3 Strategies for Ecotourism and User Fee Development in Pas

The strategy recommended for the development of Ecotourism in Trinidad and Tobago's Protected Areas is to focus on establishment of a national approach linked to improvements in the country's protected area system. Ecotourism is already being reasonably successfully marketed and practiced at the private sector

and civil society levels, but there is a need for its development at the national level through the formal system of protected areas and working with the relevant government agencies and of course involving local and other stakeholders.

There will need to be a number of national strategies implemented system-wide, particularly at the policy and guidelines level, but action on these will be tested and improved by piloting in two sites, under the proposed GEF Project supported with additional funding from sources such as central government and the Green Fund.

It should be noted that ecotourism should never be considered as the only income generating tool for protected area management. If the main driver for ecotourism is to maximize income, there is a great risk of allowing carrying capacities to be exceeded which will eventually result in degradation of the resource base and a decline in visitors – effectively "killing the goose which laid the golden eggs". This report and its recommendations assume that other avenues for revenue generation are available e.g. existing government budgets and will be pursued e.g. payment for ecosystem services.

1.3.1   Planning

(i)   The National Ecotourism Policy should be finalized through a collaborative effort between the Ministry of Tourism and the Ministry of Environment and Water Resources and the Forestry Dept. (soon to be Forest and Protected Area Management Authority). It must also involve civil society stakeholders.

(ii)   Advisory Committees should be established comprising relevant experts from government, private sector and communities. These should exist at the national and local levels to provide advice and opportunities for collaboration. They should have an input into the preparation of the various plans and strategies.

(iii)   A National Ecotourism Development Strategy and Action Plan should be developed to guide operationalisation of the Policy. The Advisory Committee for this Plan would eventually become the Committee for National Ecotourism Development Plan Implementation.

(iv)   Management Plans should be prepared for each Protected Area before the preparation of Ecotourism Development and Management Plans. Protected Area Management Plans identify the stresses on biodiversity and ecosystem health, the sources of these stresses and the strategies to address them. Having a management plan prior to an ecotourism plan is ideal as it will set the context for ecotourism which must be driven by conservation goals not income generation and must support Protected Area Management Programmes.

(v)   Ecotourism Development and Management Plans should be developed on a site by site basis – it should be noted that one protected area may have several ecotourism sites within it.

(vi)   Business Plans should form an important component of the Development and Management Plans. This will be important as the sites should be financially sustainable and the business plans will help drive the marketing and operational strategies necessary to ensure this.

(vii)   A phased approach using two pilot sites within two PAs is recommended for this project. This will allow for the lessons to be learned and a cadre of national experts established, who can then move on to develop ecotourism at the other PAs, within the context of a national plan. Draft Ecotourism Development and Management Plans have been prepared for two sites have been prepared as part of this Consultancy (see Chapter 2) but they do not have a Business Plan component as this would have required additional information not available at this time.

1.3.2   Ecotourism Development and Management

Chapter 2 below provides an outline, guidelines and recommendations for ecotourism development within the Protected Area System of Trinidad and Tobago. The following are critical components of ecotourism that must be considered within the development plans, particularly within the local context. These recommendations are based on the Consultant's research including the interviews and consultations:-

(i)   Zoning of the Site e.g. location of trails and facilities to avoid damage to the most environmentally sensitive areas

(ii)   Infrastructural Development
- Visitors' Centre – this should be the hub of an Ecotourism Attraction and should have at a minimum:-
  o Interpretive Exhibits and materials
  o Available Tour Guides
  o Toilet Facilities
  o Refreshment

(iii)   Environmental Management e.g. renewable energy, energy conservation, water conservation, selection and use of chemicals e.g. for cleaning

(iv)   Carrying Capacity/Limits of Acceptable Change

(v)   Interpretation and Environmental Management

(vi)   Benefits to Communities

(vii)   Stakeholder Involvement and Partnerships

(viii) Business Management:-
- User Fees (see below)
- Wise expenditure and accountability
- Ensure that visitors have many opportunities to spend money

  A study of nature tourism in five Caribbean and Latin American countries (Boo, 1990) found that in most of the protected areas, visitors did not have enough opportunities to spend money e.g low or no entrance fees, little infrastructure with products e.g. a shop with souvenirs, maps, insect repellent, camera batteries etc., a snack bar with refreshment. By purchasing items for sale from local community members or providing them with concessionaire stands, this will result in direct benefits to the local community.

1.3.3   User Fee Development

(i)   Use surveys and consultation to finalise appropriate user fees – bear in mind that people will never be "happy" to pay fees but if the system is user friendly, strictly regulated and visitors see the value in terms of having a good experience, then they will more readily comply.

(ii)   Liaise with tour operators and consider piloting the User Fee System with them

(iii)   Legislation is likely to be required – take advantage of the User Fee Systems (including Legislation) in place in the Caribbean and other countries

(iv)   Ensure improvements to Visitor Facilities at the two selected PAs BEFORE introducing the User Fee System to these sites

(v)   Ensure establishment of the PA Fund BEFORE introducing the User Fee System – the likelihood of user fees disappearing in the Consolidated Fund is a major concern for the stakeholders and will be a reason for them to resist paying the User Fees.

(vi)   Ensure a Public awareness and Marketing Campaign to introduce the User Fee System – this should focus on:
- the National PA System and national pride in the spectacular biodiversity and natural resources of the country

- the need for active management to ensure the sustainable conservation of these resources for the benefit of the nation and to ensure the visitor experience is maintained
- the cost of conservation particularly when a site also has to address visitor use and impacts
- where the fees go and what they are used for
- how visitors can help otherwise e.g. don't litter – use the bins, take home your empty containers; make a donation; volunteer etc.

(vii)   Ensure a tiered system of fees: -
- non-residents/residents – residents usually pay less than non-residents as:-
  o   the natural heritage within the PA System is their patrimony
  o   they already pay taxes which contribute to the PA System
  o   they should be encouraged to visit the PA System
- adults/children
- discounts for students, pensioners, large groups, multiple entries

(viii)   Consider a variety of User Fees:-
- Entry Fees
- Trail Fees
- Camping Fees

Whilst fees could be site specific, the following is suggested based on review of current fees and discussions with stakeholders:-

These are fees that go to the PA System and ideally the individual PA for maintenance & conservation	Resident Adult (US$)	Non-resident Adult (US$)	Resident Child (US$)	Non-resident Child (US$)
Entry Fee (allows entry and use of facilities e.g. toilets, viewing of interpretation)	1.00	3.00	0.50	1.50
Tour Fee (trail or boat tour etc. – to be a part of the tour fee charged by the tour operator)	0.50	1.00	0.25	0.50

Residents would pay in TT$

1.3.4 Marketing

The whole Protected Area System needs to be marketed as an Ecotourism Destination, with site specific branding for each site, focusing on key species. Branding is more than just the development of logos and must be thorough.

Social marketing is needed to promote the value and importance of ecosystems and key species amongst local people – to develop a sense of pride in the biodiversity of the Trinidad and Tobago and recognition of the need to invest in protecting biodiversity.

1.3.5 Funding

Funding for capital expenditure including preparation of studies, designs and plans, infrastructural development and training should come from multiple sources including:-

- Government of Trinidad and Tobago e.g. Ministry of Tourism
- Green Fund
- GEF Project
- Other donors e.g. GEF Small Grants Programme
- Private sector and community-based Investment

Donors like the Green Fund and others can also provide support for non-government and community-based organisations to design and implement ecotourism projects whether related to accommodations, attractions, craft and other areas.

To ensure effectiveness and efficiency it will be important to coordinate donors and provide some guidance with respect to priorities. In addition, these donors can make it a criterion that projects have a conservation component and are not just oriented towards income generation, in order to ensure sustainability.

1.4 Locally Adaptable Best Practices

The following are best practices for ecotourism gleaned from a variety of sources, most included in the References. Best practices are essentially principles which must be locally adapted to suit site specific needs. Within the Caribbean and Latin America, there are a few countries with strong national ecotourism programmes and these can be investigated for further information on lessons learned and best practices e.g. Dominica, St. Lucia (more community-based and heritage tourism, but very relevant) Costa Rica and Belize. The following are best practices for successful ecotourism:

- Multi-stakeholder Involvement and Collaboration
  Ecotourism by its very nature touches numerous stakeholders and it is important to ensure that they are all involved and working together for common goals:-
    o government agencies including protected area managers, tourism agencies, water resources managers
    o non-government organizations working in conservation and/or sustainable development
    o local community-based organizations as well as schools, churches
    o private sector – national and local including tour operators, accommodation, attractions, restaurants, taxi operators
    o donor/development agencies
    o international tour operators
  The main way to ensure involvement and collaboration is to establish an Advisory Committee – at national and local levels. There will likely need to be sub-committees to address different topics and issues. In addition there must be two-way communication e.g. through newsletters, circulation of documentation, consultations, conducting of surveys etc.

- Benefits to Communities
  A basic principle of ecotourism is that it should benefit local communities, particularly socio-economically. Communities can benefit from employment and opportunities for income generation through self-employment e.g. production of craft or food for sale. In order to benefit, community members and organizations must be involved in planning from the start as well as in implementation, unfortunately this is often challenging particularly for external agencies. Like any other form of tourism, ecotourism can marginalize local communities, especially if their capacity for participation is limited e.g. due to literacy, educational and financial challenges. Efforts must be made to build capacity and obtain the involvement of local community members, ideally through organizations. Training alone will not be enough, communities (organizations and

members) will need mentoring and coaching, technical assistance, conservation education, grant funding and other assistance over a period of several years. Capacity building is not a short-term activity.

- Capacity Building
Capacity building at all levels is essential, not just for local community members. Ecotourism requires different approaches e.g. participatory planning and gender mainstreaming, which not all government agency staff may be familiar with. Ecotourism also requires specialized training. There will be a need to develop skills in diverse fields such as business planning, hospitality and conservation. This will require a concerted effort at capacity building in all areas and at all levels e.g. development of strong institutions, training, human resources, equipment and information technology.

- National Policy, Strategy and Action Plan
Relevant government ministries and agencies (namely tourism and environment) must collaborate on the development of relevant policies and a strategy and action plan. They will also need to collaborate on implementation. For a national ecotourism programme, with particular emphasis on the national system of protected areas to be successful, there will be need for significant government support. If this does not occur, then the benefits to local communities and the local economy will not result and there will be marginalization and concomitant tourist harassment.

- Benefits to Conservation
Despite the fact that ecotourism was developed originally with the purpose of supporting conservation, the unfortunate fact is that it often does not, even when practiced within national protected area systems. The private sector takes advantage of low or non-existent user fees in the national protected area systems and/or establishes their own properties. In the latter case, there may at least be some benefits to conservation. If conservation does not benefit, then the basis for ecotourism will be eroded and there will be no hope of recovery. It is therefore essential to establish a system, starting with entry and user fees, encouragement of donations etc. Protected area managers must also parlay the benefits to communities into an investment by the communities into sustainable management of the natural and cultural resources in and around the protected area, to ensure that there are not only financial but behavioural benefits to the protected area.

- Quality
Quality is critical in tourism – facilities should never be over-marketed – visitors must get what they saw in brochures or online. Visitors are always looking for value for money but they do not want to be short-changed. It is a common saying in the tourism industry that one satisfied customer tells one person but one dissatisfied customer tells many people. The tourism industry depends on word-of-mouth marketing and testimonials. Ensuring quality requires establishing and maintaining standards through training, provision of the right tools and good supervision. Whilst it is often thought that "ecotourists" do not have as high standards or requirements as other tourists, this is not necessarily the case – all visitors require clean, hygienic and safe surroundings with friendly but polite, knowledgeable hosts.

- Income-generation Opportunities
A protected area ecotourism site must ensure there are multiple opportunities for income-generation and not just depend on entry and user fees. If there are not enough opportunities, visitors will not be able to spend money and there will not be enough income generated to cover maintenance and spill over to conservation activities. Just like the any business, there must be

continuous improvements and new products for visitors to spend on, even if they are not high cost. The obvious opportunities are refreshments (even simple cold, bottled water) food, craft, souvenirs e.g. maps, T-shirts, guides but there can also be specialized or seasonal tours, events, new products etc.

- Marketing
As the saying goes, "You may have the best mouse-trap, but if no one knows it, you won't sell any". Marketing is reputedly expensive but there are many less expensive routes today, however it does require time, energy, persistence and personality along with good techniques and materials. Community-based and small businesses often need significant marketing assistance. Protected area management agencies will need to ensure that there are marketing personnel on their ecotourism team and a marketing budget. For a national ecotourism programme based on the national protected area system, the Tourism Ministry and its agencies must be fully supportive.

- Visitor Impact Management
Limits of Acceptable Change (LAC) Systems are used to monitor for impacts such that action can be taken if the impact exceeds a pre-determined threshold e.g. closing a trail or adding fencing if the path becomes too wide. At some stage however, a carrying capacity must be determined to ensure that numbers are kept to manageable amounts since safety and the value of the tour are important components of that assessment. In addition to regulation of numbers, behavior of visitors must be regulated and tour guides play an important role in this respect.

1.5   Selection of two PAs for Ecotourism Development under the GEF Project

As it will be impossible to effectively establish ecotourism in all sites at once under the GEF Project due to financial, time and other constraints and as it is useful to conduct major planning and implementation on a phased basis using pilot projects, two of the six PAs within the Project Proposal have been selected. This does not mean that there will not be ecotourism development activities in the other areas, however in order to ensure the best results, there should be a phased process to allow for lessons learned to be analysed and disseminated and for plans to be made at the System-wide level as well as the PA level before action is taken. Recommendations have been made for all sites under Section 2.

Table 5 Features of PAs

	Caroni Swamp	Nariva Swamp	Matura	Trinity Hills	Main Ridge	Speyside/NE Tobago
Natural features of note	Mangrove forest Navigable River Scarlet Ibis & Egrets at dusk and dawn (mangrove islands) Beach	Freshwater Swamp Forest Palm Swamp Marsh Evergreen Seasonal Forest Mangrove Forest Birds including Macaws Howler Monkeys	Evergreen Seasonal Forest Largest, most intact Mora Forest Beaches including Sea Turtle Nesting Rivers & Waterfalls	Evergreen Seasonal Forest	Montane Forest Evergreen Seasonal Forest	Coral Reefs Offshore Islands
Cultural features	Fishing	Agriculture	Craft (recycled glass & paper) Community-based Ecotourism		First Forest Reserve in the Western Hemisphere	Fishing
Existing activities	Boat tours especially dusk & dawn Fishing Kayaking	Walking tours Bird-watching	Walking tours & Hikes Sea Turtle Nesting Tours Kayaking	Hunting	Walking tours & Hikes Bird-watching	Diving Snorkelling Glass bottom Boats Bird-watching Trails
Potential activities	Workshops (corporate) Walks More interactive features at the	Swamp kayaking Zip line Canopy Walk Cycling Horse-back riding	Cycling Zip line Canopy Walk Horse-back riding		Cycling Zip line Canopy Walk Horse-back riding	Kayaking

	Caroni Swamp	**Nariva Swamp**	**Matura**	**Trinity Hills**	**Main Ridge**	**Speyside/NE Tobago**
	Visitors' Centre					
Existing facilities	Visitors' Centre with exhibits and deck & meeting room for events	Large Room (meant to be office space) used as a Visitors' Centre – a few poster exhibits Trails	Trails Limited signage No Visitors' Centre (Office under construction but space limited)	None	9 Trails including most popular – Gilpin (allows for a variety of distances) Visitors' Centre with shops (just constructed) – more suited for events than a Visitors' Centre	
Ease of access to the site	Very close to Port of Spain & right of highway	Close to Manzanilla Beach	Easy	Relatively easy	Good access – main road through site	Good road access to Speyside & other coastal villages
Ease of access to attractions	River – easy Mangrove islands & beach – boat access only	Relatively easy	Forest not as easy to access as beaches	Challenging due to oil production facilities	Good – main road through site	By boat
Safety & Security Issues	To be assessed	To be assessed	Uneven trail surface with steep drop-off (Rio Seco) Some car breaking (theft)	Threat of explosions and fires	Landslides & slippery trails	Boat & Diving Safety
Threat from Natural Disasters	To be assessed	Flooding during heavy rain Snakes	Slippery nature of soil in rain Snakes	Limited	Landslides & slippery trails in heavy rain Snakes	Limited
Management Capacity	Limited	Limited	Limited	None	Limited	Limited
Community	Small community	Several communities	Well-organised community-based organisations e.g.	Small community Hunters	A few comm.-unities immediately	Speyside – main coastal community;

	Caroni Swamp	Nariva Swamp	Matura	Trinity Hills	Main Ridge	Speyside/NE Tobago
			Nature Seekers & Turtle Trust		adjacent	offshore islands uninhabited
Nearby facilities e.g. accommodation, meals	Very close to Port of Spain	A few e.g. Palmzanilla	Many – locally run	None	Mainly on coast	Several
Tour Operators	Nanan & others operate boat tours Several tour companies bring their guests, particularly from the cruise ships No contribution to conservation	Private tour operators No contribution to conservation FD staff have experience with school tours	Nature Seekers – very well organised and experienced and contributing to conservation Community-based	None	Tour Guides and Tour Operators No contribution to conservation	Tour Guides and Tour Operators No contribution to conservation
Other	Relatively easy to establish ecotourism with significant infrastructure already in place Will need community outreach	PA with highest diversity of ecosystems – providing many opportunities Limited infrastructure & capacity	The example of best practices from this area can be used. Nature Seekers could be contracted to assist with community capacity building	Not very suitable for ecotourism due to the conflicts with oil production and hunting	Relatively easy to establish ecotourism with significant infrastructure already in place	The MPA is not yet established but activities could focus initially on the existing terrestrial PA – Little Tobago

Whilst Nariva and Matura have the widest variety of ecotourism attraction options and these are already well developed by NGOs/CBOs in Matura, it was felt that Caroni with its clear boat tour market would provide the best opportunities for piloting an ecotourism project within a protected area in Trinidad. Matura can follow as an easy second, with an approach that involves greater involvement of existing CBOs with knowledge and experience in ecotourism development and management. In the case of Matura, it would make best sense to contract out ecotourism development and management to local organisations. Such organisations e.g. Nature Seekers can provide useful assistance in working to involve and benefit local community members in Caroni and Nariva. Trinity Hills is not suitable for ecotourism development due to the oil drilling and hunting activities in the area, although there may be scope for guided hunting. For Tobago, the Main Ridge Forest Reserve has

existing activities and infrastructure which only need planning, organisation and formalisation and is therefore the best choice for piloting a project; although there are already some ecotourism activities on Little Tobago with need for similar action, the wider protected area has not yet been established. The NE Tobago site could therefore follow quickly on Main Ridge.

2. Ecotourism Development and Management Plans

Ecotourism Development and Management Plans require significant consultation with stakeholders and detailed planning involving a number of specialist areas e.g. business planning and marketing. In addition, there are numerous specific pieces of information and agreements required, which would not be available at this time. The Development section of the Plan will guide issues such as zoning, infrastructure design and should include a Business Plan, as marketing and a business approach will be critical for successful development of ecotourism at individual sites. The Management section of the Plan will address issues like environmental management, hospitality management, interpretation etc. As indicated above, Ecotourism Development and Management Plans are usually for specific sites within a wider protected area (PA) and therefore should be prepared following the preparation of a broader PA Management Plan.

The following list outlines the steps involved in preparing an Ecotourism Development and Management Plan which should be used to guide the ecotourism development planning process at each site. The template has been expanded to provide information that can be used to prepare draft, outline Ecotourism Development and Management Plans for any protected area. Much more information and consultation will be required to complete these plans, but the documentation will provide a sound base for these plans. More detailed and specific information is provided for the two selected PAs: Caroni Swamp Forest Reserve, Trinidad and Main Ridge Forest Reserve, Tobago.

Steps in Preparing an Ecotourism Development and Management Plan

(i) Establish a Local Ecotourism Advisory Committee (a sub-committee of the PA Advisory Committee but with more people from the tourism industry and local community businesses)

(ii) Conduct Full Site Diagnostic - Gather information on the site – physical and biological data e.g. hydrology, flora and fauna; socio-economic e.g. population, employment and income generation; existing attractions in the area e.g. prices, facilities and services.

(iii) Conduct Data Analysis

(iv) Develop Vision, Goals and Strategies

(v) Work with Consultant(s) and Advisory Committee to prepare the following sections of the Ecotourism Development and Management Plan:-

- **Business Plan**
  Includes: product description, assets, threats, facilities & services, industry and market analyses, pricing, marketing plan, management and operations, financial plans

- **Development Plan**
  - Zoning – division of a site into zones for most appropriate use
  - Infrastructure Design – guidelines for design which will be in harmony with the specific features and heritage of the site. In general, sites should ensure best environmentally sustainable practices e.g.
    - energy conservation (including use of alternative power sources, allowing for air flow and sunlight)
    - water conservation (including steps to reduce water pollution)

- o   Visitor Site Planning – management of sites where visitors will be concentrated
- o   Site Development Plan (detailed planning for the site – will require a map)

- **Management Plan**

Environmental Management

An environmental audit should be conducted of the facilities and their operations and an environmental management plan prepared. The audit and plan (as well as plans for new infrastructure etc.) should consider:-
- o   Energy Use
- o   Water Use
- o   Wastewater Management
- o   Solid Waste (generation of garbage and handling/disposal)
- o   Use of chemicals
- o   Health and safety
- o   Nature conservation

Visitor Impact Management

Carrying capacity for the main river channel (in the case of Caroni) the trails at the other sites and the terrestrial and marine sites in NE Tobago should be estimated based on both ecological and visitor perception criteria – as there is a need to limit the number of people and vehicles within the site at any given time. Associated with this, there is a need for a Limits of Acceptable Change system so that visitor/tourism impact can be monitored and steps taken to mitigate or recover from damage if it occurs. The University of the West Indies may be able to assist with this.

Safety, Disaster Preparedness and Emergency Management

Clear safety rules must be enforced e.g. requirement of a tour guide along certain trails, compulsory use of life vests in boats.

A disaster preparedness and emergency management plan should be prepared so that there is a plan and system in place for managing such an event. The tour operators and tour guides will be critical in mobilising this plan and so must be involved in its development, along with the relevant agency.

Hospitality Management

The financial sustainability of ecotourism depends on good visitor experience and satisfaction and these are dependent on excellent customer service and hospitality. The personnel involved in interacting with all visitors, will require training (including regular refreshers) and careful monitoring and supervision. A comments card or book will be useful in monitoring and assessing the visitors perspective in order to make the necessary improvements.

Interpretation

A Manual on Signage and other Interpretive Materials should be developed for the System of Protected Areas. This can be done using the first two sites as examples. A manual will ensure a similar, cross-cutting message, theme and feel across all sites within the national Protected Area System, whilst there will be individual branding and site specific messages and topics. This approach will also help reduce costs as completely new designs will not have to be developed for each site i.e. there will be templates for logos, directional and

interpretive signs, brochures etc. These will differ from site to site by colour schematic, logo features, topics and content.

Across the System, tour guides should have a certain level of basic training inclusive customer service, tour guiding techniques and first aid. Site specific tour guides must have in-depth knowledge of the particular site with which they are associated, and because of their local knowledge and experience, they should be able to effectively tell the story about their site.

Partnering with Stakeholders
There are multiple stakeholders for PA management and ecotourism such as government agencies, non-government organisations, community-based organisations, private sector e.g. hotels, tour operators, other businesses, schools, churches. It is important to bring these groups together around common goals for the management of the protected area through awareness raising and involvement on the Advisory Committee. There can be on-going and ad-hoc sub-committees of the Advisory Committee to allow for greater involvement as required. Formalisation of collaborative management agreements will be necessary.

Benefits to Local Communities
Local community involvement e.g. through the Advisory Committee but also through awareness raising and outreach are essential, but ecotourism should benefit local communities. This is possible through:
- Employment of local community members
- Use of services of local community members e.g. mason, carpenters, tour guides
- Concessions to local community members e.g. restaurants, shops
- Training and educational opportunities

Financial Management – user fees, concessions etc.
There are a variety of ways ecotourism attractions within protected areas can generate income which must then be carefully managed and accounted for. These include:-
- Entry Fees
- User Fees e.g. for tours, camping, filming for commercial purposes
- Concessions e.g. for food and refreshment
- Sale of branded souvenirs e.g. caps (both at the site and at the airport etc.)
- Sale of useful items e.g. insect repellent, binoculars

The maintenance and operational costs must be covered as well as the cost of public liability insurance. Funds should also be available to cover emergency repairs e.g. due to heavy rain and flooding.

2.1 Caroni Swamp Forest Reserve, Trinidad

Business Plan Components
Caroni Swamp is situated on the west coast of Trinidad, 3.5 km southwest of the capital, Port of Spain. It is a Forest Reserve and Wildlife Sanctuary, recognised internationally as a RAMSAR site for its rich birdlife in particular. Caroni Swamp is an estuarine system comprising about 5,996 ha of mangrove forest and herbaceous marsh, interrupted by numerous channels, and brackish and saline lagoons, and with extensive intertidal mudflats on the seaward side. Along the rivers, Red and Black mangroves dominate resulting in a dramatic scenery with the tall trees and their aerial prop roots descending into the water. The swamp has been modified by attempted reclamation, and there is some seasonal cultivation on the

landward fringe (Bacon, 1970 in RAMSAR undated). Caroni Swamp is important economically for oyster and fish harvesting, for hunting and for ecotourism (Ramdial, 1975 and Chin Yuen Kee, 1978 in RAMSAR undated). Major commercial fisheries are based on demersal stock in the adjacent eastern Gulf of Paria.

The swamp is used for roosting by several wetland birds including Trinidad's national bird – the Scarlet Ibis (*Eudocimus ruber*). These birds, along with a variety of Egrets return to roost every evening in very large numbers and this has become a major attraction with several private boat owners taking visitors (cruise ship passengers and stop-over visitors)on boat trips down the river to see (and hear) these and other birds. Visitors also do fishing and most recently, kayaking has been introduced.

The Forestry Division has established an office and Visitors' Centre at the end of the road into Caroni Swamp and this includes:-
- Large exhibit about wetland ecosystems – mainly photographs and life size 3D model
- Large deck for events
- Bathroom facilities

The services of guided boat tours or fishing tours are offered by private individuals with the largest operator being Nanan's, who is now also offering kayaking. As the boat operators start their tours before the Visitors' Centre, most of the visitors do not use it.

Threats to the site are mainly from:-
- Filling in of wetlands for agriculture and squatting
- Urbanisation south of the CR Highway and East-West Corridor
- Possible erosion of the river-banks by the wash from boat engines which should always go slowly (but do not)
- Poachers (over-harvesting of oysters and fish)

Caroni Swamp is at an advantage over Nariva Swamp as a wetlands boat tour attraction, as the rivers can be easily accessed by boats and the mangrove lagoon before open sea, make it ideal for boating tours. Also, it is in closer proximity to the capital city (where cruise ships dock) so it can take advantage of the over 100,000 cruise ship visitors annually.

Currently, the tour operators and national marketing provide significant marketing of the Caroni Swamp boat tours – particularly viewing of the Scarlet Ibis at sunset. There is a need for branding of Caroni Swamp and the Red Mangrove and Scarlet Ibis would be the most relevant species for a logo. The average tour costs TT$50, unfortunately, none of the income from tours accrues to management of the protected area, and even the tour operators are concerned about inadequate management of the resources. A system must be put in place which would require fees (to return to PA management) for:-
- (i) Entry to Caroni Swamp (this would allow access to the current facilities: Visitors' Centre, bathrooms, snack concession and deck areas and to new facilities later on e.g. boardwalk, other exhibits)
- (ii) Boat tours in the Caroni Swamp

Whilst the boat tours should be the major focus, there are other opportunities for income generation (for both the protected area and local community members) e.g. boardwalk tours within a small section of the wetland, sale of souvenirs including handicraft and sale of food and beverage. The large deck area could also be rented out for events – but this would have to be done carefully to avoid disturbance to the bird life and other visitors from noise e.g. from use of sound systems.

Development Plan Components

Zoning
Currently most of the activity at Caroni Swamp occurs near the entrance (when one turns on the highway onto the entrance road). However, this area is actually illegally occupied by one of the main tour operators. This situation must be regularised. Either the boat operators should all be required to start operations from the Visitor Centre dock (but the parking lot is insufficient in size) or there should be an extension to the Visitors' Centre with a small gazebo type building (about 12 feet in diameter) with a set of exhibits and a boardwalk down to the main picnic area. Hence there would be three main intensive use zones:-

- Entry – with parking, interpretation, ticket sales, souvenirs and refreshment and boardwalk to Main Visitors' Centre. At this location, the boat tour operators could also have clearly marked booths with their information and access to their services
- Main Visitors' Centre – with additional parking (mainly for office), interpretation and deck area for relaxation
- Main rivers/channels/mangrove lagoon - for use by boat tours (some channels should be off-limit to boats)

If a boardwalk is constructed within the mangroves later – this should be a moderate use area – with fewer people at a time allowed access.

Infrastructure Design
The existing infrastructure should be used as far as possible, to reduce costs and wastage. The new structures could be more rustic in appearance and blending more into the surrounding landscape. An architect will be required for design of new infrastructure and a structural engineer to address the derelict viewing tower.

Site Development Plan

- Entry
  The road into the area should be dominated by the gigantic sign which is currently located at the Main Visitors' Centre/Office and which is too big in terms of aesthetics. That sign is more appropriate to mark the road entry into the Caroni Swamp Protected Area. A sign showing a map of the ecotourism site would be very useful too. Some landscaping will be required but this should use native flowering plants.

Picture 1 Oversized Sign at Caroni Swamp
Visitors' Centre/Main Office

- Boat Dock/Pier Areas
  As indicated earlier, a decision must be taken regarding the best location for these facilities – either near the entry to the property or beside the Main Visitors' Centre/Office. This will depend on the main type of boat used, the depth of the water and ease of access to the boats, and a turning basin will be

needed. Whatever the decision, there needs to be some clean-up of both areas, as there are unattractive and unsafe sections at both locations.

- New Gazebo Style Visitors' Centre with Boardwalk to Main Visitors' Centre

This area should be given priority, along with the regularisation of the boat tour operators and the requirement for them to have proper facilities. This area will provide the first welcome and introduction to the site and should provide seating and shelter in addition to a more informative, but user friendly set of exhibits than currently at the Main Visitors' Centre. There should be information on the Scarlet Ibis and the Red Mangrove in particular as well as Mangrove Oysters and fishing – linking the natural resources to the cultural heritage of the area. Tour guides should be available at this location to provide information about the tour options available. This area should also provide for the organised sale of souvenirs and craft as well as refreshments. There should be a boardwalk/pathway using a loop trail design down to the Main Visitors' Centre, so that there is an option for persons who do not want to go on the boat tour – to walk down the main area and back along a scenic trail. This trail should have shaded, seating areas as well as interpretive signs.

- Main Visitors' Centre

This area functions mainly as an office and visitors walk through the central Visitors' Centre which depicts in the form of photographs and a life-size model, the wetland ecosystem – particularly mangroves. The visitors walk through this area on to a large deck providing views on to the river. They can sit and relax, make use of the toilet facilities and the more substantial café facilities before returning to the entrance. A solar-powered golf cart (about US$8,000) could be available (for a fee) to take visitors back to the entrance if they prefer not to walk.

There is an odd bridge just off the main parking lot – which effectively goes nowhere – it should be removed, or if possible – could be the start of the proposed Mangrove & Wetlands Boardwalk Trail.

- Boardwalk Trail

A suitable location for a one hour boardwalk trail through the mangroves and wetland should be identified and such a trail developed. Entry to this trail should be for a fee and with a tour guide only. A gate could be placed at the entrance with a sign about the tour, to prevent general access without a tour guide. Ensure visitors have mosquito/insect repellent applied to avoid unpleasant experience.

- Viewing Tower

The tower is in a state of complete disrepair and is a hazard. A structural engineer experienced in wood structures will need to be contracted to examine the tower to see if it can be repaired. If not, it should be demolished. If it is repaired, there must be a maintenance schedule which must be adhered to. If this is not going to happen, then there is no point rebuilding the tower, as it is very exposed to the elements and will require regular maintenance to ensure safe use.

Picture 3 Viewing Tower, Caroni

Picture 2 Close-up of Viewing Tower showing damage

- Beach Facilities

Consideration should be given to repairing the beach facilities established years ago, however if the beach is not attractive and if there is not likely to be significant usage then this should not be a top priority. It could be developed later as an additional tour – if it is found to be a feasible option.

Management Plan Component

Most of the management planning components for each site will be similar although some details will differ from site to site depending on whether the activities are water based (marine or river) or land based etc. Management Issues specific to Caroni include:-

- Addressing the existing tour operators and regularising their operations
- Charging of an entry fee – at new Visitors' Centre, or purchased at the NFPAMA office or online
- Charging of user fees (for tours) through tour operators.

Visitor Impact Management

With sunset being the favoured time for visits to the mangrove lagoon to see the roosting of the Scarlet Ibis, there can easily be over-crowding. This will need to be monitored and controlled – with rules about routes/use of the river and boat speed, to avoid collisions and damage to the river banks. The photograph below was taken towards the end of April – which is the close of the cruise ship season, and there were several boats – it is likely to be overcrowded December through March when there are more visitors.

Picture 4 Sunset boat tours at Caroni Swamp in April

Interpretation

This should focus on wetlands and mangroves in particular – with the message conveying the importance of mangrove ecosystems for wildlife – particularly birds, fish and oysters and for protection of coastlines, and hence, the need for conservation. Many different stories can be developed e.g. the ways the different types of mangrove have adapted to the saline and muddy environment, the filtering of run-off from land, acting as a nursery for fish etc.

Special tour packages should be designed for school groups – this should involve not only the boat tour and viewing the interpretive centre, but also hands-on activities.

The existing exhibits at Caroni are obviously meant for guided tours, as there is little explanatory information.

2.2 Main Ridge Forest Reserve, Tobago

Business Plan Component
The Main Ridge Forest Reserve located in the centre of eastern Tobago is about 4,000 ha and is an area of lush, tropical rainforest important for biodiversity and watershed conservation. In addition to its natural significance, it is important historically as the first Forest Reserve declared in the Western Hemisphere (in 1765). It is also important culturally as an area where locals hunt (during Open Season) for wild meat, consumed traditionally at various festivals. The area has a high diversity of tropical plants and large numbers of a wide variety of birds and other animals though many of the latter are nocturnal.

The biodiversity and cool, rainforests provide visitors with a break from the primarily beach recreational options in Tobago. The main road through the Forest Reserve provides for easy access by car and from this main road there are 9 trails including the very popular Gilpin Trace. A Visitors' Centre has been established by the Tourism Development Company but appears to be mainly for use to host events. Interpretive facilities including exhibits will need to be developed at this site. Generally the main form of interpretation is through the tour guides.

The main threat to the use of the site is heavy rain and related landslides.

The Main Ridge is well used and marketed nationally and by the private tour operators and independent tour guides, with no benefits to conservation. Prices vary depending on the experience of the tour guides who charge about US$35 for the 2 hour hike on the Gilpin Trace. The tour guides are independent and the tour operators provide the link to these individuals.

Development Plan Component
Zoning
Currently most of the activity at Main Ridge occurs along the main road through the site, from which trails are accessed, with most activity at the Gilpin Trace – which has even had a shelter built to accommodate waiting tour guides. In addition, a Visitors' Centre has been built – mainly it seems to accommodate events, but also with booths for sales, which presumably will be concessions. Hence there would be three main intensive use zones:-
- Road – this is a thorough-fare
- Trails – particularly Gilpin Trace
- Visitors' Centre
Some of the trails are moderate rather than intensive use.

Infrastructure Design
No new structures are required, except possibly safety rails/boardwalks on some of the trails, in areas where it becomes very slippery in the rainy season. Any new structures, should be built with wood, keeping in mind the ambience of the forest.

Site Development Plan
- Entry
  There are currently signs at the entrance, but there is need for a sign showing all the trails and the Visitors' Centre.

- Main Visitors' Centre

This area was just recently built and has not yet been formally opened.
  - There is a need to finalise plans for its use – is it for events and if so, what kind of events e.g. weddings, workshops and/or is it for interpretation and if so, an interpretive plan and materials i.e. exhibits need to be prepared
  - There is a need to finalise plans for its operation – who will be responsible and what costs will be charged – because it will be difficult to charge for "entry" to this site as the road is a thoroughfare. Therefore in the case of Main Ridge, there should be a "toll" which allows visitors to enter the Main Visitor's Centre.
  - There may be need for some structural features to shore up the building, as it may be slipping due to the soil and terrain. This should be investigated.

- Trails
  - Having mapped all the trails – a brochure should be produced clearing showing these and indicating length, difficulty, features etc. Visitors and trail guides should be encouraged to use the other trails.
  - Based on the terrain and rainfall, safety structures should be put in place on each trail

- New Products

  A zip-line should definitely be explored for at least one of the less used trails – this should result in more activity on that trail. There must be a fee collected for this activity.

Management Plan Component

Most of the management planning components for each site will be similar although some details will differ from site to site depending on whether the activities are water based (marine or river) or land based etc. Management Issues specific to Main Ridge include:-
- Addressing the existing tour guides and regularising their operations into the new system
- Addressing soil erosion challenges on the trails and the road

Interpretation

An interpretation strategy will need to be developed for the site incorporating exhibits in the new Visitors' Centre and signage throughout the site. Currently, all the interpretation is dependent on tour guides, therefore, it will be difficult to collect an entry fee unless there are facilities to use. There is a lot of space available both inside and outside the newly constructed Visitors' Centre – this could allow for inter-active exhibits as well as posters and models. As the internal space is just one large open area however, it will be challenging to create an exhibit.

Picture 5 Large, newly constructed Visitors' Centre at the Main Ridge Forest Reserve

Picture 6 Large, newly constructed Visitors' Centre at the Main Ridge Forest Reserve (inside)

2.3 Recommendations for Other Sites

Nariva Swamp including Bush Bush
This area has the greatest biodiversity and opportunities for a wide variety of tours – walking, hiking, cycling, canopy tours and zip-lines along trails through several different types of forest and wetland habitat. However, a new large Visitors' Centre will be needed inclusive interpretation. Significant work will need to be done with the local communities and some of this has been initiated by the Forestry Division and the Environmental Management Authority. There are other opportunities nearby also e.g. beach and river tour possibilities along with a guest house and local restaurant.

Matura
The community-based organisations in the area, particularly the Nature Seekers are already very active and well-organised in implementing ecotourism for turtle-watching, kayaking and walks. They are ideally suited as co-management partners to develop and manage trails within the Forest Reserve component of the site e.g. Rio Seco Trail. The latter is in urgent need of attention with respect to safety and compulsory provision of guides. Garbage is a big problem at this site, and guides would help address this problem. The few existing interpretive signs are excellent in their quiet, poetic way.

Picture 8 Interpretive Sign on Rio Seco Trail

Picture 7 Garbage along Rio Seco Trail

Speyside – Little Tobago and Goat Island
Little Tobago is already a protected area and tour guides/operators are taking bird watching tours out to this site, making no contribution to its protection. The user fee system should be instituted as quickly as possible (at least for non-residents). Diving tours are already conducted in the area and therefore a user fee system could be incorporated (as occurs in other countries) relatively quickly by working closely with the dive operators. Hence, ecotourism could be formalised quickly in this area, as many of the components are already in existence.

3. Analysis of risks, threats and barriers to development and proposed mitigation strategies

Barriers to development are currently at the governance level and require the attention that is being given vis a vis:-

- Establishment of the National Forest and Protected Area Management Authority
  Without the establishment of this agency in Trinidad and generally without a new thrust in terms of ecotourism, there will be no development within the protected area system. Ecotourism must be seen as a critical business arm of the System which will help sustain its work.
- Lack of capacity for ecotourism development and management within the government sector
  Training will be required and to have the necessary level of impact to inspire, motivate and sustain ecotourism development within the National PA System will require a multi-pronged approach. This will involve not only short-courses for professional development but should include a study tour taking key personnel from the new Authority along with personnel from the Ministry of Tourism and relevant stakeholders on a tour to see ecotourism operating within a national system of protected areas (in addition to privately managed areas) e.g. Costa Rica or Belize. The tour should be organised so as to formally help establish mentoring programmes to provide long term assistance for the development of ecotourism in Trinidad and Tobago.
- GEF Project Proposal to Improve Forest and Protected Area Management
  This project will act as a catalyst to the development of ecotourism within the National System of Protected Areas in Trinidad and Tobago. Without the activities required by the project, there may be a lack of focus on ecotourism.

Table 6: Threats, Risks and Mitigation Strategies

Threats	Risk	Sites of concern	Impact	Mitigation Strategies
GOVERNANCE/INSTITUTIONAL				
Lack of a User Fee System	High especially if requires legislation and if this takes a long time to prepare and pass High if there are challenges in operationalising the User Fee System e.g. resistance from the public	All	No benefits to Conservation	Establish a User Fee System in the two selected PAs, as per guidance from Ecotourism Specialist (see Section 1.2) and Socio-economist. A pilot approach will allow improvements when the system is established in all the other PAs. Use examples from other Caribbean islands to guide legislation and user fee system generally.
Limited involvement	Medium – whilst	All	No benefits to	Involve tour operators in establishment of

Threats	Risk	Sites of concern	Impact	Mitigation Strategies
of tour operators in conservation	there is currently limited involvement, the tour operators consulted appreciate the need for conservation and are willing to participate e.g. through a User Fee System		Conservation	the User Fee System
Inadequate facilities and services	Medium – some facilities exist and others can be relatively easily improved using a phased approach within sites	All	This will discourage visitors from paying user fees and currently results in a lack of awareness about the protected area system and conservation and hence unlikely prospects of support In addition, the more services available for sale the greater the returns	(i) Liaise with Ministry of Tourism to develop a National Ecotourism Policy (ii) Prepare and implement ecotourism development and manage-ment plans for pilot sites within the selected PAs and use that experience to create a National Plan for Ecotourism in PAs in T&T and site specific plans (iii) With guidance from these plans improve, construct and establish Visitor facilities and services, starting with the pilot sites
Inadequate regulation of visitor numbers and activities	High	Some	Degradation of the natural resources e.g. garbage, soil erosion on trails etc.	(i) Begin the process of establishing carrying capacity for the different sites (ii) Establish Limits of Acceptable Change and Environmental Management Systems (iii) Provide guidelines on behaviour to tour operators and visitors
Limited capacity for ecotourism and visitor management including at the tour	High	All	Inappropriate development and management of ecotourism in PAs	(i) Hire a qualified, experienced Ecotourism Manager (ensure further training as necessary) and have this person establish a capable team

Threats	Risk	Sites of concern	Impact	Mitigation Strategies
guide level				(ii) Ensure relevant, credible training at all levels (iii) Review existing Tour Guide training and add relevant components and ensure refresher training (iv) Ensure capacity building within communities
Limited National-level Marketing	Medium as it is better not to market an ecotourism product that doesn't really exist – whilst national level marketing plans for Ecotourism in the PA System can be developed, their implementation must wait until the product is ready	All	Without marketing, sufficient visitors for profitability will not go to the sites However if the sites are marketed before they are ready then visitors will be turned off and discourage others from visiting	(i) Begin to develop Destination Marketing for Ecotourism in the PA System (national and private) (ii) Develop branding and marketing plans and materials for the pilot sites and consider within the context of what branding for the others would look like (iii) Begin marketing once the Visitor Facilities and Services are improved and the User Fee System established
ENVIRONMENTAL				
Land slides	High during the rainy season	Main Ridge	Road access blocked Trails blocked and damaged	Work with relevant agencies to ensure heavy equipment located in key communities to at least partially clear road blocks to allow vehicles pass (i) Ensure equipment on hand and a team to clear trails (ii) Ensure emergency funds available for basic repairs (iii) Ensure all tour guides have cell phones and key contact numbers to call in case
Slippery trails during rains	High during the rainy season	Matura Main Ridge	Visitors may slip and hurt themselves	(i) Add gravel, steps, rails and other infrastructure as necessary (ii) Install warning signs
Flooding	High during the rainy	Nariva	Road access blocked	Develop a system to address where this

Threats	Risk	Sites of concern	Impact	Mitigation Strategies
	season			impacts conservation and ecotourism
Fires	High during dry season	Nariva		Work with farmers to address setting and management of fires
Hurricanes	Low – Trinidad and Tobago are not prone to hurricanes	All	Wind and rain damage to vegetation and infrastructure	
Snake bites	Medium	Nariva Matura	Injury to visitors	(i) Place interpretive warning signs – telling visitors about snakes and advising them to watch where they put their feet (ii) First Aid & CPR training of tour guides with special training re: snakes (iii) Ensure nearby hospitals have anti-venom.
Insect (e.g. mosquit) bites	Medium	All	Discomfort to visitors	(i) Let visitors know they should apply insect repellent before going on the trails
CLIMATE CHANGE				
Climate Change from Global Warming increases the possibility and intensity of most of the Environmental Threats and Risks.				(i) Increase the resilience of natural ecosystems through conservation and restoration activities as well as enforcement and educational activities to reduce the threats to, and destruction of, natural resources (ii) Increase the resilience and decrease the vulnerability of local communities through awareness raising and assistance with adaptation measures e..g environmentally sustainable resource harvesting practices (iii) Increase the resilience and decrease the vulnerability of infrastructure in and around the ecotourism sites including roads e.g. improved drainage, stronger buildings

Threats	Risk	Sites of concern	Impact	Mitigation Strategies
				(iv) Ensure rapid response systems are in place to address break-downs in infrastructural systems
SOCIO-ECONOMIC				
Limited capacity of local communities	Medium	Most	Reduced benefits to communities, possibly resulting in negative attitudes and practices e.g. visitor harassment, touts etc.	(i) Involve local communities in planning (ii) Assist local communities with capacity building including encouraging and facilitating the establishment of community-based organisations
Limited funds for infrastructural and other development e.g. Visitor Facilities (accommodations, restaurants) at both government and civil society levels	Medium	All	Inadequate development of sites	(i) Involve the Green Fund in planning (ii) Encourage Green Fund to support capacity building and different funding approaches e.g. access to small grants involving simpler administrative processes e.g. simpler application form (there are other Funds within the Caribbean which can share their experience).
EXTERNAL FACTORS				
Reduction in tourist visitor arrivals due to global factors e.g. downturn in global economy and/or threat of terrorism	Medium	All	Loss of Income and possible closure of businesses if the reduction is prolonged	(i) Ensure strong domestic tourism market (this will also help strengthen visitation from the sector of "Visiting Friends & Relatives) (ii) Ensure on-going marketing especially in globally challenging times (iii) Ensure safety and security of sites within national PA System (iv) Ensure multiple income generating strategies for the PA System and stakeholders
OTHER				
Diving Accidents	Medium	Speyside	Injury to visitors	Emergency System in place including Hyperbaric Facilities at nearby hospital

4.   Capacity Needs for Ecotourism Management

There are two main levels of capacity building required for ecotourism management – professional and technical. The professional level will be critical in the early development of ecotourism within the national PA System and also to grow and sustain ecotourism as a key programme. Persons at the professional level should be highly trained and provided with practical experience through study tours, exchanges and mentoring. This will allow this core team to provide training for other professionals and for persons at the technical level, building on basic technical skills training that is already available locally.

(i)   Professional
A team of management professionals will be needed to manage ecotourism in the national protected area system (Trinidad and Tobago). A degree in protected area management and/or tourism management with specialisation in ecotourism would be ideal. However, within the Caribbean, the personnel with this type of academic education may be challenging to find. The draft National Ecotourism Policy lists three universities in Trinidad which provide degrees in tourism management but UWI is the only one that offers a course "Introduction to Ecotourism". The certificates, diplomas and associate degrees being offered do not address ecotourism although the short courses in Sustainable Tourism and Environmental Issues offered at the Trinidad and Tobago Hotel and Tourism Institute have a good ecotourism component.

Training in ecotourism is available from a variety of institutions in nearby USA, Canada and Latin America e.g. Costa Rica. In addition, there are online training courses offered by some reputable organisations e.g. The International Ecotourism Society (TIES) – www.ties.org . Short courses including certification are available as well as workshops and conferences. Professional membership in relevant organisations should be encouraged.

The PA System Ecotourism Manager would be responsible for the development and management of all aspects of the Ecotourism Programme across the PA System. They should come from a tourism business management background (education and experience) with ecotourism training and experience in addition. Areas of knowledge and competence would include the following:
- Sustainable Tourism Assessment and Development
- Environmental Management
- Sustainable Tourism Destination Marketing
- Ecotourism Management
- Financial and Project Management
- Business Planning
- Human Resources Management

The PA System Ecotourism Manager would lead a team of staff members specialising in each of the following areas. Initially, there would be one person per area but as ecotourism within the System expands, additional personnel would be taken on and local protected area personnel would be trained by the team, at least to a certain basic level. The core areas are:-
(i)   Destination Marketing
This person would have a tourism marketing educational and experience background along with relevant training. They would be responsible for Branding and Marketing

including the development of marketing strategies and materials and implementation of strategies including use of social media). They would also play a role in the packaging of activities to form tours.

(ii) Interpretation and Environmental Education

This person would have an Education or Communications background with specialised training including National Association of Interpreters certification. They would be responsible for the development of educational and interpretive materials including signage, brochures and tour guide information. They would also be responsible for training tour guides.

(iii) Green Building

This person could be an Architect and/or Builder with specialised training. They would be responsible for the design, construction and maintenance of infrastructure including trails and facilities such as Visitors' Centres.

(iv) Environmental Management

This person would have an environmental management background and specialised training. They would be responsible for conducting environmental audits, preparing and helping to monitor and evaluate environmental management systems in each protected area's ecotourism sites.

(v) Visitor Impact Management

This person would have an environmental management background with an emphasis on ecosystem management. They would be responsible for preparing carrying capacity assessments and Limits of Acceptable Change programmes and monitoring and assessing these to ensure adaptive management.

(vi) Hospitality Management

This person would have a sustainable tourism background with hospitality and customer service training. They would be responsible for ensuring the ecotourism sites meet relevant tourism standards and for ensuring visitor satisfaction. They would also be responsible for training persons (including community members) working or hoping to work in the hospitality aspect of ecotourism e.g. tour guides, housekeepers, taxi operators etc.

(vii) Community Outreach and Development

This person would have social work and community outreach educational background and experience with training in ecotourism. They would be responsible for engaging the local community for involvement in ecotourism planning and implementation.

These professionals would provide technical support for Protected Area Managers and relevant personnel at each site. There will need to be someone at each site responsible for the ecotourism activities but if there is sufficient support from the central agency, this person may be someone with a first degree in either tourism or environmental management and with in-house training (from the core of professionals) and other training.

(ii) Technical

A team of persons on the ground at each site will be needed with training and experience e.g. tour guides, trail maintenance personnel. Some of these may be employed directly and others indirectly and many will be from the local communities. They will require basic secondary level education in addition to training although there will need for specialist tour guides with at least first degrees in natural resources management/forest conservation.

Whilst the Tourism Development Company and the Tourism Hospitality and Tourism Institute have developed and currently run tour guide (and several other relevant) courses, however, the requirements for an ecotourism tour guide are more specialised and therefore additional training will be necessary. The Tobago Tourism and Hospitality Institute and Eco Project Ltd have developed a Eco Tour Guide Manual under a UNDP/ SGP grant for Belle Garden wetland in Tobago and this could be built on. The national level training should provide the base for all other subsequent, specialised training. Some of this specialised training should eventually be conducted by the team of professionals (mentioned above) from the central agency and from the protected area. Tour guides for a particular site must be very familiar with the specifics of that site.

Tour guides are the most critical of the technical personnel and can either make or break an ecotourism venture. They must have the personality, local knowledge, skills training and experience to do a good job. Tour guides should ideally be local and therefore as far as possible tour operators should not be permitted to use their own tour guides within the national system of protected areas. Instead, the protected area management should work with NGOs and local CBOs to identify suitable local community members and train them as tour guides.

To retain these skills, staff will need to feel that their compensation is commensurate with the work they are required to do. There must be scope for movement within the system and for creativity in developing new approaches whether for marketing or interpretation. There should be a system where personnel can move up e.g. from junior to senior tour guide to supervisor/trainer, with commensurate increases in remuneration and recognition.

GEF Project

As the GEF Project may not run concurrently with the complete establishment of the new NFPAMA, it will likely be necessary to contract consultants to implement project work at the professional level e.g. Visitors' Centre design and construction, design of interpretive programme and site specific ecotourism development and management plans. Appropriate existing staff within the NFPAMA can be identified to work along with and, understudy the consultant to effect knowledge transfer and allow for experience to be gained. For the training to be conducted under the GEF Project (with joint GEF and other donor funding) the following is recommended (and numbers can be increased as necessary, with co-funding):-

1. Develop core team of ecotourism experts within the NFPAMA and co-management partners (recommend Nature Seekers) as per Outcome/Output 2.1.1, Activity 5 (see Appendix 4):-
   (i)   6 people for 5dy study tour e.g. Costa Rica National PA System   15,000
           (visit PAs, establish mentoring) @ US$2,500 each
   (ii)   2 people sponsored for full TIES Ecotourism Management
           Certification (online courses) @ US$2,700 each   5,400
   (iii)   2 people sponsored for training from Certified Interpretive Guide
           Through Certified Interpretive Trainer/Planner   2,600
   (iv)   Equipment, Materials, Books, Memberships   2,000

   TOTAL   25,000

2. Develop a team of tour guides for the two selected PAs, with staff from the NFPAMA, co-management partners and local community members as per Outcome/Output 2.1.1, Activity 9:-
   (i)   12 people trained under the TDC tour guide and other relevant

| | workshops (i.e. provided with basic level tourism training) | 4,000 |
| (ii) | 12 people trained by the core team of experts using materials revised from Activity 8 (based on their training) and site specific information | 6,000 |

TOTAL   <u>10,000</u>

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APPENDIX 1 – Mission Report

FAO(TT) Improving Forest and Protected Area Management Proposal Preparation
Mission Report (18th April – 1st May, 2013)
Susan Otuokon, Ph.D., Ecotourism Specialist

The following provides an overview of the main activities for each day of the Mission and is followed by Appendix 1 with detailed notes from meetings and interviews.

1. 18th April: Travel
    Depart Kingston, Jamaica: 19:40; Arrive Port of Spain, Trinidad: 23:00

2. 19th April: Caroni Swamp
    9am - Meeting with Forestry Dept. representatives (Caroni, Nariva and Matura)
    - GEF Tracking Tool Review
    - Discussion re: Recreation/Tourism – sites, visitation, fees/permits
    2pm – Meeting with Tour Operators/Private sector in Tourism Industry
    5pm – Boat Tour to see the Scarlet Ibis roosting

3. 20th April: Nariva Swamp/Bush Bush; Matura
    - Stop at "Boatline"
        o Issue of "informal" use for tours
        o Sale of Cascadoo (armoured catfish) and Black Conch
    - Manzanilla Beach – swimming and camping
    - Field Station, Nariva Swamp (Kernahan) and Bush Bush Trails
        o Infrastructure and its use: Field Station used also as a Visitors' Centre; Trails are the fire-lines
        o Issue of Squatter farming and related fires and agricultural chemical pollution
        o Tours – FD gives to school groups but many tour operators bring visitors – they get a permit to take a certain amount of visitors per year (but don't pay for this)
    - Matura – Rio Seco Waterfall Trail (this was cut short due to rain and darkness falling but was visited again by Susan Otuokon and Erik Blommestein on 26th April)
    - Matura – Turtle Nesting Tour and Interview & Discussions – Suzan Lakhan & Dennis Sammy, Nature Seekers
    N.B.: There were plans to visit the Plumitan section of Nariva but the Forestry Officers were not available and time did not allow

4. 21st April: Trinity Hills
    - Drove through the Forest Reserve stopping at various points
        o Oil fields & pipelines (huge swathes cut from forest to allow for these)
        o Small trailer for Forest Officers/Wildlife Officers to stay overnight
        o Evidence of an Ocelot at edge of forest
        o Large number of campsites for hunters (right opposite the Wildlife Sanctuary)
        o Extensive fire had just burned through a section of the site
        o Two large farms seen (one old and one relatively new – site still burning)

5. 22nd April: Tobago
    9am – Meeting with the Secretary, Division of Agriculture, Marine Affairs, Marketing & the Environment, Tobago House of Assembly

10:30am – Meeting with Forestry Dept. representatives (tried to meet with Fisheries Dept rep)
- Presentation by Mr. Trim, FD
- Discussion re: Operations at the Sites
- Discussion re: Recreation/Tourism – sites, visitation, fees/permits

2pm – Tour:-
- Speyside
- Main Ridge Forest Reserve

8pm – Team work on Project Work-plan

6. 23rd April: Tobago

9:30am – Stakeholder workshop

2:00pm – Tried to meet with Fisheries Dept. representative (not available)

3:00pm – Tried to find Tourism stakeholders as they did not attend the stakeholder workshop. There was heavy rain in the afternoon – we visited three locations but the key stakeholders were not there; EB/SO spoke to two people at the Craft Market.

5:30pm – Airport for return flight to Port of Spain/Team work on Project Work-plan

7. 24th April: Mid-Term Workshop, Couva (9 – 4:30pm)
- Background information on the Project was provided and then each consultant presented briefly on findings to date
- I made a power-point presentation (see Appendix 2) highlighting:-
  - What my tasks as Ecotourism Specialist were
  - Ecotourism vs Nature Tourism – and the fact that most of the sites/tourism activities were nature tourism rather than ecotourism as no funds returned to maintenance of the sites nor conservation of the resources and further, it was not clear that the activities were environmentally sustainable.
  - Constraints to Ecotourism Development e.g. lack of a user fee system, lack of involvement of operators in conservation
  - Features and issues at each of the 6 sites, related to possible ecotourism e.g. Trinity Hills not really suited for ecotourism
- Myself and Erik Blommestein facilitated the working group re: Ecotourism/Income Generation & I presented on behalf of group. Highlights were:-
  - Visitor Centres should all have (standard)
    - Information (displays/exhibits, brochures etc)
    - Available Tour Guides
    - Food & Beverage
    - Souvenirs
    - Toilet Facilities
  - Each Site needs to be branded e.g. species unique or representative of the area
  - Planning is required for each site including business plans
  - Environmental Education is required at each site
  - Marketing is needed for the PA System and each site
  - Concerns were raised about the Govt. accessing funding from the Green Fund and the challenges NGOs/CBOs faced in accessing this funding
  - NFPA Board should have NGO/CBO representation
  - NGOs/CBOs involved in management of a PA should have access not only to project funding but also assistance with related recurrent expenses
  - There should be different user fees for Locals and Foreigners, Adults and Children
  - There will be some opposition at first, but if the Visitor Centres and facilities are improved and people feel they are getting value for money, it will be OK

8. 25th April: Meetings at EPPD
   am: Meeting with Mr. Hayden Straker, Tourism Development Company (TDC)
   (Ministry of Tourism representatives did not attend)

- TDC is responsible for:-
  (i) Product development – standards, training, infrastructure
  (ii) Marketing
- New Strategic Plan – just started preparation – is to include ecotourism – in particular: bird-watching, diving and sea-turtles (and plans for a Draft Ecotourism Policy)
- Visitor Facilities
  o Generally not in good condition – infrastructure and information but TDC is only involved in management of 5 sites e.g. Pitch Lake, Maracas (none in Project sites)
  o For this Project, Forestry should liaise with TDC as the former had the conservation know-how and information about the flora and fauna but TDC had the marketing know-how and would be able to assist with exhibits etc.
  o TDC does work with NGOs/CBOs through MOUs e.g. Nature Seekers
  o HS did not know of any standards for maintenance of the Visitor Facilities e.g. Tower at Caroni Swamp
- Marketing
  o It was noted that at Caroni – people only know of Nanan's tours (due to the fact that he was (illegally) at the front of the property and because of his marketing)
  o TDC can assist with general "destination" marketing e.g. the PA System/Ecotourism
- User Fees (Approach to instituting)
  o Will need to raise awareness/national pride
  o Ensure people understand that there is a cost to conserving the resources and maintaining the sites
  o Must ensure value for money e.g. good Visitors' Centres
  o Different Fees – (i) local & foreign and (ii) entry & tours
- Tour Guides
  o Licensed tour guides must be mandatory
  o There can be problems with touts e.g. at the Pitch Lake
- Caroni Swamp
  o Whilst there is a Visitors' Centre - no-one knows about it – but that is partly because of Nanan's Tours – people do not drive into the main car park so they don't see the facilities
  o Suggestion to put a small Visitors' Centre at the entrance with a boardwalk to the main Visitors' Centre and establish a larger car park at the entrance
- What needs to be done to improve sites
  o Community Involvement & Benefits
  o Activities around the Site
  o Food & Beverage
  o Toilet Facilities
- Relevant People/Groups:-
  o Tour Operators' Association (Courtney Rooks, President – 620-8240 – does zipline tour in Rio Seco)
  o Ministry:-
    ▪ Karen Jennings Crooms, Tourism Coordinator – 761-5148
  o TDC:-
    ▪ Yoland, Selman, GM - Product Development

- Alistair Mounsey – Research Dept.
- Training
  - TDC does training in business management, first aid, tour guiding etc.
  - TTEC Standards

pm:
Meeting with Water and Sewage Authority (WASA)
- Have noted decrease in forest cover (deforestation - clearing land for mining, housing) and decrease in sand in aquifers (mining) – in one case, the aquifer was exposed
- Along with this, a decline in water resources
- Minister has told them to ID more water resources and they are looking at pipelines from the North (which would require drilling through the hills to take pipeline through)
- They are considering recreational activities at various Dams
- Would consider some kind of Payment for Ecosystem Services but currently they are subsidising water costs to the public
- They have recently begun to implement an "Adopt a River Project" – education about water quality and care of our rivers
- Caroni River is degraded but provides significant quantity of water

Meeting with Environmental Management Agency (EMA)
- The Reforestation Project in the Nariva area had an ecotourism component but it was not funded (Green Fund) however want to include it now and have been liaising with the Tourism Development Company
- Communities are interested and some training has been done, however there have been a lot of drop-outs – due to the low education level
- Believes there is potential as currently the tour operators bring 2 "maxi taxis" – about 48 people @ US$100 each to the area
- Socio-economic studies found income of TT$500/month in Kernahan

9. 26th April: Matura
   am: Rio Seco Waterfall Trail with Nasser
   pm: Visited Nature Seekers Office – continued discussions with Suzan Lakhan

10. 27th April: Port of Spain
    Literature Review

11. 28th April: Port of Spain
    am: Literature Review
    pm: Team work on Work-plan

12. 29th April: Meetings at EPPD
    am: Meeting with Oil companies
    - There is information on the ecosystems – flora and fauna, conditions etc. from various studies e.g. Ecological Risk Assessments and EIAs that the oil companies have had to do
    - There are oil spill modelling studies for Guayaguayare coastline
    - The studies can be obtained from the Ministry and Petro Trin has maps/plans of all the sites
    - The oil companies cannot provide personnel for the field work but suggested CPEP, military, scouts etc.
    - The oil companies are willing to look at possible funding support
    pm: Meeting with Forestry Dept. representatives re: Work-plan and Results Matrix

13. 30th April: Meetings at EPPD
    Team work on Work-plan and Results Matrix

14. 1st May: Meetings at EPPD
    Team work on Work-plan and Results Matrix

APPENDIX 2 - Mid-Term Stakeholders Consultation – Presentation by Ecotourism Specialist

FAOTT/GEF Project Development – Ecotourism Consultancy Tasks

1. Assess potential for ecotourism development in T&T and propose strategies and options for ecotourism and user fee development in PAs (including requirements for developing visitor facilities)
2. Ecotourism development plans for two selected PAs
3. Propose locally adaptable best practices
4. Analyse risks, threats and barriers to development and propose mitigation strategies
5. Identify capacity needs for ecotourism development

Will involve: site visits, consultations, interviews, literature review

Key Findings/Issues to Date

1. Ecotourism vs Nature Tourism

2. Constraints to development of Ecotourism:-
• Lack of a user fee system
• Limited involvement of operators in conservation
• Limited national level marketing
• Inadequate management of existing protected areas and concerns re: degradation of resources
• Limitation of tour guides
• Inadequate facilities & services
• Inadequate regulation of numbers/activities
• Limited capacity for ecotourism/visitor management

Key Findings/Issues to Date

Caroni Swamp – has Visitors' Centre & other facilities; organised tour operators but less options as less habitats & species diversity

Nariva Swamp – shared facilities with Forestry Dept; numerous options due to wide variety of habitats, easy trails

Matura – limited Forestry Dept facilities; already numerous community-based ecotourism activities

Trinity Hills – no facilities; challenges due to safety issues

Speyside/Little Tobago – has facilities and marine & terrestrial options; already existing tours but marine area not currently protected

Main Ridge Forest Reserve – has facilities and several trails with existing tours and other options possible

APPENDIX 3 - Notes from Site Visits

A. Caroni Swamp – Boat Tour, 19th April, 2013
1. Mangrove Forest all the way along the River – out to Mangrove Islands; Mangrove is increasing including further inland and marsh decreasing due to agriculture and increased influx of sea
2. Mostly foreigners from cruise ships – hence seasonal
3. Mostly evening tours (around 4:30/5:00pm) to see the Scarlet Ibis come to roost
4. Variety of birds, snakes
5. Tower built of Guyanese hardwood but is now unusable – termite eaten. Similarly beach area was built but in similar dis-repair and seldom used anyway.

B. Nariva Swamp (including Bush Bush Wildlife Sanctuary), 20th April, 2013
1. Downstairs Field Station are offices and a large room with posters/exhibits used to host school groups; upstairs is accommodation as officers have to stay over on fire duty. The Fire Tower is used as a look out for fires during fire (dry) season
2. Students visit the Field Station fairly often for educational tours – they are shown a ppt presentation followed by a guided tour
3. There are other visitors brought by tour guides/tour operators
4. Reforestation is taking place using a variety of native species (nursery behind Field Station)
5. Restricted flow of water in Nariva due to Nariva Dam and water being lost at Boatline (was originally built to take logs out)
6. Drying out of swamp is leading to increasing fires – also people are using the swamp (mainly illegally) for agriculture – and they use fire to clear the land – which spreads – Forestry Dept. have been showing people how to build fire breaks and getting them to call the FD when they are going to burn
7. Major crop is watermelon – there is a lot of chemical use
8. Major crop used to be rice – which preserved more of the water and resulted in waterfowl even Scarlet Ibis – but none now
9. Royal Palm and Red-bellied Macaws
10. Blue & Gold Macaw Project – brought this bird back
11. Freshwater Marsh – has sheet flow – cannot be accessed
12. There are about 20 communities around Nariva
13. Bush Bush – Swamp Forest on one side and Seasonal Evergreen on the other side
14. Wide variety of birds, Howler Monkeys

C. Matura Beach – Turtle Tour, 20th April, 2013
1. Visitors – 20% foreign and the remainder are local from all over the island
2. Visitor Survey showed what the visitors wanted e.g. place to have dinner and stay overnight along with other activities. This resulted in:
   - a home-stay programme. Community members have established bed & breakfast opportunities and guesthouses
   - kayaking up Salybia River (1 hour up river with guide or ½ hour in the pool by bridge without guide)
3. Guides receive government training e.g. life-saving, hospitality and wildlife
4. They were losing resource people to stable jobs elsewhere but they got a contract from govt to manage the forest which provides some additional income to tour guiding
5. Ecotourism – guided tours to see egg-laying and learn about sea-turtles

6. Conservation – pm: tag turtles every night during nesting season (8.8km beach) and also weigh and measure turtles; am: count the turtle nests
7. Before the Turtle Season – 1,000 volunteers clean the beach – mainly glass bottles and paper – this led to their idea about jewellery (trash to cash). 22 men & women have been trained to make glass beads (melt glass with oxygen/propane) and paper beads (rolled paper). Just started about 3 months ago and sell at office and beach. They just did a presentation at the Hyatt.
8. The Nature Seekers see ecotourism as a tool for conservation (helps pay for their conservation work). They did a recent study looking at 100 sample sites re: impact of visitors – monitored survival and compared to other sites – didn't find any difference. Guides are separate from those doing Enforcement along beach and Monitoring.
9. HOWEVER, they only earn about TT$400,000+ from guided tours but their expenditure on turtle conservation (including research) is TT$1,000,000+ (cost of equipment, flipper tags, human resources)
10. The road to the beach is bad – and turns away some visitors (people ask for lighting on road but they explain why not)
11. Green Fund (3yr project) – Just got a Marketing Officer and Training Coordinator so now doing branding; doing management courses to strengthen organisation e.g. accounting (Price Waterhouse); craft project expansion
12. Grant funding is a constraint – it often doesn't allow them to use funds for maintenance of equipment and infrastructure
13. Trying to expand business – approaching private land owners re: management of land e.g. fire lines and maintain land
14. The Matura Beach site – just recent construction (last season) – includes toilet facilities. They sell craft, light refreshment and do meals on request but there are now more restaurants staying open late and also buying produce from farmers. 6 guesthouses including in Salybia.
15. The guests purchase their turtle beach permits (the beach is a prohibited area) from the Forestry Dept offices. Nature Seekers call FD every Friday afternoon to know how many permits sold – i.e. how many visitors will be coming. They have finally convinced FD to provide them with some permits (50 per season) to sell at the location (in case people come without) – these funds are returned to FD.
16. Charge TT$20 for locals and TT$20 foreigners (just moved from $15 to $20 following survey – willingness to pay (ECLAC – EBlommestein). They just started an "Adopt A Turtle Programme" to earn additional funds – this is possible because of the tagging of the turtles – so the "adoptive parent" can get information on their turtle – time they came to the beach, how many eggs and even how much revenue
17. User Fees – must have an organised/set fee that gives value to the product and provides value for money; similarly for the tour guide fee (must have well trained guides)
18. Need Leaders – Strong people – patience, determination
19. Community must obtain capacity and earn credibility from tour operators (e.g. previously Asa Wright used to insist on doing the tour with their own tour guides but recently have changed)
20. Relationship between FD and Nature Seekers – depends on trust and transparency. FD helps with technical support and enforcement. The community had the time and the interest.
21. On a second visit to the area (to hike the Rio Seco Trail) a stop was made at the Nature Seekers Office and brief discussion with Suzan Lakhan. The question of insurance was discussed and she said this was necessary but very expensive and could perhaps be a group system.

Suzan Lakhan – 398-3038

D. Tour of Speyside and Main Ridge Forest Reserve, Tobago – 22nd April, 2013

The tour started from the DNRE (Forestry) Office in Scarborough and stopped at:-

1. Goodwood – Genesis "Zoo" – to see a farmer who had a small wildlife "zoo" in his yard – the enclosures were very small but apparently he has numerous visitors – school groups and tourists. He also raises peccaries for sale – game meat.
2. Argyle Waterfall – passed the Sign
3. Roxborough – Fishing Depot
4. Numerous scenic vistas looking down from road to Bays
5. Villages e.g. Louis D'Or, Delaford then Speyside
6. Stopped at Look-out Site – with views of Little Tobago and Goat Island
7. Little Tobago – 250 acres with diving sites all around
   - 2 main dive operators
   - Each does about 2 dives/day
   - Sandy beach & Pier (needs repairs)
   - Bathroom facilities
   - Observation Centre (3 bedroom house)
   - Wildlife Sanctuary (as is St. Giles Island further away)
   - Very hot – short tours – mainly for bird watching
   - Glass bottom boat tours (from Speyside)
8. Goat Island – formerly privately owned but recently acquired by the State – there is a dilapidated old building on the site near beach
9. Main Ridge Forest Reserve
   - One road goes through the Reserve (from one side of the island to the other- Roxborough to Bloody Bay) and provides access to theTrails.
   - Wide variety of birds including the White-tailed Sabrewing Hummingbird, Trogons, Chacalaca, Motmot, Southern Lapwing
   - Issues with unstable slopes and soil – heavy rain results in landslides on trails and roads
   - Alien invasive plants along bank where the road was cut
   - Gilpin is the most popular trail
     - it is the easiest
     - provides best birding.
     - there are 5 waterfalls including 2 "golden" ones (due to iron oxide)
     - the most marketed.
     - It is so popular that the tour guides used to stand at entrance and hustle the visitors until FD established a system whereby the tour guides take a number and sit in a specially built shelter and take turns as visitors arrive. There are normally about 6 – 8 tour guides at the shelter and they rent boots and raincoats in the rainy season.
     - The tour is usually 2 – 21/2hrs and the tour guides charge US$35.
     - The full length of the trail takes you to Bloody Bay about 3.5km – it is also a heritage trail as it was used as a road before the new road.
   - Idea to put in a zip line or canopy walk
   - There is potential for a longer trail
   - Roxborough has about 6,000 people and Bloody Bay about 2,000 – most of guides come from these areas, also hunters and some handicraft.

E. Notes from Meetings in Tobago

Meeting with Dept. of Natural Resources & Environment (Forestry) – 22nd April, 2013

1. Main Ridge Forest Reserve
    - Trails: 1986 – 5 trails, now 8 or 9 – they have been surveyed
        o   Includes Bloody Bay to Roxborough to Speyside to Charlotteville (13.5km)
        o   Gilpin Nature Trail – started to establish camp-sites but stopped due to inadequate funds
        o   50% of the trails are signed
        o   All trails are accessed off the main road through the site (they were once agricultural access)
    - Visitors' Centre just completed (built by TDC)
    - Site also used for hunting – can be in conflict with tourism
    - Had to open other trails especially because of over-use of Gilpin Nature Trail – had issues with Carrying Capacity and Limits of Acceptable Change – did a study over 4 years re: visitor use; but have not implemented project. UWI was doing a study – not sure of results. 2002 – about 4,108 visitors estimated but believed to be about five times that
    - Decrease in number of birds e.g. Bullfinch
    - Area is not clearly defined
    - White-tailed sabre-wing Hummingbird
    - Alien Invasive Species – Kudzu Vine

2. MPA at Speyside would include:
    - Little Tobago – Orientation Centre (not yet opened), 2 bird-viewing towers & trails
    - Goat Island – diving from this site; the property is now state-owned but the building has not been maintained
    - Speyside is 1 of 3 major reefs and adjacent to Little Tobago and St. Giles (prohibited areas) – the former currently visited by birders (50% of birders to the island).
    -

3. Issues:
    a. Projects designed but not implemented due to lack of funding
    b. Erik asked if the proposed MPA could be connected to the Main Ridge Forest Reserve – the response was positive (at Speyside) especially as THA slated NE Tobago for development and need to address conservation. They have agreed on a Ridge to Reef concept. Along streams – needs stabilisation. There are some private lands in middle to lower watershed but hardly used – could come to some agreements with land owners
    c. Climate Change – most villages are coastal, upper watershed protected (lands very erosion prone), middle areas generally abandoned – former farms – could possibly be reforested (but owners may want to sell for vacation home development)
    d. User Fees
        - No user fees being collected – they thought legislation would be needed but Pigeon Point – user fees are collected without legislation (apparently used to be privately run)
        - Cultural issues – since land is government's people think access should be free – will need sensitisation. Locals should pay a different fee and Tobagonians provided with free permits. Most tourists are from Trinidad
        - Adventure Farm (birds): charge TT$30 or US$5

- Argyle Waterfall (run by a cooperative): TT$40 foreigners TT$25/30 local (is on govt land (not Reserve) but along a stream from the Main Ridge
  e. Tour Guides
     - 70 trained tour guides and 15 qualified tour operators – these take visitors to all the sites
     - Tour Operators have to get a license from the Magistrate's Court but this is not related to Forestry
     - Tourism Hospitality & Tourism Institute (THTI) does the training (Mr. Trim does the flora & fauna component)
     - Tour guides could eventually become workers in the PA System
  f. Challenges – will need vehicles for policing PA
  g. CANARI – Pantin study re: watershed – showed high value
  h. Forestry – focus on Production Forestry – generally Teak & Caribbean Pine – but have stopped both due to fires; re-started again with Teak but not Pine – other issues e.g. nothing growing underneath. Now growing ornamentals for sale.
  i. Revenue
     - Revenue from Game Increased 2008 – 2009 - due to increased use because of cultural festivals – every Sunday – different churches (increased consumption of game meat) and influx of hunters from Trinidad
        - Open Season 1 Oct – 28/29 Feb 5:30am – 7:30pm
     - Sawmills, log haulage, felling, seedlings for reforestation, conference room
  j. Wildmeat farming – was introduced (by DNRE) but only 1 farmer still doing it (this person was visited – he started a "zoo" at his home and also produced peccaries
  k. Collaboration with NGOs e.g. training, helped Argyle Waterfall Coop with trail building

Stakeholders' Meeting– 23rd April, 2013
(was mainly people from Dept of Natural Resources & Environment (Forestry)

Following general introduction by Howard Nelson and Illias Animon, there were a series of questions from them both. Then Susan Otuokon asked for feedback on a number of issues, which was provided as follows:
- Trails – need zoning – what activities on each
- Constraints
  - Need to involve farmers/community members
  - Need for more infrastructure
  - Need for more signage/interpretation
  - Need for better marketing
    - Tourism addresses this – UK mainly but also Scandinavia, Canada also they attend/market Tobago at e.g. bird fairs etc.
    - There is a proposal to market to Latin America – due to proximity
    - "Clean, Green & Serene (& Safe)
    - The Marketing team need to liaise more closely with DNRE for correct information and to understand difference between nature and ecotourism

- Need for new products e.g. trails, rivers, camping, zipline, biking, family oriented (depending on groups that actually come)
- Speyside – need to improve pier at Little Tobago
- All-inclusive Tours from cruise ships – agents in Trinidad & abroad – do not liaise much
- Who visits sites – tourists (foreign & Trinidad) but also Tobagonians – when the site is new or when family & friends visit)
- Training currently e.g. another language, record keeping, marketing (TDC)
  - Speyside, Plymouth, Argyle – had community tour guide training in the last 2 years
  - Need for refreshers
  - Most tour guides have only primary level education
  - Tour guides need to be able to identify plants including ornamentals
  - Training needed not only for tour guides but also service staff e.g. in hotels, restaurants; community members, taxi drivers
  - Swimming
- Snake bites – voluntary first aid/CPR certification but response plan needed involving tour guides
- Divers – hyperbaric station in Roxborough
- Heavy rain leads to landslides and breakaways on trails and can block access via road (only one road) and then it takes time to repair the trails due to funding challenges
- User Fees
  - There will be some resistance at first because of freeness mentality but will come around
  - Pigeon Point (private ownership to state ownership but the fee was kept) – last Sunday monthly is free to locals
  - Waterfall – TT$40 – 60 with guide – one hour
- Facilities
  - Little Tobago – toilet facilities – concerns re: seepage; should use alternative energy; landing jetty
  - Wash room facilities needed at various locations e.g. Parlatuvier Bay

Appendix 4 - Project Outcome/Output and Activity Table

Outcome/Output	Activity
Component 1: Improvements to the legal and institutional arrangements for PA management (1,465,000)	
1.1.1 National legislation enacted forests, wildlife, and PAs management.	***Activity 1***: *Identify gaps (including through , a rapid assessment of the suitability of existing protected areas and their integration into the draft legislation) in present legislative framework and suggest alternatives (one legal consultant)*
	Activity 2: *Discuss with stakeholders and redraft legislation after public consultation*
	Activity 3: *Follow administrative processes/procedures to get the bill proclaimed by the President*
	Activity 4: *Constitute the NFPAMA to govern the PA system*
1.1.2. National PA system plan agreed and published (130,000 ha).	***Activity 1***: *Conduct two technical studies (a) Review literature and revisit 1980 Systems Plan, 1991 LTC land rationalization study, and 1994 World Bank Protected Areas project documents to determine their relevance in the present day context and undertake (b) PA gap analysis (c) impacts on biodiversity from different sectors and response options with regard to PAs design. (two consultants)*
	Activity 2: *Propose a draft system and new PAs based on gap analysis and classify the PAs into a suitable management category in the PA Policy (2011)*
	Activity 3: *Consult with national stakeholders (3 workshops) and finalize draft plan*
	Activity 4: *hire legal consultant to prepare amendments to legislation and gazette the PA system*
	Activity 5: *Publish the System Plan*
	Activity 6: *Prepare an action plan for its implementation (1 consultant/training specialist)*

Outcome/Output	Activity
1.1.3 A minimum of **six new sites** designated as formal PAs under the new legislation (expected to cover about 35,000 ha)	***Activity 1****: Conduct ecological viability and connectivity assessment for 6 PAs and identify new boundaries of PAs using GIS in consultation with various authorities (consultants – terrestrial and marine)*
	Activity 2: *Consult with stakeholders on the status and relevance of proposed boundaries and identify potential areas of conflict arising from designation of the new PAs (six consultations)*
	Activity 3: *Explore the possibility of agreements with private land owners based on compensation payments in and around new PAs*
	Activity 4*: Survey PA boundaries and geocode them using GPS and obtain approvals for the boundaries of the new PAs from various stakeholders*
	Activity 5*: Draft standard agreements with private land owners, **if feasible** (incentives and tax breaks) (a legal consultant)*
	Activity 6: *Declare 6 PAs (35,000 ha) - gazetted*
	Activity 7: *Map and demarcate the boundaries of 6 PAs on the ground*(Co-finance EU)
	Activity 8*: Assess the site-specific staff needs for management of the PAs and recruit the staff required to manage 6 PAs and evolve MOU with various stakeholders on their roles in management of the sites* (Co-finance- Govt)
1.2.1 NFPAMA staff and PA management partners (about 100) trained in current best practices in PA management and biodiversity conservation.	***Activity 1:*** *Assess current capacity, including through stakeholder consultation, to identify capacity development needs (building on the needs identified at PPG phase) and plan training activities (a HR consultant) including attachments and learning-by-doing activities, internships etc.*
	Activity 2: *Identify a core group (NFPAMA Training Staff/Unit) within NFPAMA in collaboration with PA management partners to plan training activities*
	Activity 3: *Develop material for NFPAMA staff* and PA management partners *training in:* *1. effective PA management and biodiversity conservation* *2. ecotourism and PA recreation management* *3. revenue generation and management* *4. forest and wildlife law enforcement* *5. participatory approaches and co-management* *6. project development and administration* *7. communication and education*

Outcome/Output	Activity
	8. gender mainstreaming *9. Formulating management plans* *10. Monitoring and evaluation of PA management*
	Activity 4: *Train 100 NFPAMA staff* and PA management partners *in the above areas*
	Activity 5: *Develop site-specific guidelines/handbooks in the above areas*
	Activity 6: *Train 50 tour guides and operators in 1, 2, 6 and 7 of the above areas in collaboration with TDC, THA,* NTA *& TTHTI*
	Activity 7: *Evaluate effectiveness of law enforcement measures by NFPAMA and PA management partners and modify training suitably (consultant)*
1.2.2 MIS (National Biodiversity Information System (NBIS)) developed and implemented for PA monitoring and assessment and reporting to international conventions. (Co financing - Conabio)	**Activity 1:** *Plan, assess content needs and implement the tasks of developing MIS*/(NBIS) *(a team of consultants)*
	Activity 2: *Identify a core team in NFPAMA* and PA management partners *to undertake the tasks of developing MIS*/(NBIS)
	Activity 3: *Procure equipment and software needed and establish MIS*/(NBIS) *Unit*
	Activity 4: *Develop reporting mechanisms on PAs to the national focal points for MEAs*
	Activity 5: *Acquire baseline data to establish the GIS and populate the database for PA management and develop MIS*/(NBIS) *(including stakeholders' details)*
	Activity 6: *Train NFPAMA staff* and PA management partners *to use and manage MIS*/(NBIS)
	Activity 7: *Status Report on 6 PAs*
1.2.3 Ecological research and monitoring programme to guide PA management.	**Activity 1:** *Identify research and monitoring programme needs. Also set research priorities/needs/targets for PAs including ecotourism related studies (e.g. carrying capacity) and develop the criteria for monitoring, in collaboration with key stakeholders (consultant)*
	Activity 2: *Collect all published data on species and ecosystems through the MIS*/(NBIS)
	Activity 3: *Identify key partners/focal points in NFPAMA, UWI and NGOs for research and monitoring in PAs and define who will do what*

Outcome/Output	Activity
	Activity 4: *Develop cooperative arrangements between the NFPAMA, UWI, IMA NGOs,* and relevant research partners *to address research needs (partnership agreements to be developed by Ministry/THA and transferred to NFPAMA)*
	Activity 5: *Develop ecological research and monitoring protocols/code of conduct*
	Activity 6: *Develop a MOU with NALIS (National Library and Information System Authority) to serve as a back-up repository of research outputs in PA and biodiversity in Trinidad and Tobago and its updating* (Co-finance, Govt)
	Activity 7: *Build the capacity of leading agencies and key stakeholders with responsibility for conducting research and monitoring to include gender and other social issues relevant to PAs management(NGOs)*
1.2.4 Public education and awareness programme implemented.	***Activity 1:*** *Assess needs, streamline options, evolve a communication strategy and develop an implementation plan for* public education and awareness programmes (*a public education specialist)*
	Activity 2: *Identify, train and engage PA focal-point staff and key partners for public education/awareness programme implementation*
	Activity 3: *Undertake a knowledge attitudes and practices survey in 2 PAs and evaluate what works well and expand to other 4 PAs*
	Activity 4: *Develop and implement in one PA multiple public* education and *awareness tools/products (including: smart phone application, social media, radio and television advertisements, documentaries and print media) in the following key thematic areas, preferably site-specific, including:* *the value of biodiversity conservation and the role of PAs* *new boundaries of PAs* *the value of environmental services from PAs* *new fine structures and legislative measures* *ecotourism and its importance* *fire prevention and its relevance* ***Activity 5:*** *Implement an agreed mechanism to receive information from and answer questions of stakeholders*

Outcome/Output	Activity
	Activity 6: Hold a workshop to identify the key gender issues in PA management
	Activity 7: Organize events to sensitize PA managers on gender issues and raise awareness on gender and biological conservation (in collaboration with the Institute for Gender and Development Studies (IGDS), UWI).
	Activity 8: Develop communication tools to share information to the wider public about gender-related issues and biological conservation in collaboration with CAWFOR.
1.3.1 Information about biodiversity in the 6 pilot sites collected and analysed every year.	*Activity 1:* Establish a detailed baseline inventory for selected flora and fauna in 6 pilot PAs, building on the works done in the PPG phase, and feeds into activity 1.2.3. (check for consistency with activity above)
	Activity 2: Develop and adopt protocols and strategies for sampling 20 indicator species within each PA
	Activity 3: Develop an open-access internet-based database for managing and disseminating biodiversity data collected in 6 PAs, to populate MIS at activity 1.2.3.
	Activity 4: Train PAs staff and relevant stakeholders in sampling protocols, strategies and data analysis (see training activity)
	Activity 5: Develop a database on 13 unprotected species and publish their status and management strategy, to populate MIS at activity 1.2.3.
	Activity 6: Conduct annual inventory of 13 species of flora and fauna in 6 PAs
1.3.2 Management plans produced for the six pilot sites.	*Activity 1:* Develop cooperative arrangements between MEWR, THA, NFPAMA, NGOs/CBOs, UWI, IMA and other relevant stakeholders to formulate the management plan and identify a team for every site (consultants)
	Activity 2: Develop site-specific management targets (for ecosystem services, ecosystem processes, indicator species, sustainable use indicators etc. related to the national categorization) and zoning for each PA, including ecotourism zones where visitation allowed)

Outcome/Output	Activity
	Activity 3: Conduct detailed stakeholder analyses (building on the results in the PPG phase) and develop a strategy and guideline to involve relevant stakeholders in decision making (e.g. independent multi-stakeholder advisory committee) and subsequent management of 6 PAs (bearing in mind the gender dimensions)
	Activity 4: Develop management priority matrix in collaboration with all relevant stakeholders (bearing in mind the issues related to gender, communication, livelihood, tourism/ socio-economic development, stakeholder engagement etc).
	Activity 5: Draft management plans based on targets emphasizing co-management arrangements and roles of various stakeholders (consultant)
	Activity 6: Revise management plans based on consultation with stakeholders, approve and publish them
	Activity 7: Establish site specific stakeholder management committees and the national project steering committee developed and agreed (including Procedural and Terms of Reference)
1.3.3 Threats to biodiversity conservation identified and appropriate actions taken.	**Activity 1:** Identify, quantify and rank site-specific threats in 6 PAs through detailed studies and further analysis (following the results in the PPG phase) (consultant) – check 1.3.1. and 1.2.3
	Activity 2: Develop site-specific interventions for addressing the most relevant threats (in consultation with stakeholders)
	Activity 3: Train NFPAMA staff and relevant stakeholders (particularly women and youth) on techniques for addressing the threats
	Activity 4: Implement site-specific management interventions to address relevant threats to biodiversity
	Activity 5: Develop and implement sensitization/training for police and judiciary on wildlife crime and its implications for PAs management
	Activity 6: Determine status of selected threatened species in every PA (building on the results of the PPG) and how to address main decimating factors.
	Activity 7: Stabilize/recover wildlife population by augmentation, if found essential (e.g. Pawi)

Outcome/Output	Activity
	Activity 8: *Regulate over exploitation (e.g. hunting, fishing etc) and evolve sustainable use mechanisms and alternate livelihoods (with special emphasis for gender in collaboration with CAWFOR) (*Co-finance- new project in Nariva, Green Fund)
Component 1 Total	-
Component 2: Improvements to infrastructure for biodiversity conservation and forest restoration (2,75,000)	
2.1.1 Visitor facilities upgraded and maintained.	**Activity 1:** *In collaboration with TDC, prepare guidelines to design and establish visitor facilities in all PAs (consultant)*
	Activity 2: *In collaboration with TDC, evolve site-specific business plans to develop ecotourism in all 6 PAs (building on the attempts made during the PPG phase) (consultant)*
	Activity 3: *Design and develop/upgrade visitor facilities identified during the PPG phase (Appendix XX) (contract) (*Co-finance Green Fund)
	Activity 4: *Identify relevant partners (NGOs/CBOs) to manage the visitor facilities in 2 PAs and commit through MOU/letters of agreement to ensure their sustainable operation (*Co-finance Green Fund)
	Activity 5: *Train NFPAMA staff and co-management partners in visitor facilities management (and to develop and manage projects to access the Green Fund)* *(NGO+ consultants)*
	Activity 6: *Based on the lessons learnt, identify and implement new requirements/products (including paid nature camps, educational tours, recreational hunting/fishing etc.) for expanding ecotourism facilities/products to other PAs*
	Activity 7: *In collaboration with TDC, brand and market ecotourism products at national and international markets and establish links with hoteliers and tour operators*
	Activity 8: *Develop interpretation strategy/interpretative guides (tour guides, signs and brochures) and raise awareness among local people (consultant)*
	Activity 9: *Conduct training for tour guides (with TDC)*
	Activity 10: *Conduct surveys to assess visitor satisfaction and obtain feedback on visitor facilities/ecotourism products*

Outcome/Output	Activity
2.1.2 Equipment for protection activities is upgraded and used effectively.	*Activity 1:* Construct/upgrade and maintain field stations, office space, telecommunication and watch towers (contract); (Co-finance, Govt)
	Activity 2: Assess equipment needs (building on the requirements assessed in PPG phase) and procure equipment for 6 PAs (as in Appendix XX) (Co-finance, Govt)
	Activity 3: Adopt procurement policy and health and safety policy and develop a maintenance plan
	Activity 4: Explore the need to construct quarantine, animal rescue and rehabilitation facilities for confiscated wildlife (contract) (Co-finance, Govt, Green Fund)
	Activity 5: Train NFPAMA staff to use safety and other equipment and implement the maintenance plan
	Activity 6: Assess effectiveness of the equipment procured
2.1.3 Degraded areas, identified as a priority in management plans, are rehabilitated for habitat enrichment (500 ha).	*Activity 1:* Rehabilitate already identified degraded areas (e.g. Nariva Swamp) (Green Fund)
	Activity 2: Identify, map, select and demarcate new restoration sites and targets in and around 6 PAs(Green Fund)
	Activity 3: Develop rehabilitation/restoration plans for these identified degraded areas in 6 PAs in consultation with stakeholders and seek finance for implementation(Green Fund)
	Activity 4: Determine change in species abundance/diversity in restored sites(Green Fund)
Component 2 Total	
Component 3: Development and testing of sustainable financing system (790,000)	
3.1.1 NFPA fund established through legislation and board of trustees appointed.	*Activity 1:* Draft NFPA fund legislation in consultation with stakeholders (consultant)
	Activity 2: Pass/adopt NFPA fund legislation in Parliament, promulgated by the President
	Activity 3: Appoint NFPA Board and NFPA fund trustees
	Activity 4: Agree and sign MOU/LOA on terms of fund management between Central Government and THA
	Activity 5: Explore the options for cofinancing the NFPA Fund initially from the Green Fund (in consultation with key stakeholders)
3.1.2 Operating procedures and manuals agreed and produced	*Activity 1:* Develop operational procedures and draft manuals to implement the NFPA fund (consultant)

Outcome/Output	Activity
	Activity 2: *Consult with stakeholders and publish manuals and operational procedures to implement the NFPA fund*
3.1.3 NFPAMA staff (70) trained in operation of the new system.	***Activity 1:*** *Identify a core group in NFPAMA/THA for training in new operational system*
	Activity 2: *Develop course for NFPAMA staff training in (a) fund management and (b) operational procedures*
	Activity 3: *Conduct staff training in the above areas (bearing in mind gender dimensions)*
3.1.4 Senior staff and PAmanagers (25) trained in budget planning, tourism revenue management and innovative financing techniques.	***Activity 1:*** *Identify a core group of NFPAMA/THA and other relevant stakeholders for the training in budget planning, tourism revenue management and innovative financing techniques*
	Activity 2: *Identify and participate in training courses in the above areas (consultant)*
3.2.1 Funding requirements for management of PA system assessed and agreed.	***Activity 1:*** *Assess the funding requirements for the PA system (consultant) (including the areas in and around the PAs having potential for MOU with NFPAMA for conservation)*
	Activity 2: *Discuss with stakeholders budgetary requirements for the effective management of the PA system (including the requirement of NGOs)*
	Activity 3: *Publish budgetary requirements for the effective management of the PA system*
3.2.2 Strategic plan for sustainable financing produced.	***Activity 1:*** *Identify multiple strategies for recurrent funding including national budget, PES, grant funding, conservation agreements, fines, user fees etc.*
	Activity 2: *Consult with stakeholders*
	Activity 2: *Produce a draft sustainable financing plan (consultant)*
	Activity 3: *Publish sustainable financing plan*
3.2.3 System of user fees designed, piloted and operating in two PAs.	***Activity 1:*** *Identify the optimal user fee for 6 PAs (entry and for ecotourism activities) through detailed studies (e.g. contingent valuation) and propose a user fee (consultant)*
	Activity 2: *Finalize user fee collection and benefit sharing mechanisms (with NGOs/CBOs/ private sector)*
	Activity 3: *Enhance social acceptance through public education on the contributions of user fee (in 2 PAs) to conservation of the PA (% share staying in PA) and local people (% benefits shared)*

Outcome/Output	Activity
	Activity 4: _Introduce user fee in 2 PAs following stakeholder consultations and detailed WTP studies (building on the results obtained in PPG phase) and develop online systems for its collection_
	Activity 5: _Train staff to conduct willingness to pay studies periodically to amend user fees_
3.2.4 Other forest revenues evaluated and revised where appropriate.	**_Activity 1:_** _Evaluate various forest revenues (e.g. timber sales, hunting and other licence fees, fines, research fee etc.), propose their revision and explore new areas (e.g. PES, environmental tax at airport etc.) and set up online systems for collection (consultant)_
	Activity 2: _Consult with stakeholders about the revisions and address their concerns_
	Activity 3: _Train NFPAMA staff and relevant stakeholders (CBOS, NGOs) in project development and management skills required to access the Green Fund to increase the revenue to PAs_
	Activity 4: _Examine the potential of wildlife farming, homestay and small scale industries based on invasive species (e.g. bamboo) to engage local communities in conservation-oriented business (e.g. souvenirs from trash to cash)-_ TCP-FAO? Green Fund (Matura)
3.2.5 NFPA fund capitalised by implementation of the new financing system.	**_Activity 1:_** _Agree on terms of endowment funding to NFPA from /Govt_
	Activity 2: _Learn the lessons and modify the system operation_
	Activity 4: _Build and operate the NFPA fund_
Component 3- Total	-
Component 4: Monitoring and evaluation and information dissemination (130,000)	
4.1.1 Project monitoring system operating providing systematic information on progress in meeting project outcome and output targets.	**_Activity 1:_** _Constitute the project support team and identify two focal points one in Trinidad and the other in Tobago to supervise the activities and ensure project progress (a project leader)_ Co-finance, Govt
	Activity 2: _Constitute a Multi-stakeholder National Project Steering committee to monitor project progress and ensure effectiveness of activities in delivering the planned outputs_
	Activity 3: _Monitor the risks and uncertainties during project implementation and explore necessary measures to minimize the negative impacts on project outcome and output targets_
	Activity 4: _Report the project progress annually_

Outcome/Output	Activity
4.1.2 Mid-term and final evaluation conducted.	*Activity 1: Constitute an independent multi-stakeholder technical team and formats for annual and mid-term evaluation and propose revisions in the project plan*
	Activity 2: Conduct annual, mid-term and final evaluations along with the independent multi-stakeholder technical team (external evaluation expert for the final evaluation)
4.1.3 Project-related "best-practices" and "lessons-learned" published.	*Activity 1: Organize workshops to share best practices and lessons learnt after annual and mid-term evaluations*
	Activity 2: Publish workshop proceedings
	Activity 3: Publish a Newsletter for sharing experiences
4.1.4 Website to share the experience and information dissemination.	*Activity 1: Identify a team to develop and maintain website*
	Activity 2: Identify the contents to share in the website and disseminate and popularize the website
Component 4 -Total	-
5.1 Project Management activities	
	Activity 1: Procure services of a project leader and two focal points (one in Trinidad and the other in Tobago) and constitute the Project Management Team
	Activity 2: Procure services of a Technical officer
	Activity 3: Find office space and procure equipment
	Activity 4: Organize two inception workshops for finalizing operation procedures and four year work plan
	Activity 5: Constitute National steering committee
	Activity 6: Constitute PMC