# MEDIUM-SIZED PROJECT PROPOSAL
## REQUEST FOR GEF FUNDING

**AGENCY'S PROJECT ID:** 1740
**GEFSEC PROJECT ID:**
**COUNTRY:** Belize
**PROJECT TITLE:** Integrating Protected Area and Landscape Management in the Golden Stream Watershed
**GEF AGENCY:** UNDP
**OTHER EXECUTING AGENCY(IES):** FFI
**DURATION:** 4 years
**GEF FOCAL AREA:** Biodiversity
**GEF OPERATIONAL PROGRAM:** OP 2, 3, 4
**GEF STRATEGIC PRIORITY:** BD-1
**ESTIMATED STARTING DATE:** September 2005
**IMPLEMENTING AGENCY FEE: US 90,000**

| FINANCING PLAN (US$) | |
|---|---|
| **GEF PROJECT/COMPONENT** | |
| Project | 975,000 |
| PDF A* (September 2001) | 25,000 |
| ***SUB-TOTAL GEF*** | **1,000,000** |
| ***CO-FINANCING**** | |
| GEF Agency | |
| Government | 279,706 |
| Bilateral | 96,000 |
| NGOs | 744,812 |
| Others | |
| *Sub-Total Co-financing:* | *1,120,518* |
| ***Total Project Financing:*** | **2,120,518** |
| **FINANCING FOR ASSOCIATED ACTIVITY IF ANY:** | |

* Indicate approval date of PDFA
** Details provided in the Financing Section

**CONTRIBUTION TO KEY INDICATORS OF THE BUSINESS PLAN:**

- 170,000 ha brought under enhanced protection
- 1,000,000 ha within associated landscape (MMMC) benefiting

**RECORD OF ENDORSEMENT ON BEHALF OF THE GOVERNMENT:**

*(Enter Name, Position, Ministry)*
Mr. Hugh O'Brien
Ministry of National Development

Date*: (Month, day, year)*
2 June 2005

This proposal has been prepared in accordance with GEF policies and procedures and meets the standards of the GEF Project Review Criteria for a Medium-sized Project.

Frank Pinto
Executive Coordinator
Date: 23 August 2005

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## ACRONYMS

| | |
|---|---|
| APAMO | Association for Protected Area Management Organizations |
| BAPPA | Belize Association of Private Protected Areas |
| BAS | Belize Audubon Society |
| BCES | Belize Center for Environmental Studies |
| BMC | Bladen Management Consortium |
| BFREE | Bladen Foundation for Research & Environmental Education |
| BLE | Belize Lodge & Excursions |
| BNR | Bladen Nature Reserve |
| BENCO | Belize Environmental Consultancies |
| CARD | Community-Initiated Agricultural Development Project |
| CRFR | Columbia River Forest Reserve |
| CSO | Central Statistics Office |
| CZMAI | Coastal Zone Management Authority & Institute |
| ESTAP | Environmental & Social Technical Assistance Project |
| FD | Forest Department |
| FFI | Fauna & Flora International |
| GEF | Global Environment Facility |
| GOB | Government of Belize |
| GSCP | Golden Stream Corridor Preserve |
| GSW | Golden Stream Watershed |
| GSWAC | Golden Stream Watershed Advisory Committee |
| IDB | Inter-American Development Bank |
| IUCN | The World Conservation Union |
| MBC | Mesoamerican Biological Corridor |
| MBRC | Mesoamerican Barrier Reef Corridor |
| MMMC | Maya Mountain Marine Corridor |
| MNRE | Ministry of Natural Resources and Environment |
| NGO | Non Governmental Organization |
| NEAC | National Environmental Action Plan |
| NPAPSP | National Protected Areas Policy and Systems Plan |
| PACT | Protected Area Conservation Trust |
| PAMO | Protected Area Management Organization |
| PASAA | Protected Area System Assessment & Analysis – Public Report. GOB 04/2005 |
| PDF A | Project Development Funds (level) A |
| PfB | Programme for Belize |
| PHMR | Port Honduras Marine Reserve |
| RDP | Regional Development Plan |
| RGW | Rio Grande Watershed |
| SAGE | Southern Alliance for Grassroots Empowerment |
| SATIIM | Sarstoon Temash Indigenous Institute for Management |
| SRDP | Southern Regional Development Plan |
| TIDE | Toledo Institute for Development and Environment |
| TNC | The Nature Conservancy |
| UNDP | United Nations Development Programme |
| WB | World Bank |
| YCT | Ya'axche' Conservation Trust |

## PART I - PROJECT CONCEPT

### A – PROJECT SUMMARY

1. Despite Belize's small size (22,960 $km^2$), the country's global biodiversity significance is disproportionately high, due to the extent and relative intactness of its estimated 85 terrestrial and 2 marine ecosystems.[1] A small but growing population of approximately 273,700,[2] combined with a low level of industrial development, has helped maintain the integrity of Belize's biodiversity to date. Almost 57% of Belize remains under closed forest cover. Its interdependent landscapes, waterways and coastal areas support habitats that nurture some 4,000 species of plants, 121 terrestrial and marine mammal species, 504 bird species, 151 species of amphibians and reptiles, and the second largest barrier reef complex in the world.

2. The Government of Belize (GoB) has combined a willingness to assign protected area (PA) status to an unusually large percentage of its national territory[3], with persistent difficulties in finding ways to finance active management of these same areas. In light of this situation, various approaches to co-management have been used to supplement weak and in some cases non-existent on-the-ground management by Government. NGOs have played a particularly constructive role in co-management; for example, Bladen Nature Reserve (BNR), considered by many as Belize's most important national protected area in terms of biodiversity, is currently managed on behalf of Government by a consortium of four NGOs who work closely with the Forest Department in execution of their mandate. Another type of co-management, between Belize's Forestry Department (FD) and Community Based Organizations (CBOs), has been attempted with support from a GEF Medium-size Project (MSP) and been found wanting due, *inter alia*, to persistent barriers such as inadequate capacities of both co-managing partners.[4]

3. In addition to the Government-designated PAs, the National Protected Area System (NPAS) also contains a significant number of Private Protected Areas (PPAs). Many of these are lands of priority conservation importance identified, purchased and managed for conservation by national and international NGOs. International NGOs that have been involved in this process of land acquisition include The Nature Conservancy (TNC), Earthwatch and Fauna and Flora International (FFI).

4. Given the abundance and combined size of PAs, it is common for two or more PAs to be contiguous and/or to share portions of ecosystems, watersheds, etc. It is also not unusual for the combined presence of PAs within such ecologically linked areas to surpass 50% or more of the relevant land area. In the case of the Golden Stream Watershed (GSW), the demonstration site for the present project, the relevant figure is over 60%. In such circumstances, co-ordination and exchange among Protected Area Management Organizations (PAMOs) becomes important, even crucial. The significance of such exchanges is largely conditioned by the PAs' ecological interdependencies. Situations of relatively high interdependence present important opportunities to establish common goals, to develop and implement shared, or at least harmonized, monitoring systems, and to ensure that a shared position advocating conservation and sustainable development of an overall area can emerge from the cacophony of voices of competing self-

1 Central American Ecosystems Mapping Project (World Bank / Gov. of Netherlands).
2 CSO 2003 mid-year report.
3 18.52% of its lands, or 42.2% of its terrestrial extension and 7.33% of its waters (Protected Area System Assessment & Analysis – Public Report. GOB 04/2005).
4 Ravndal, Virginia. October 2002. "BZE/98/G32: Community Co-Managed Park System for Belize, Final Project Evaluation." Mimeo.

interest. In the Belizean context, strengthening co-operative relationships amongst PAMOs is thus key to enhancing the effectiveness and sustainability of the overall PA system, as a tool for conservation of biodiversity.[5]

5. In summary, the current NPAS consists of a large number of PAs (c. 94[6]), covering a very significant portion of national territory and operating under a variety of management regimes, including benign neglect. The participation of Government in site-level management is extremely limited, yet its role in setting the policy environment within which PAs operate remains dominant. Key barriers that need to be addressed in order to make the NPAS sustainable are: (i) that the NPAS is fragmented, not cost effective and not financially sustainable; (ii) that biodiversity within individual PAs is increasingly isolated as historically connecting landscapes are transformed while local communities remain indifferent, or even opposed, to the PAs and their conservation goals, and; (iii) that private protected areas (PPAs) are isolated from the broader NPAS, with few incentives to encourage their establishment or effective management for conservation.

6. Recognizing that national policy governing PA management has to date proven inadequate for ensuring sustainable and coordinated management of Belize's globally significant biodiversity resources, the Ministry of Natural Resources and Environment (MNRE) embarked upon a policy reform process in 2004, which is due to yield a new framework for PA management by July 2005 and an endorsed policy / revised National Protected Areas Act by 2006. This reform process is being carried out through a project entitled "National Protected Areas Policy and System Plan (NPAPSP)." The pending revised NPAS policy management framework, based in part upon a thorough assessment and analysis of the current protected area system released in April 2005, is expected to stimulate improved management of Belize's many PAs. Priority considerations include: encouraging the consolidation of adjacent protected areas into single management units; enhancing coordination and collaboration of management and monitoring practices; strengthening incentives for private protected areas and lands to function as interlinking parcels between key conservation areas. Through these and other reforms, the effectiveness of Belize's NPAS would be significantly enhanced.

7. **Given the national context and considerable opportunities for comprehensive reform of Belize's NPAS, the present project intends to play a critical and complementary role in this process, providing a replicable demonstration model where several of the key priorities cited above will be implemented and showcased at a national level.** The proposed project site, the Golden Stream Watershed (GSW), has been selected due to its considerable potential for addressing many of these priorities. In addition, it has been chosen because of its distinct features, such as representative, diverse and interdependent terrestrial and marine ecosystems, the convergence of multiple types of adjacent protected areas and the global significance of the area's biodiversity. These characteristics give it great potential to function as an example of coordinated, interlinked protected area and landscape conservation.

8. Finally, the GSW has been chosen because the protected area managers active in the area have already laid considerable groundwork in consolidating their respective efforts to conserve the globally significant ecosystems of this critical watershed, and in developing a practical model of coordinated conservation corridor management; these efforts have been independently recognized by the Mesoamerican Biological Corridor (MBC) and Belize NPAS reform process alike. Since the GSW provides such fertile grounds for

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5 It should be noted, however, that even where the combined weight of PAs is particularly large, buffer zones and broader landscapes will never disappear; co-ordination at this level must therefore also remain an important consideration in PA management.

6 Protected Area System Assessment & Analysis – Public Report. GOB 04/2005; known hereafter as the PASAA Report 05.

an integrated management model which incorporates sustainable use as well as protection in its framework, and which moreover already benefits from existing biodiversity-friendly private and community enterprise foundations developed in its buffer national and private lands, the chosen project context clearly has great potential for a fruitful GEF intervention.

9. As such, the **goal** of the present project is to enable Belize's protected area management system to function as an integrated, coordinated and cost-effective tool for biodiversity conservation and sustainable development.

10. The project's **objective** is for the Golden Stream Watershed (GSW) to function as a replicable model of how multiple protected areas working within an ecologically interconnected and interdependent biodiversity corridor area can jointly achieve conservation and sustainable development objectives, thereby catalyzing the sustainability of Belize's national protected area system.

11. In order to achieve the above objective, the project will deliver the following four Outcomes:

Outcome 1: Protected area management authorities, with the support and participation of buffer area stakeholders, have jointly developed and are collaborating to implement a standardized and complementary set of management plans for the GSW's four protected areas.

Outcome 2: Protected area management authorities, local government bodies, private sector landholders and local communities have jointly developed a strategy for sustainable development of the GSW landscape that strengthens the financial and social sustainability of the protected area system and provides widespread benefits to the communities at large, and are co-operating to sustain its implementation over the long-term.

Outcome 3: Fiscal and legislative environments affecting private protected areas have been clarified and improved as a result of collaborative NPAPSP / BAPPA / GSW efforts, providing mechanisms to effectively integrate private protected areas and private lands within landscape level management systems.

Outcome 4: Protected area management authorities and other stakeholders throughout Belize have benefited from, and are beginning to apply, lessons learned from the GSW experience, thereby consolidating the NPAS.

## B - COUNTRY OWNERSHIP

### B-1. COUNTRY ELIGIBILITY

12. Belize is eligible for GEF support, having ratified the Convention on Biological Diversity on 30 December 1993. It endorsed a National Biodiversity Strategy and Action Plan (NBSAP) in September 1998.

### B-2. COUNTRY DRIVENNESS

13. Since early 2004, Belize has been engaged in a process aimed at rationalizing its protected area management system. The National Protected Area Policy and Systems Planning (NPAPSP) process involves review and revision of all policies and management criteria pertaining to Belize's NPAS, with

the objective of producing a comprehensive national protected area policy and system plan. This process was conceptualized at a national level following recommendations emerging from an earlier GEF project[7] that had identified systemic weaknesses in PA governance as preventing GEF funds from enabling persistent barriers to be overcome. The process, which has been financed by Belize's Protected Area Conservation Trust (PACT), UNDP and various international conservation NGOs, is intended to ensure that Belize's NPAS becomes both more sustainable and responsive to conservation needs, social interests and national development priorities alike. All research and policy reports are due to be presented for public and government endorsement by July 2005.[8] A set of draft recommendations related to reform of the NPAS had already been made public at the time of project submission, with an endorsed policy and revised National Protected Areas Act expected to be legislated during 2006.

14. Although not all recommendations emerging from the analysis will necessarily be integrated into the eventual NPAPSP policy, key strategies that have emerged from the process reflect current thinking amongst PAMOs in Belize and were favorably received at the first consultation process.[9] Amongst these recommendations are several which the current project will directly address, thereby assisting in strengthening the NPAS and making it more sustainable. These include:

- Promoting coordination and standardization of management practice among PAs.
- Strengthening nascent, potential conservation corridors by integrating the management of PAs with the broader productive multi-layered landscapes in which they are situated, such as watersheds.
- Developing innovative strategies that enable PAMOs to overcome the barrier of financial sustainability, which has often undermined prior GEF and non-GEF conservation programmes.
- Ensuring that PAs and PAMOs espouse a management vision which goes beyond that of strict conservation, and become socially and economically integrated with their surrounding buffer zones, promoting sustainable livelihoods through effective, appropriate management.
- Assisting to integrate PPAs within the NPAS, and helping to draft mechanisms that give PPA and private landowner's incentives to ensure that their lands can fill the gaps between national protected areas.

15. Depending on respective timing, further effort to harmonize the project with the NPAPSP process may need to take place during the inception phase, but this is not expected to involve major changes. The project proponents are aware that the GOB intends to apply for PDF Block B funds in order to prepare an FSP proposal to GEF via the World Bank. This project would be designed under GEF SP-1, and would be geared towards consolidating Belize's national protected areas system. The project proponents and the Ministry of Natural Resources & Environment / Forest Department share the opinion that the proposed GSW project will play a vital role as a demonstration project (as indicated in C-1 and E-2 below) for the implementation of the NPAS consolidation project, and are thus maintaining close communication to ensure that project synergies and compatibility are closely and effective maintained. All of this is particularly important given that the present project has been designed under GEF Strategic Priority-1, Catalyzing the Sustainability of Protected Areas (see C.1 below).

16. In addition to its linkages with NPAPSP, the project supports other elements of Belize's national priorities as highlighted in **Table 1** below.

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[7] Community Co-Managed National Parks Project Reviewed by Virginia Ravndal in 2002.

[8] This nationally funded process is laying the foundations for a GEF FSP WB proposal to implement the revised NPAS plan, which is discussed at greater length in section E.2.

[9] 19th April 2005, Holy Redeemer Parish Hall, Belize City.

**Table 1: Project support to national priorities**

| Policy document/ Institution | Goal / Objective | Nature and mechanism of project support to goal |
|---|---|---|
| National Strategy on Biodiversity (1998) | To complete the development of management plans for all Protected Areas, in accordance with the sustainable use of such areas | This project will ensure that 3 new PA management plans are developed in the GSW corridor. It will also build uniformity into the content and implementation of these plans, and coordination between management of these 3 PAs and the Port Honduras Marine Reserve.[10] |
| | To implement the Biological Corridors System as a complementary in-situ conservation measure to the NPASP | By consolidating the incipient conservation corridor system in the GSW (designated as the southeastern component of the MBC national protected area system) through a uniform management interlinking its diverse PAs, the project will both strengthen the NPAS and demonstrate the potential for PPAs to catalyze landscape level conservation systems. |
| | The strategy noted the inadequacy of conservation focus upon watersheds, despite these being known to play a critical role in sustaining seagrass beds, mangroves, broadleaf forests and the outlying World Heritage Site Belize Barrier Reef | By adopting a watershed approach to define the geographical focus of the project, the project will address this highlighted vacuum of activity. |
| Protected Areas Conservation Trust (PACT) | PACT has recognized the importance of the GSCP-driven conservation corridor in the GSW, through previous grant allocations to the area | Project will consolidate PACT and other funding support to YCT, the GSCP and GSW, to ensure that local agencies can sustain project processes established by the end of the project period. |
| The GOB/IDB funded Economic and Social Technical Assistance Project (ESTAP)'s Regional Development Plan (RDP) for southern Belize of 1999. | This 2-year extensive planning and consultation process identified the most viable economic avenues for Toledo's development, and conclusively recommended that these be secured through "the efficient and sustainable allocation and utilization of resources in the region."[11] The three economic development strategies considered to be most viable in the Toledo context were sustainable agriculture, fishing and tourism. | As discussed in Section C.2.3 / Output 2 below, the project will focus upon strengthening alternative industries highlighted in ESTAP's RDP business analysis, as well as others substantiated by additional business evaluations. These include those produced by Green & Black's chocolate company (for agroforestry / cacao) in 2003; the Ecotourism Consulting Group's ongoing analysis of niche tourism markets for PAs and community organizations 2003-5; by Vodafone user analysts for sustainable forest woodwork products in 2005 (all elaborated further in Output 2 below). |
| Toledo Development Corporation (TDC) | The Government of Belize's (GOB) policy objectives to promote human development and economic growth in Toledo District, as identified by the TDC, include: advocacy for and promotion of environmental protection; community-based development; | The project will provide complementary support to these objectives. In addition, a representative from the TDC will be invited to join the watershed advisory commission to be established by the project, in order to enhance opportunities for direct synergies between the GSW initiative and District development efforts - including |

[10] The PHMR already has a management plan, drafted in 2000.

[11] Regional Development Plan for Southern Belize, ESTAP, GOB-IDB, 1999.

| Policy document/ Institution | Goal / Objective | Nature and mechanism of project support to goal |
|---|---|---|
| | collaborative management; preservation of indigenous cultures. | potential replication of lessons learned. |
| Toledo Healthy Forest Initiative Taskforce (THFIT) | This 7-member body was convened by ministerial mandate in January 2005 to advise government on a sustainable vision for forest use in southern Belize. Its specific objectives are to produce a policy white paper and pilot models of sustainable forest management practices for Toledo for Cabinet to endorse in 2005. | The underlying ethic of this initiative strongly favors a community-based management approach, as does the present project. The present project will complement and enhance the THFI's work by providing critical support in its key component areas - capacity building, community enterprises, and sustainable resource management. With three members of the proposed GSW project (FFI, YCT and TIDE) on the Board of the THFIT, there is considerable potential for the interlinked CRFR, GSCP and TIDE private lands to function as a demonstration area for the THFIT process. |

## C – PROGRAM AND POLICY CONFORMITY

### C-1. PROGRAM DESIGNATION AND CONFORMITY

17. The present project has adopted SP-1, Catalyzing the Sustainability of Protected Areas, as its guiding framework. Its catalytic approach will operate through a number of channels:

- First, the proposal is closely linked to a number of priorities being developed under the NPAPSP process (see Section B.2 above), and as such should operate as a timely demonstration of the new directions being put forward under that policy.

- Second, work at the project's demonstration site will help to consolidate the demonstration of a model approach to PA management in situations involving several protected areas and protected area types—in this case Private Protected Areas (PPAs), a forest reserve and a co-managed marine protected area—working in a coordinated manner within a single watershed and its receiving water body. Similarly, the watershed approach being applied by the project represents a potentially critical and innovative strategy for addressing Belize's need for effective integrated conservation programmes that effectively span terrestrial and aquatic PAs. The Golden Stream watershed is a particularly appropriate location for this demonstration because of its ecological representativeness vis-à-vis other watersheds and forest ecosystems in the country, and because, as highlighted in the NPAPSP system analysis process, it represents the most compelling ridge to reef watershed corridor site in southern Belize.[12] Thus, for both thematic and geographic reasons, lessons to be learned at the site are broadly applicable to the broader NPAS.

[12] PASAA Report 05 – The map of conservation corridors in Belize which appears on p. 84 of the PASAA report highlights only two compelling examples of corridors spanning terrestrial / marine ecosystems and encompassing multiple PAs: one is in the extreme north of the country (including Freshwater Creek Forest Reserve – Shipstern PPA – Corozal Bay Wildlife Sanctuary - Bacalar Chico National Park), and the other is the GSW.

- Finally, the project's efforts to disseminate lessons learned will open the door to replication of the approach within other watersheds (see Section C-4 below) and other areas where multiple and/or multiple-type PAs (including PPAs) share common or highly interdependent ecosystems. Outcome 4 places significant emphasis on amplifying this demonstration effect (see Section C-2.3 below).

18. The project will also contribute to SP-2 – Mainstreaming biodiversity in production landscapes and sectors. It will do so by defining the project focal area from a watershed-level perspective in which approximately 25% of the area is private, community or national lands, and by incorporating a focus upon sustainability of both PAs and non-PA areas through biodiversity-friendly enterprise development.

19. In terms of the GEF Operational Programmes (OPs), project activities will contribute to GEF programme objectives related to OP-2 (Coastal, Marine and Freshwater Ecosystems), OP-3 (Forest Ecosystems) and OP-4 (Mountain Ecosystems), all of which are found in the GSW landscape. To illustrate, the Golden Stream originates in the lower mountain forest habitats of the Columbia River Forest Reserve (OP-4), continues through the broadleaf forest ecosystems of the private Golden Stream Corridor Preserve (GSCP) where up to 300 different tree species have been identified (OP-3), and the coastal and wetland ecosystems of TIDE's Block 127 private protected lands where mangrove forests dominate, and eventually flows into the globally significant marine ecosystems of the Port Honduras Marine Reserve (OP-2).

## C-2. PROJECT DESIGN

20. This section describes the overall project design. It includes the following sub-sections:

- Belize's National Protected Area System (NPAS); Baseline Barriers and Related Activities
- Maya Mountain Marine Corridor (MMMC) and the Golden Stream Watershed (GSW)
- Project structure
- Risks to project implementation
- Project cost to GEF

### *C-2.1 Belize's National Protected Area System (NPAS)*

OVERVIEW

21. The GoB has made significant efforts in recent years to establish and extend its NPAS. Belize's NPAS consists of 94 PAs distributed among 10 PA categories. Currently, the NPAS covers an estimated 18.5% of Belize's national territory, defined as both terrestrial and marine areas. When terrestrial area alone is considered, this figure rises to 36.5%; the comparable figure for the marine area is 7.3%.[13] Most important in terms of area are forest reserves, followed by national parks, marine reserves and private reserves.

22. Southern Belize's Toledo District, where the project demonstration site is located, contains the greatest concentration of protected areas. This is hardly coincidental; the historical isolation of the south from the centre of national economic and political activity has played a key role in facilitating conservation of Toledo's resources, if by default rather than design. As such, Toledo contains a rich tapestry of varied and significant protected areas, as indicated in **Table 2** below:

[13] PASAA Report.

**Table 2: Protected Areas falling within the Toledo District**

| Type | Name | Size in acres |
|---|---|---|
| Forest Reserve | Columbia River | 148,357 |
| | Deep River | 78,574 |
| | Machaca | 3,756 |
| | Swasey Bladen | 14,779 |
| National Park | Paynes Creek | 31,679 |
| | Rio Blanco | 100 |
| | Sarstoon Temash | 41,898 |
| Nature Reserve | Bladen | 99,670 |
| Wildlife Sanctuary | Agua Caliente | 5,492 |
| Marine Reserve | Port Honduras | 350km$^2$ |
| | Sapodilla Cayes | 125 km$^2$ |
| Archaeological Reserve | Nim Li Punit | 121 |
| Private Protected Area (PPAs) | GSCP | 14,970 |
| | TIDE's Golden Stream & Rio Grande lands | 30,000 |

23. As a result of the Toledo District's isolation, all the national parks, nature reserves, wildlife sanctuaries and marine reserves listed in Table 2 above are administered through co-management agreements with local partners. Only the Forest Reserves, under the exclusive management of the Forest Department, and the Archaeological Reserve, managed by the Archaeology Department with informal support from the local community,[14] are still completely administered by government. The PPAs are managed by their respective NGO owner / managing agencies.

24. In addition to creating new PAs, Belize established an innovative quasi-governmental endowment organization in 1996 called the Protected Areas Conservation Trust (PACT) to help fund management of its protected areas. PACT's funds are raised from fees levied on all visitors exiting Belize, creating a revolving fund that is used to provide grants to different PAs on a competitive biannual basis.

25. At the regional level, Belize is a member country of the multi-laterally funded regional Mesoamerican Biological Corridor (MBC) project, an initiative begun in 1997 with the ambitious aim of linking the fragmented wildlands and protected areas of Mesoamerica through corridors of natural and restored habitats. However, after eight years of engagement in the MBC process, practical progress towards the creation of viable conservation corridors connecting Belize's PAs has been minimal. Nevertheless, the MBC project has had some success in raising awareness amongst conservation professionals in Belize of the potential role of conservation corridors in enhancing NPAS effectiveness.

BASELINE BARRIERS AND RELATED ACTIVITIES

*26.* Despite the above positive steps, the sustainability of Belize's NPAS is far from assured. Key barriers to the emergence of a sustainable NPAS have been identified and are analyzed in turn below, together with baseline efforts to address them.

*Barrier 1- The NPAS is fragmented, not cost-effective and not financially sustainable*

[14] In this case, Indian Creek, one of the project's key buffer communities.

27. Despite the financial support provided by PACT, Belize's NPAS suffers from insufficient GoB resources to effectively manage the vast area of national landscape under protected status. As Belize's economic crisis continues to deepen, reflected by a financing gap estimated at US$504 million, or 560% of usable reserves, and recent economic downgrades by leading international credit rating agencies, the ability of Government to allocate revenue to conservation activities has also decreased.[15] In 2003, MNRE received only 2% of GOB revenue with which to execute its considerable management responsibilities; in 2005, the economic situation has become even bleaker. In the absence of sufficient GoB resources to sustain the NPAS, PAMO and private sector funds, including revenues from sustainable alternative businesses, will remain crucial to ensure the long-term sustainability of the overall system.

28. In addition to the limited amount of resources available to manage the existing NPAS, the system itself is not organized in such a way as to take maximum advantage of the resources that *are* available. This problem of cost effectiveness is closely related to the fragmented nature of the system. For example, there is no comprehensive legislative system to govern PAs and ensure uniformity of management systems amongst them. Instead, PAs have been declared and administered according to various legislative tools, and are under the jurisdiction of three different governmental departments and Ministries: the Forest Department (Ministry of Natural Resources & Environment - MNRE), the Fisheries Department (Ministry of Agriculture and Fisheries) and the Institute of Archaeology (Ministry of Culture). Partly as a consequence of the multiplicity of governance systems overseeing the protected areas in Belize, the design and coordination of protected area management on the ground has remained fragmented and *ad hoc*. There is little co-ordination or integration amongst the country's approximately 94 PAs, even when these are managed by the same Government Department, co-managed or owned by the same PAMO agency, and even less amongst those managed by different departments and protected area managers. Each PA is managed according to its own distinct system, evolved not through any defined process, but rather according to factors such as the history of the particular PA's creation, the finances, personnel and institutional skills available to the management entity in question, and the institutional priorities and preferences of the managing entity. In a country as small as Belize, such Balkanized management represents a substantial constraint on management efficiency, and is scarcely sustainable, financially or otherwise.

29. While there may be some advantages associated with this management diversity compared with a more standardized system—notably the possibility that innovative approaches may emerge—the drawbacks are almost certainly greater. Belize's many PAs have separate field staff and patrols, trained by different experts utilizing different methodologies—even in cases where respective staff teams are operating in adjacent areas, with shared ecosystems, species and threats to their survival. Without a uniform biodiversity management system, data is collected using distinct methodologies that are often not comparable and, partly for these reasons, are rarely shared. As a result, opportunities to collectively and cost effectively conduct biodiversity monitoring, or threats analysis and response, are dramatically reduced. A case in point is the seasonal, predominantly man-made forest fires which threaten forest ecosystems on an annual basis in the dry season. The ability of such forest fires to spread and consume forests within and beyond PAs could be greatly reduced through the development and application of collaborative emergency fire management programmes, shared communication systems and field ranger training programmes between PAMOs operating in proximate areas. Such efforts would enable partners to swiftly mobilize themselves and pool their limited human and financial resources to effectively address the common threat.

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[15] Source: *Standard & Poor's Report on Belize*, Ratings Direct, 05/04/05 (Reprinted in Belize's Amandala newspaper, pg 18, 10/4/05).

30.In sum, although the ongoing NPAPSP reform process (see above, Section B-2) aims to increase the efficiency of Belize's NPAS, the current scenario remains one of isolated management, with each PA managing entity, and even each PA, being managed according to its own distinct system. As a recent report noted "…even though a variety of management entities and a functional protected area trust fund exist, these organizations operate in isolation from each other, and have little impact on the development of Belize and protected areas at a national level."[16] The results—including impacts on cost effectiveness and conservation effectiveness—represent significant barriers to a sustainable NPAS.

31.**Baseline efforts** to address these issues have included attempts to find alternatives to Government-financed and managed PAs, as well as steps to reduce fragmentation and its associated effects. First, there has been a significant trend towards devolving co-management responsibility to Conservation NGOs and Community-Based Organizations (CBOs), transforming them into official protected area management organizations (PAMOs). These entities are either mandated by law to manage protected areas or are given the responsibility for management of these areas through the signing of specific co-management agreements. The co-management experiment that emerged largely as a result of GOB economic necessity has evolved into a promising model of devolved, local responsibility for conservation practice, whose prospects for sustainability are enhanced by a decreasing dependence upon GOB to sustain them, and increased ownership for such processes at the grassroots level. These national NGOs and CBOs raise funds in a variety of ways, e.g., from national sources – with PACT being a primary source – or more frequently, from a variety of international sources, such as the GEF small grants programme. In many cases, funding is secured with the support of partner international agencies. However, given the finite availability of funding, Belize's PAMOs inevitably compete with one another in an effort to sustain their respective PA management efforts and systems, rather than developing consolidated and collaborative efforts to improve their respective and collective financial sustainability.

32.Recognizing the opportunities lost as a result of ineffective collaboration, key national stakeholders have recently begun to take action to address the barrier posed by fragmented protected areas management, and to take advantage of the opportunities for improvement of the NPAS that institutional exchanges and overall policy reform could provide. Two groups—the Association for Protected Area Management Organizations (APAMO), a broad association of all non-governmental protected area managing entities, and the Belize Association of Private Protected Areas (BAPPA), an association of those minority of protected area managers whose agencies actually own the lands they manage —have been formed. Of the two associations, BAPPA has been the most proactive, no doubt motivated by its greater need to stabilize the uncertain status of private protected areas (PPAs) through lobbying and collective mobilization and to ensure that the reformed protected area legislation reflects the important role PPAs have come to play in the NPAS.[17] Although the consolidation of APAMO, which was formed in early 2003, has been considerably slower, the association has itself also recently become galvanized in response to increasing threats to protected areas occurring in direct buffer zones or even spilling into the protected areas managed by its members.[18] With similar interests and increasingly active members, APAMO and BAPPA thus both provide forums wherein collaboration and advocacy with regards to protected areas management could be fostered, but whose full potential to address fragmented management through collective action has yet to be fully realized. A successful national demonstration model of collaborative management would give Belize's PAMOs the necessary confidence to invest time

[16] Proceedings of the Meeting of Protected Areas Management Organizations (BAS), Jan 2003.

[17] See section B.3 below for further information on BAPPA and PPAs

[18] Namely, the Crooked Tree Wildlife Sanctuary managed by BAS (where a developer recently cleared mangroves on the borders and within the reserve, and has since been taken to court), and the Bladen Nature Reserve managed by the Bladen Management Consortium (which is being threatened by a new satellite community of Central American immigrants which was established on – and until progress was halted by BMC over – the border to BNR).

and energy in working together towards common goals, rather than simply engaging in an endless struggle over competing funds.

33.At the same time, the aforementioned NPAPSP process to reform the NPAS and produce a comprehensive national protected area policy and management system, which is led by the Ministry of Natural Resources & Environment (MNRE), is nearing completion. Clearly, the existence of a comprehensive framework to promote streamlined management of Belize's PAs, including PPAs, will provide an unprecedented opportunity for reversing the costly fragmentation of the system. **In order for this theoretical framework to be translated into change on the ground, practical examples of applied, streamlined management will be vital, to encourage national dissemination and adoption of coordinated management principles.**

*Barrier 2- Biodiversity within PAs is increasingly isolated as historically connecting landscapes are transformed while surrounding communities remain indifferent, or even opposed, to the PAs and their conservation goals*

34. Belize's protected area system was not planned, but rather evolved on an *ad hoc* basis, in response to growing national and international interest and opportunities for support of biodiversity conservation efforts. In this context, little attention was given to issues involving landscapes and communities surrounding newly created PAs. Key issues in this respect include: the impact of landscape transformations in areas surrounding PAs; their potential to undermine the system's long-term viability; the economic, social and cultural impacts of PA establishment upon local communities.

35.Not surprisingly, insufficient community engagement in the management and support of protected areas in Belize was subsequently identified as a persistent barrier to effective PA management by the aforementioned UNDP GEF MSP Community Co-Managed Park System. This project clearly demonstrated that although Belize's rural communities were interested in becoming engaged in and benefiting from the management of PAs, they lacked the technical capacity to automatically transform themselves into effective PA managers, and required concerted training in order to do so.

36.The disjointed processes of landscape transformation around PAs, and the alienation of communities within these landscapes from the PAs they border are closely inter-linked, and represent ongoing challenges to the sustainability of Belize's NPAS. PAs such as the Sarstoon Temash National Park have become almost entirely encircled by unplanned settlements, and threatened by unregulated development activities that have resulted in the gradual but steady erosion of the surrounding forest landscapes. As a result, Sarstoon is inexorably becoming an isolated island of biodiversity, unable in the long-term to conserve the critical ecosystems and species within it or to play an integral role as a conduit of biodiversity exchange between other national protected areas, from which it has effectively been cut off.[19] Current trends suggest that Sarstoon's physical and ecological isolation from the NPAS is a fate other PAs are liable to face in the near future. The steady erosion of landscapes around PAs, and the PAs' subsequent isolation from one another, has belied the optimistic notion that Belize's extensive natural forest cover could withstand the process of conversion and deforestation indefinitely.

37.At the same time, as many PAs have existed for years as paper parks, with no management regime or boundary demarcation in place on the ground to support them, with minimal or no effort to develop local interest in sustaining them through awareness, capacity-building or livelihood efforts, surrounding

[19] Another example is that of the interconnected reserves located in the Maya Mountain range, including the Chiquibul Forest Reserve the Bladen Nature Reserve and the Columbia Forest Reserve; all of which are managed according to separate regimes, and two of which (Chiquibul and Columbia) are being degraded by unregulated logging and NTFP extraction activities which over time, threaten to make an island of Bladen in between.

communities have understandably shown limited interest in them. Landscape fragmentation and community dislocation have together resulted in protected areas having very weak socio-economic foundations in the Belizean context.

38. **Baseline efforts** to address the problem of ecosystem isolation and fragmentation—and their roots in the PA-community relationships and local development processes—had been entrusted to the MBC project. The strategy of encouraging protected area managers to collaborate with one another (see Barrier 1 above), and with other relevant stakeholders, to establish physical, unbroken conservation corridors at national and regional levels that would provide sufficient space for the free flow and regeneration of endemic species threatened by landscape conversation and fragmentation, was seen as the only practical way to conserve critical biodiversity throughout the Central American isthmus. The MBC project was to identify the key potential areas for corridor linkages at national and regional levels, and subsequently encourage collaboration and standardization of management practices among the implicated agencies. As a result of this project, it was anticipated that a series of self-referencing and mutually-supportive NPAS systems would be created, functioning effectively to protect biodiversity through accommodation and reconciliation with parallel regional development processes.

39. Despite these great expectations, the MBC process has not been successful in addressing the persistent barriers that continue to prevent the integration and consolidation of PA and conservation corridor management in Belize. While the MBC project in Belize recognized that collaborative management is necessary in order to consolidate the NPAS and incipient corridor efforts, its approach in encouraging collaboration among the different national PAMOs was extremely passive. MBC staff assumed that as a result of participating in various workshops or meetings, or by being included in the national MBC mailing lists, Belize's PAMOs would readily seize the initiative to forge concrete collaborative activities independently. Unfortunately, this preconception proved naïve at best. The reality was that between the long intervals of MBC-sponsored activities, PAMOs largely turned their attention to business as usual, applying their limited resources to urgent matters within their respective protected areas.

40. In sum, neither the MBC nor any other ongoing process has seriously addressed the barrier of fragmented management—in this case involving management not only of PAs but of connecting landscape corridors as well—with sustained technical support. As such, whilst some efforts at streamlining and coordinated standardized management practices have occurred, these have been piecemeal and inconclusive, and unable to demonstrate the importance and benefits of collaborative effort.

41. The Belizean government has clearly demonstrated a strong understanding of the inter-relationship between conservation and development, and is eager to see benefits from PAs spill beyond PA boundaries. The MNRE actively encourages PAs and PAMOs to become more effective in delivering socioeconomic benefits to buffer communities[20]—a concern which many PAMOs themselves are attempting to address by initiating livelihood-oriented projects in community areas. However, as conservation agencies limited by financial and human resources, their development work has been largely piecemeal rather than systematic, working with discrete groups within perhaps one potential sector, e.g. ecotourism or agroforestry. Such efforts are not sufficient to address the considerable socioeconomic needs that exist in the country's rural and impoverished areas. In their effort to harmonize interests and benefits across PA borders, PAMOs are moreover constrained in their actions by the terms of the National Protected Areas Act (NPAA), which limits economic practices and general activities within PAs to tourism and other recreational activities alone. As such, a somewhat paradoxical situation has prevailed,

[20] As evidenced by the theme of the MNRE April 2005 week: "Protected Areas, Sustaining Livelihoods."

whereby the GoB on the one hand has been encouraging PAMO agencies to deliver community benefits through their work, while at the same time, existing national legislation regarding PAs has inhibited their ability to do so.

42.Recent events, however, indicate that GoB is prepared to accept modifications in legislative regulations regarding PA management to afford PAMOs greater leeway by which to address community needs, reform the NPAA, and thereby overcome the barrier of limited financial sustainability and community engagement which it poses. A new window of opportunity for balancing conservation priorities with development needs in the context of protected area management has recently been created through an innovative PA management plan recently endorsed by the GoB for one of its largest national parks. In June 2005, a management plan was formally adopted by the GoB for the Sarstoon Temash National Park, which created several management zones for the PA. In addition to the customary conservation zone, and sustainable recreation areas, the plan also included an indigenous use area where resources for local subsistence needs, under controlled conditions, could now be legally extracted for community benefit. This zone was defined through a combination of biodiversity and anthropological research, which was then correlated through GIS mapping to create the different use zones. Through this innovation in PA management, the Sarstoon model represents the first instance of a national park allowing resource extraction for local indigenous subsistence use, ushering in a new management principle that will need to be reflected in the reformed NPAA that will emerge from the NPAPSP process.

43.Clearly, neither the GoB nor PAMO agencies want to lift all management regulations for national parks, or to invite wholesale, unrestricted resource use activities within their boundaries, thereby potentially undermining the integrity of the entire NPAS system. From this perspective, both PPAs and private lands have considerable potential to address the need for financial sustainability of the NPAS, and integration of communities within PA management processes. PPAs such as those located in the GSW have yet to be integrated formally within the NPAA, and therefore still do not have specific management criteria indicating how they should be utilized. This constraint can be turned into an opportunity to explore how PPAs and private lands might operate to ensure that broader social benefits are accrued from their sustainable management. Indeed, certain PAMO agencies in Belize that manage PPAs are already forging the way in this regard. The clearest case in point is that of the Programme for Belize's Rio Bravo PPA, the largest in the country, which is being managed according to a balance of ecological and economic sustainability considerations. PfB has established a 40 year FSC-certified forest management system in a large portion of the PPA, which is generating revenue for local communities on a sustainable basis, while ensuring the financial sustainability of the managing entity, PfB. This example suggests that in the effort to overcome the barriers created by insufficient community benefits and thus support for PAs, and insufficient means to ensure the financial sustainability of PAs as a whole, PPAs and potentially private lands around PAs have a particularly critical role to play due to their greater flexibility in pursuing innovative, sustainable enterprise development, within and beyond their specific boundaries.

44.In conclusion, despite the unfulfilled expectations of the MBC project, there remains widespread willingness and commitment amongst PAMO agencies in Belize to work across protected area boundaries from an integrated landscape perspective, in coordination with development agendas or processes and communities alike. This interest provides fertile grounds for a successful GEF intervention which capitalizes upon foundations laid by the MBC, and the efforts of national processes and PAMO agencies alike. Clearly, concerted, multifaceted and innovative strategies that not only engage local communities, but private business sectors as well in sustaining the integrity of protected areas are needed. Without efforts to reconcile these interests, they will inevitably come to be seen as competing, once land availability and resources become further restricted. Communities and the government alike will inevitably come to view PAs as areas of land artificially locked away from national development efforts, confirming the perception that protected areas and their managers are more concerned with plants than people. In sum, unless PAMOs can ensure that sufficient economic benefits are provided to both PA

buffer zones and the nation at large from their management, their very existence is likely to come into question.

*Barrier 3- Private Protected Areas (PPAs) are isolated from the broader NPAS, with few incentives or mechanisms for their establishment or effective management for conservation*

45. As mentioned in the previous section, no legislation exists to set criteria for their establishment or management or to provide steps for their integration within the broader NPAS.[21] There is no definitive list of how many PPAs exist, while recognition of PPAs has taken place on an *ad hoc* and informal basis, ranging from letters of recognition from the Ministry of Natural Resources & Environment (in the case of the GSCP), to inclusion of reserves on PACT's formal list of PPAs in Belize (GSCP, Rio Bravo, Monkey Bay, Shipstern) to formal Statutory Instruments (enacted for Rio Bravo and TIDE's Block 127 only). Despite this unsatisfactory situation, the importance of PPAs in Belize's NPAS is widely recognized, given the critical function they play in filling physical gaps in protected areas coverage and green belt linkages.[22] In addition, legislative instruments or incentives, such as conservation easements, which might function to encourage sustainable management of significant ecosystems and resources in private lands that buffer and impact protected areas, do not currently exist.

46. Given the uncertain status of PPAs within the NPAS, PPA managers have become an increasingly organized and vocal advocacy group, spearheaded by the formation of BAPPA, the recognition afforded to PPAs in national conservation efforts strongly noted in the Protected Area System Assessment and Analysis (PASAA) 2005 report, and by the creation of a new land tax category by the GoB in 2003 affecting large tracts of undeveloped private lands. The latter essentially created a disincentive to create or maintain PPAs, since they were not exempted from the new tax. As a result, BAPPA was encouraged to become more active in its efforts to ensure that PPAs receive formal recognition as a distinct and productive type of 'undeveloped' landholding. At the same time, in order to ensure that 'real' PPAs become formally recognized as productive partners in the NPAS—rather than cynical landowners motivated by a desire to evade the new land taxes by declaring their estates PPAs—BAPPA has developed a point system based on IUCN criteria to evaluate the biological significance and management effectiveness of potential PPAs. Aspiring PPAs will need to meet these criteria in order to qualify as nationally-recognized PPAs, thereby ensuring that their designation and function continues to play a meaningful role in consolidating the NPAS. BAPPA is currently lobbying for these criteria to be incorporated within the reformed NPAS; now that these same recommendations have enhanced political weight by virtue of being highlighted in the PASAA 2005 Report, conditions for securing clarification and redefinition of the roles of PPAs within the NPAS have never been so auspicious.

47. The continued absence of a process or mechanisms by which to ensure that PPAs operate to their full potential within Belize NPAS was indeed cited as a major weakness of the system by the PASAA report, and a priority issue for the country to address. As noted in the discussion on Barrier 2 above, there exist considerable opportunities for PPAs to play a particularly critical role in strengthening the financial sustainability of the NPAS, as well as in consolidating conservation corridors and landscapes. As such, integration of PPAs within the reformed NPAS, and endorsement of criteria by which to recognize them are key objectives of the ongoing NPAPSP process, which this project intends to actively support and complement.

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21 Proceedings of the Meeting of Protected Areas Management Organizations (BAS), Jan 2003.

22 Establishing Private Protected Areas for strengthening natural resources and their sustainable use in Belize, Central America, BAPPA Project Proposal, 12/2004

NPAS BASELINE SCENARIO

48. Under the baseline scenario, i.e., without the present GEF project, it is expected that progress would continue to be made in reforming and systematizing the NPAS. However, the goals of enhancing co-ordination and exchange among PAMOs, which can be called for or even legislated through processes such as the NPAPSP, can only really be validated and implemented through on-the-ground activities. Implementation generates lessons learned, which when coupled with concerted dissemination strategies and geared through existing national PAMO networks, can percolate throughout the system as policies and legislation become operationalized. The timing of this proposed project could not be better, since it is coming on stream at the best possible juncture for playing a key demonstration role to compliment, strengthen and implement the NPAPSP process. Although other funding sources are currently being explored by GOB to facilitate NPAPSP's implementation of the National Protected Areas System Plan (which should be completed in July 2005), none can be considered in any way imminent or secured.

49. Ultimately, without GEF support for demonstration work at GSW, the degree to which the initiative could be consolidated, and the NPAS enabled to subsequently benefit from the GSW experience, would be sharply curtailed. In a worst-case scenario in which insufficient funds prevented progress in the GSW from being consolidated, the situation could take a turn in an unsustainable direction, and the incipient GSW corridor example could become fragmented over time. This would substantially set back the great progress made in modernizing Belize's NPAS, by removing a potentially successful model showcasing many of the approaches it is seeking to stimulate.

*C 2.2 Maya Mountain Marine Corridor (MMMC) and the Golden Stream Watershed (GSW)*

50. This section describes the ecological characteristics of the broad sub-region and specific project context where the GEF initiative will be focused. Starting from an analysis of the important intermediate level at which the project seeks to have a demonstration effect, e.g., through replication of project results within the adjacent watersheds, this section also demonstrates why the GSW has been selected as the primary project site. The section goes on to present an integrated analysis of the threats facing the project demonstration site, together with a baseline scenario of likely outcomes in the absence of a GEF intervention.

MAYA MOUNTAIN MARINE CORRIDOR (MMMC)

51. The MMMC is a conservation zone first conceptualized in the mid-1990s by the Belize Center for Environmental Studies (BCES) and The Nature Conservancy (TNC).[23] The motivation for naming this approximately one million-acre (400,000 ha.) area[24] the Maya Mountain Marine Corridor was to encourage holistic "ridge to reef" conservation strategies in this expansive, interdependent and biologically significant area. Specifically, the MMMC consists of five watersheds in the Toledo District (Punta Ycacos or Payne's Creek, Deep River, Golden Stream, Middle River, and Rio Grande) that directly discharge their waters into the Port Honduras Marine Reserve, and a sixth watershed in Stann Creek located directly to the north of the MMMC (Monkey River) whose freshwater also impacts the area. The MMMC connects the Maya Mountains and the forest reserves it contains (Columbia River Forest Reserve and Bladen Nature Reserve) with the coastal waters and reefs of the Gulf of Honduras. The MMMC contains five broad ecosystem types: upland forests, coastal plain, freshwater, estuarine and shallow nearshore and coral reef. These ecosystems support

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[23] See De Vries, Gregory W., Margaret F. Haines, Steven B. Hufnagel, Andrew K. Laird, Kyle D. Rearick and Osmany E. Salas. 2003. *Enhancing Collaboration for Conservation and Development in Southern Belize*. Joint Masters Thesis, School of Natural Resources and Environment, University of Michigan.

[24] The MMMC is located largely in the Toledo District but also includes part of southern Stann Creek as well.

increasingly threatened species such as jaguar, birds such as the yellow-headed parrot, manatees, marine turtles, etc.

52. Freshwater and nutrients reaching the coast from these various watersheds drive the production of mangrove forests and sea grasses, which in turn support coastal fisheries by providing both food and habitat for young marine life. The freshwaters therefore play a key factor in integrating these globally significant terrestrial and aquatic ecosystems. Should the quality of these waters become degraded, not only would freshwater species suffer, but estuarine and nearshore communities and coral reefs as well due to their sensitivity to water quality degradation.[25]

53. Given the global ecological significance of this area, and its great potential to function as a demonstration area for conservation corridors in action, the MMMC's critical conservation importance was identified by the Mesoamerican Biological Corridor (MBC).

GOLDEN STREAM WATERSHED (GSW): OVERVIEW

54. Of the several watersheds located within the MMMC, the Golden Stream watershed has received particular recognition, not only because of the critical biodiversity it contains, but also due to the fact that of the various watersheds located in the GSW area, it has the greatest potential of all to function as a viable demonstration of a working conservation corridor. Given the significant groundwork in coordinated conservation already laid by stakeholders within this watershed, the MBC declared the GSW to be the southeastern component of the national MBC corridor system in the late 1990s. At a recent MBC meeting in January 2005 held in Honduras, the GSW was again showcased as perhaps the most promising example of successful conservation corridor achievements in Belize.[26] The aforementioned PASAA Report 05 also highlighted the GSW's corridor potential, noting the significant cluster of conservation targets to be found in the area, that were identified by the national protected area evaluation process.[27] In addition to its corridor conservation potential, the GSCP site, which is a focal area of this project and the critical interlinking PA in the GSW, has also been independently recognized for its ability to function as a model of PPA management, and thereby contribute to national policy formulation in this area:

> ... the GSCP is the only fully established private reserve in [Toledo], in the sense that it is constituted in a way that assures long-term conservation management… [through] a mixed management system incorporating protection, sustainable land management, and eco-tourism.[28]

55. In sum, in light of its independently substantiated ability to function both as a replicable model of coordinated PA conservation spanning a physical watershed corridor, and as a showcase for PA and PPA efficiency and integration within the NPA system, the Golden Stream Watershed (GSW) was chosen as the demonstration site for this project.

56. The Golden Stream originates in the rugged terrain of the Columbia River Forest Reserve (CRFR), a little documented forested range stretching along the Maya Mountains, whose significance for biodiversity and watershed integrity is however widely accepted.[29] As noted by Parker et. al, in 1993:

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25 De Vries et. al. 2003; Toledo Institute for Development and the Environment (TIDE). 2000. "Maya Mountains Marine Area Transect Site Conservation Plan."

26 The MBC "Experience Exchange Workshop" was held in Tecucigalpa, Honduras between Jan 24th - 28th. Proponents from Central America involved in corridor applications were invited to share their experiences. YCT was selected by MBC Belize to represent Belize at this regional event, to showcase their experiences and achievements in attempting to establish a conservation corridor in the GSW.

27 The analysis of data on Belize's biodiversity, resources and ecoregions – both within and beyond existing NPAS areas – was conducted by a conservation planning optimization tool (software) known as MARXAN.

28 Toledo Land Use Potentials Plan, Wilson, 2000

> Plant species found in the wet hill and low mountain forests in the CRFR are apparently among the unusual floristic elements of a once widespread lower montane type that now survives in widely separated and fast shrinking patches scattered along the Caribbean slope in Middle America. The extensive subtropical lower montane wet forest at 600-900m in the CRFR is undoubtedly one of the largest examples of its kind left in Central America.[30]

57. The river stretches down the foothills through a tropical broadleaf forest ecosystem that extends to the mangroves of the coast, where it drains into the Port Honduras Marine Reserve (PHMR), and the Belize Barrier Reef World Heritage Site beyond.

58. Tree species diversity within the GSW area is high, with up to 300 tree species recorded. The GSW forests provide critical habitat for diverse fauna, including several threatened animals such as the Central American spider monkey (*Ateles gelffroyi* IUCN VU), Baird's tapir (*Tapirus bairdii* IUCN VU), and Hickety turtle (*Dermatemys mawii* IUCN EN), as well as a high species richness of breeding and migratory birds.[31] The GSW also functions as a strategic conduit of biological exchange between terrestrial and marine ecosystems, adjacent watersheds, and their respective protected areas. Of particular importance are linkages with Bladen Nature Reserve, which borders the GSW to the north, and which is considered the jewel in the crown of Belize's protected area system.

59. Prior to Category 4 Hurricane Iris, which severely impacted the area in October 2001, biodiversity surveys in part of the GSW established the baseline status of the area's biodiversity, specified key threats, and identified critical biodiversity information gaps. The biodiversity assessment, supplemented by post-Iris rapid surveys, identified a range of vegetation types within the Golden Stream watershed, including mountain and hill forests, broadleaf tropical forest, semi-evergreen seasonal forest, riparian forest, seasonally flooded swamp forest, and mangroves. A survey of fauna identified included at least 32 medium/large mammals, 224 species of birds (41% of the national total) including harpy eagle (*Harpia harpyja*), 23 species of bats (32% of national total), and 18 species of reptiles and amphibians. Of the mammals listed, 23 of the species recorded or reliably reported are either threatened or CITES listed, including the Neotropical river otter (*Lutra longicaudis*), ocelot (*Leopardus pardalis*), puma (*Puma concolor*), West Indian manatee (*Trichechus manatus)*, and white-lipped peccary (*Dicotyles pecari*). Data indicated that mammal and bird sightings and activity were concentrated in areas near rivers and swamps, probably due to the absence of water in small streams during the dry season. The important role of riverbanks and watercourses in sustaining local wildlife was thereby strongly evident.

60. The marine component of the site consists of the Port Honduras Marine Reserve (PHMR), which occupies 350km$^2$ beginning at the Rio Grande and stretching up to Monkey River. From the shore, it extends approximately five miles out to sea. With its lush sea grass beds, the PHMR provides an ideal habitat for the endangered manatee. Manatees were once commonly hunted in the Port Honduras area but are now protected in the reserve. The waters of PHMR are home to numerous fish species, including jewfish, angel fish, barracudas, snappers, permits and tarpon. The abundant mangrove and sea grass beds serve as a nursery habitat for the young fish. Four mangrove species occur here and can be found in succession (Red, Black White, Buttonwood) from the water's edge to the sandy ridges or dry soil.

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29 Toledo Land Use Potentials Plan Wilson, 2000.

30 Parker, T.A., III, B.K. Holst, L.H. Emmons, and J.R. Meyer. 1993. *A Biological Assessment of the Columbia River Forest Reserve, Toledo District, Belize*. Conservation International, RAP Working Papers 3. 81 pp.

31 Golden Stream Watershed Biodiversity Report. Evan Bowen-Jones and Jose Pop, 2001. In two limited research sessions alone, over 40% of Belize's bird population was recorded in the GSW. For full biodiversity report, please refer to www.yct.bz/GSW_rea_report.PDF

Mangroves act as a nursery ground for fish and lobster and protect offshore areas from erosion. The sea and the several cays attract many birds, including Brown Pelican, Magnificent Frigate, Caspian Tern, Mangrove (yellow) Warbler and the Royal Tern. The Sooty Terns, which migrate from South America to mate and nest on Middle Snake Cay, can also be found in the PHMR. Although the World Heritage Site Belize Barrier Reef, the second largest such reef complex in the world lies just outside the PHMR, the integrity of the reef's rich but vulnerable ecosystems remain integrally linked to the quality and effective management of the PHMR's. In sum, it is difficult to overstate either the GSW's intrinsic global biodiversity significance or the importance of ecosystem interconnectivity that make a ridge to reef conservation approach so critical in this context.

61. The GSW is divided into a mosaic of productive and protected lands. The basic breakdown is presented in **Map 1** and **Table 3** below. Additional descriptions of each component of this mosaic, including baseline conservation and sustainable development activities since 1998, along with threats to biodiversity and related causes, are presented in **Annex C**.

**Table 3. Type, size and management entities of terrestrial and marine areas in the Golden Stream Watershed**

| GSW Parcels | Stakeholder | Physical area (acres) |
|---|---|---|
| **Columbia River Forest Reserve** (ex Maya Mountain Reserve South portion) | Forest Department | 52,000 acres |
| **La Sierra Research Centre** | | 760 acres |
| **GSCP** | YCT /FFI | 14,970 acres |
| **Block 127** and associated parcels (St.Martin's) | TIDE | 11,879 acres<br>500 acres |
| **Port Honduras Marine Reserve (PHMR)** | TIDE | 102,400 acres |
| **Belize Lodge & Excursions** | BLE | 7,600 acres |
| **National and private lands owned or occupied by indigenous communities** | | |
| Mixture of national land / leased land / private land | Indian Creek | 5,762 acres |
| Mixture of national land / leased land / private land | Golden Stream | 5,300 acres |
| Mixture of national land / leased land / private land | Medina Bank | 1,015 acres |
| Lease | Tambran | 60 acres |
| **ESTIMATE, GSW AFFECTED AREA** | | **202,246 acres** |

BASELINE ACTIVITIES IN THE GSW

62. The proposed GEF intervention will benefit greatly from a strong existing foundation of distinct, collaborative and complementary efforts by or benefiting the area's key PAMOs, which are functioning to stimulate sustainable management, development and conservation of the GSW's interrelated resources and ecosystems. These programmatic efforts are briefly examined below. As noted, **Annex C** provides further details of baseline activities within each component area of the demonstration site.

*YCT/FFI*

63. Since forging their inter-institutional partnership in 1999, FFI and YCT have developed a programme to promote conservation and sustainable development objectives in the GSCP and broader watershed. FFI and YCT's respective and joint programme in southern Belize has focused on the following broad areas:

- **Biodiversity Conservation.** Activities have included developing a biodiversity monitoring programme for the GSCP and establishing a tree nursery at the GSCP from which over 6,000 endemic trees have been grown and subsequently replanted within the wider watershed area.
- **Building local capacity and awareness for conservation management.** Activities have included training ex-hunters and loggers from the local Mayan communities to work as GSCP field rangers,

providing a continuous education outreach programme for the GSCP buffer community schools and training local farmers in biodiversity-friendly, organic farming techniques to replace damaging slash and burn farming.

- **Sustainable Livelihoods.** Activities have included a training programme in agroforestry / agricultural practices, which is benefiting six communities spanning the Rio Grande-Golden Stream and Deep River watersheds, and which includes the cultivation of cacao for international export and vegetables / fruits for local market and home consumption. This programme has been running since 2002 and is fully funded up until 2007. An additional livelihood engagement promoted by YCT is the development of value-added timber use spanning the entire production processes, commencing with community training in sustainable forest extraction techniques and establishment of a community-managed carpentry woodwork shop on the GSCP in 2002. Support also includes three separate training programmes that have taken place between 2002 and 2005 in carpentry techniques, as well as the hiring of expert European designers to assist in product marketing and development. In 2005, YCT will begin focusing upon strengthening community eco-tourism capacity, through the development of modest community-owned infrastructure, training in eco-tourism practice including certification for select community guides, marketing and promotion.
- **Policy & Advocacy in Conservation Management.** Activities have included advocacy for reform of the NPAS related to PPAs through BAPPA, and support for policy reform to enhance community-based forest management in Toledo through the Toledo Healthy Forest Initiative Taskforce.

64. These combined activities have helped FFI and YCT to address many of the pre-existing threats to the GSCP, such as incursions by villagers from the buffering communities to hunt animals or clear land for farming or for grazing domestic animals. Community outreach work, combined with continuous monitoring by the local ranger team has helped to abate threats posed by incursions. These efforts have resulted in the GSCP being established as one of the most recognized and functioning PPAs in the country, both in terms of its internal functions, and with respect to its unique potential to create a physical conservation corridor along the length of the GSW.

*TIDE*

65. The Toledo Institute for Development and Environment (TIDE), a non-governmental organization, was founded in 1997 to meet the growing environmental and development needs of Toledo District, the southernmost district of Belize. TIDE was conceived as a grassroots initiative in response to the negative environmental effects from activities such as manatee poaching, illegal fishing, illegal logging, destructive farming methods, and other types of unsustainable development. Initially started by volunteers, TIDE has grown to include 17 paid staff and 2 full time volunteers. TIDE's mission is to research and monitor Toledo's natural resources, assist in protected areas planning and management, and to foster the development of responsible tourism and other environmentally sustainable economic alternatives by providing training and support to district residents.

66. In 2000, after six years of lobbying by TIDE and community members, the Port Honduras Marine Reserve was declared; shortly thereafter, TIDE was granted co-management of the reserve by the Government of Belize. TIDE also manages 30,000 acres of private lands on the Rio Grande and Golden Stream Rivers.

67. Traditionally, the PHMR has been used for commercial fishing; the income of the residents living in and around PHMR is generally low and there is little infrastructure in the area to support large scale industry or much employment. With TIDE's help, local residents have begun to find ways to use the reserve more sustainably. TIDE Tours, TIDE's ecotourism program, has conducted tour guide certification and continues to conduct all forms of tourism training including fly fishing and kayaking. Local community members are now able to derive greater benefits from their use of the reserve for world-class fly-fishing tours; the flats of PHMR provide excellent habitat for the elusive permit. Local guides

also use the reserve for other types of tours including snorkeling, swimming, kayaking and relaxing at the cays. TIDE's success in successfully developing sustainable livelihood alternatives for the communities of the PHMR gained international recognition in 2002, when the organization was awarded the UNDP Equator Prize for outstanding community efforts in the area of poverty reduction and biodiversity conservation.

*FOREST DEPARTMENT*

68. Under a new management structure since 2004, the Forest Department has shown itself increasingly willing to address and reform its operational policies and procedures, so as to enhance conditions for collaborative and sustainable forest management in southern Belize. Most notable amongst these efforts is one already discussed in **Table 1** above, namely, its creation of the Toledo Healthy Forest Taskforce Initiative. This body, which is comprised of key local conservation agencies and representatives of southern Belize including FFI, YCT, TIDE, SATIIM and the Toledo Development Corporation as well as FD, has been tasked with the responsibility of designing innovative policies and pilot study projects that showcase and facilitate the development of locally-managed, locally-beneficial, sustainable forest management practice. In addition to this commendable effort, the FD has shown itself willing to support the efforts of local agencies to evaluate and monitor the ecological impacts of current forest licenses, particularly salvage logging post hurricane, as evidenced by the FD-sanctioned TIDE/YCT/FFI rapid ecological assessment of the CRFR in 2004. Most importantly, the FD has been the leading department of the Ministry of Natural Resources and Environment spearheading the process to reform Belize's national protected area system, in direct response to lessons learned from and recommendations arising out of the UNDP GEF MSP Community Co-Managed Park System for Belize, and its final project evaluation report. While the activities listed are still in their process rather than implementation stages, FD and MNRE have over the past couple of years exponentially enhanced the context for collaborative, locally-oriented forest management, shown themselves to be responsive to constructive criticism and ready to embark on ambitious reform processes to address their noted weaknesses, and are hence creating a favorable enabling environment for the present GEF initiative to capitalize upon.

*SUSTAINABLE DEVELOPMENT INITIATIVES*

69. Cooperation among the specific stakeholders engaged in the GSW project, designed to meet common conservation objectives, has been stimulated through such activities as joint watershed ranger patrols (TIDE-YCT-BLE), joint efforts in combating the threat of forest fires (YCT-TIDE-FD-local stakeholders and communities), the joint CRFR Rapid Ecological Assessment of 2004 (FFI, TIDE, YCT and FD, and the development of a joint watershed-level biological monitoring system led by YCT's Biodiversity Coordinator (YCT, FFI, TIDE).

70. In addition to these conservation efforts, the GSW stakeholders have instigated or are benefiting from a series of sustainable enterprise initiatives affecting the GSW. Following completion of the RDP, which outlined a vision for the development for southern Belize, based on the encouragement of sustainable enterprises, several independent studies and initiatives to substantiate the viability of alternative community enterprises have emerged. These include market research by the UK-based organic chocolate company, Green & Black's, which demonstrated that Toledo's cacao farmers could reasonably expand production and direct earnings from $250 to $450 US per acre per year, providing a substantial household income supplement in an otherwise impoverished district where annual incomes are estimated at less than $5,000 US / year. The Green & Black's 2003 business plan moreover projected a growth in Toledo's cacao production from 26 tons in 2003 and $51,000 US total benefits going to its approximately 200 farmers in 2003, to a production level of 256 tons produced by 600 farmers, providing $500,000 US in community benefits by 2009. This process of market expansion was justified by the company's own strong development since 1999, growing by 40-50% per year, which enabled it to commit £1,000,000 in advertising its products per year. This business plan and proposal, developed with FFI's input, led to the British Government's development agency, DFID, investing £257,000 in the company to assist it in

expanding cacao production within the Toledo District between 2003-6, and provided YCT with the confidence to develop a complimentary cacao outreach programme amongst its buffer communities, in partnership with Green & Black's.

71.Meanwhile, as the agricultural sector goes through a transition, tourism has boomed, developing rapidly over the past two decades based on a diverse mix of natural and cultural attractions. Today, tourism has become the single largest source of economic growth in Belize, with revenues in 2001 of $242m, representing 18% of GDP. One of every four jobs is now dependent on tourism and the sector is a significant and expanding source of foreign exchange. The development of tourism and its articulation with agricultural production and natural resources is emerging as a key development strategy (MTES 2003-2005).[32] TIDE Tours, the for-profit wing of TIDE that organizes community-based and PA-oriented tourism, is already in the space of three short years, turning a profit of approximately $20,000 US / annum from its work, providing an existing network and company that the present initiative will capitalize upon. YCT and TIDE are moreover able to benefit from expert pro bono ecotourism consultant support to develop the capacity of their PAs and buffer communities to profit from ecotourism revenue, as members of national consortium of NGOS (also including Programme for Belize, Belize Audubon Society, SATIIM and Friends of Nature) who are creating a network of PA visitation sites and packages which will be promoted in the adventure niche of the ecotourism market[33].

72.Meanwhile, beyond the sectors highlighted by the RDP, a YCT-commissioned market analysis research report produced in April 2005 by a customer needs analyst expert from the Vodafone company[34] identified a considerable vacuum and niche market for certified wood or craft products made by Mayan crafts persons, which could be capitalized upon in local and national circles alike, and which the organization is currently capitalizing upon with the help of European designers and potential investors. To substantiate these findings are the multitude of successful community-based forest enterprises in neighbouring Mexico and Guatemala[35], which have significantly enhanced socioeconomic benefits for local villages and Governments alike[36]. In sum, these and several other studies exist to substantiate the economic prospects of the alternative enterprises that the present initiative intends to build upon. By consolidating these disparate efforts and partnerships into a uniform management framework, spanning protected area and non-protected areas alike, the present project enjoys a unique opportunity to establish a replicable, sustainable and consolidated, management framework for the GSW.

GSW THREATS ANALYSIS

73.GSW's global environmental values are currently relatively well protected by various conservation initiatives that have been at work over the past decade. These have included land purchases supported by international NGOs, a private sector ecotourism initiative and a co-management agreement covering

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32 Toledo: A Study in Elusive Development

33 The Ecotourism Consulting Group, a European-US partnership with several decades of global experience in tourism and Belize in particular, is being funded by TNC, the Summit Foundation and Oak Foundation to develop a business plan and marketing strategy for the national NGO network; due to be produced and promoted end of 2005.

34 Market Research Report: Niche Markets for Woodwork Products in Belize. YCT/Vodafone, April 2005.

35 Global Forests in Transition: Trends and Issues. Presentation given by Alejandra Molina, Communities and Markets Coordinator, Forest Trends, at THFIT retreat, April 7th 2005.

36 In neighbouring Peten, Guatemala, community-managed forests like the Arbol Verde initiative have eliminated forest fires and are providing 3million quetzals to Government in revenue. Meanwhile, adjacent protected areas are costing the Government 10 million quetzales to manage, and are beset by uncontrollable forest fires. *Perspectives on Community-Based Forest Management*. Freddy Molina, ACICAFOC, at THFIT retreat, April 7th 2005.

management of its coastal and marine zone. Thus, the following description of threats, if written several years ago, would likely have appeared significantly more discouraging. GSW's relatively positive conservation outlook, even under the baseline scenario and particularly when compared with many other areas in Belize, is cause for optimism that with support from a GEF MSP, a truly successful demonstration site can be consolidated.

74. However, the above is not to say that the site lacks persistent threats or that success under a baseline scenario would be assured. As the socioeconomic survey of the GSW conducted during the PDFA process demonstrated, both the livelihoods of the project area's communities, and the regional economy as a whole, depend greatly upon access to and extraction of natural resources, which inevitably translates into pressures, and oftentimes outright threats, to their long-term integrity.[37] Some threats, though to a certain extent already ameliorated through recent efforts, do persist and present the possibility of reversal of progress to date. Other threats have seen no such progress towards their elimination.

75. Threats, underlying causes and associated ecological impacts are presented below, with the discussion organized around each specific threat. Since the site contains various 'sub-sites,' many of which face significantly different threat profiles, **Annex C** has been prepared to provide details concerning each of these areas. Please also refer to **Annex B,** which provides further cross-referenced information on threats, integrating and summarizing the relationships between impacts, threats, causes, barriers and outputs.

Industrial forestry

76. Industrial forestry is concentrated within the Columbia River Forest Reserve (CRFR). This area has been traditionally logged in the past. More recently, **logging** has been conducted by a U.S.-based company called Ecofor, which was granted a salvage concession to 28,000 acres shortly after the 2001 hurricane. Under the terms of this concession, Ecofor was only allowed to salvage trees that had been irreversibly compromised by the hurricane. Additional restrictions, such as avoiding logging on hillsides also apply. However, a number of ecological **impacts** associated with this salvage operation have been observed and documented by local partners,[38] including: (i) soil compaction and habitat fragmentation due to logging road construction, (ii) stream blockage, (iii) erosion and sediment runoff into rivers, with increased flooding risks downstream. Informal monitoring has also suggested that, in light of FD's inability to oversee Ecofor's operations, the company has not abided by the terms of its concession, for example by logging on hillsides and extracting still viable trees.

77. The CRFR is under the exclusive management of the Forest Department, but the GoB readily admits that its ability to effectively monitor this reserve is extremely limited due to **financial and personnel constraints**. These are not its only limitations: the Forest Department is also constrained by the institutional and economic legacy of forest management in Belize, forged in its early days as a colony whose sole purpose for being established was due to the precious hardwoods it contained. The forest industry remains undiversified, predicated upon extraction and lucrative personal contracts that provide minimal social or economic benefits for the country at large. The underlying objective of Belize forestry was never to develop the country over the long-term; rather, to create personal fortunes. Overcoming this **historical approach to forest management** will not only require greater investments, but also innovative ideas encouraging a diversified forest industry, supported by new policies and collaborative private-public ventures. In the meantime, the ecological integrity of CRFR, like other forest reserves in the country, will continue to suffer from the inadequate management system that governs it.

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[37] See www.yct.bz/GSW_socioeconomic_report.doc

[38] Rapid Ecological Assessment of the Columbia River Forest Reserve Past Iris. Jan Meerman, 2004 (Report commissioned by FFI, YCT, TIDE).

78.The long-term prospects of the portion of the CRFR that falls within the GSW and directly impacts it are undermined by the fact **no management plan** exists for the area.[39] This represents a significant barrier to effective management of the 148,357 acre CRFR, of which the GSW portion in question represents approximately 25-33%.[40] The most recent study of the CRFR was produced in 2004, and commissioned jointly by FFI, YCT and TIDE, who were all concerned to learn more about the ecological health of this critical reserve which directly impacts their respective protected areas. The study concluded that past management practices were endangering the CRFR's future value as an extractive forest and ecological reserve. It called for a new approach to CRFR including, *inter alia*, a management plan, criteria to incorporate the recently added CRFR section into the broader CRFR management framework, continuous monitoring of the area and active reforestation efforts.

79.Current FD management has stated that all post-Hurricane salvage permits will be reviewed and discontinued in 2005. It is unclear at present whether Ecofor will seek to replace its expiring salvage concession with a non-salvage logging concession; however, given the company's investments in creating forest roads over the past few years, they will likely be interested in doing so. Since Belize's **forestry policy** does not require short-term concessions holders either to reforest or to develop management plans for their concession area, and given that the issuing of long-term concessions is not the norm,[41] the net effect of continued logging is expected to be little different from the salvage concession logging in recent years.

80.It is estimated that ongoing industrial logging activities within CRFR are having **moderate impacts on forest biodiversity** within the CRFR (particularly on forest structure), with **low-moderate impacts on other areas within the watershed**. However, these moderate impacts, if allowed to persist, could become more significant over time as degradation of forest resources continues.

Small-scale logging

81.At the same time that the Ecofor concession has been impacting the CRFR and adjacent, forested national lands, **small scale logging** conducted on an individual basis by villagers or townsfolk from the District has also been underway, ranging from petty personal permits intended for domestic use to one-year forest licenses. Although the Forest Department views chain saw logging by petty permit as a wasteful, unsustainable forest appropriation practice, which is moreover frequently abused by permit holders who sell the wood they extract rather than use it for home consumption as they are supposed to, they also recognize that it remains by and large the only way for indigenous communities to engage in the forest industry, and secure some form of income from forest resources.[42] The Forest Department is hoping to phase out small-scale logging, which as timber felled by Iris is used up or decayed will naturally become less profitable anyway, and introduce stipulations requiring local villagers to at least equip themselves with portable sawmills before having their permit applications approved. This may well prove a solution to the under researched, but clearly problematic threat of small-scale logging, and provide an opportunity for encouraging small-scale loggers to join together in modest cooperatives, to which NGOs could provide technical assistance to enable more sustainable forest practices to be adopted

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39 These lands were formerly known as the Maya Mountain Forest Reserve but amalgamated within CRFR in 1997, and thus not included in the CRFR management plan formulated in 1994.

40 Meerman, Jan. 2004. "Rapid Ecological Assessment of the Columbia River Forest Reserve Past Iris."

41 No long (20-40 year) concessions currently exist in Toledo; however a previously suspended long-term license (discontinued in late 2001) held by Atlantic Industry Limited (AIL) for western CRFR (management blocks) is currently being reviewed with a view to amending it.

42 Report on the Toledo Healthy Forest Initiative Taskforce Retreat, April 7-8th 2005.

by small-users, while continuing to enable them to derive some income from the forest industry. That said, the phasing out of small-scale logging by these means may yet prove a politically unacceptable policy to pursue without clear support to the alternative certified, cooperative model proposed by the THFIT. In sum, the impact of unmonitored small-scale logging remains an outstanding management and conservation issue, which FD and the THFIT have jointly acknowledged needs to be addressed and replaced where possible with sustainable, community-based management alternatives. However, both FD and the THFIT still do not have a clear vision and work plan on how this should be achieved.

Encroachment

82.Although **encroachment** into the CRFR as a result of cultivation by local villagers or national development priorities is not a widespread phenomenon in the GSW area, it is a real threat affecting both the southwestern fringes of the CRFRF, and villages such as San Pedro Columbia and San Jose, and the Bladen Nature Reserve to the northeast. The former incursions are the result of communities independently expanding their cultivation areas into the CRFR as a result of land restrictions; the latter has been fueled by the local area representative from Toledo East, who in 2005 began bulldozing roads right up to the BNR's boundaries to make new land settlements for immigrant Central American laborers. Of the GSW's focal communities, all are increasingly suffering from **land shortages** created by **population growth**, regional development, and lack of alternative income-sources. Therefore, although forest fragmentation within the specific GSW zone in the CRFR due to land shortages is not presently occurring, on the basis of parallel experience it nevertheless is a very real one looming on the nearby horizon. Hence, although communities currently respect the GSCP boundaries, if the trends of land scarcity and population increase continue, compounded by poverty and underdevelopment, they are likely to covet the large stretches of 'empty' land located on their borders.

Fire

83.Although agriculture is not directly encroaching the CRFR, forest fires originating from **slash and burn agricultural practices** do threaten and impact the CRFR and GSCP, particularly in the post-hurricane Iris period. As shown in the map of 2003 fires (see Annex C, Map 2), fires originating south in Golden Stream village and north from Medina Bank village both threatened the GSCP's northwestern borders that year. Only a timely but dramatic intervention by the YCT rangers - namely, bulldozing a fire breaker between the GSCP and Golden Stream lands - prevented the fire from consuming the PPA. As such, activities on the borders of the GSCP and CRFR are still able to threaten its internal integrity.

84.Such fires caused by slash and burn agriculture are the direct result of the **lack of economic opportunities** available to Toledo's rural indigenous population. Economic returns provided by slash and burn agriculture are not sufficient to meet communities' needs, both because diminishing availability of land has meant farmers no longer leave land fallow for sufficient periods to ensure the ecological sustainability of milpa farming, and also because prices for such staples have steadily decreased over past decades. Whereas a few decades ago, Toledo's farmers could be guaranteed to sell their products as a result of organized purchase by the national agricultural marketing board, competition from regional producers such as Guatemala has meant that the purchase of many key items is no longer organized and shipped to Belize city as they once were. As farmers are left to compete on an individual basis in a small District market, they have had to increase production in order to maintain income levels. This has resulted in more land being used, land not being left fallow to regenerate, and as such, the subsequent impoverishment of tropical soils, whose productivity is then artificially – and temporarily - sustained by the introduction of chemical fertilizers; many of which have been offloaded on the local market after being banned for use in developed countries. Although agricultural methods and products which do provide decent returns while protecting or even enhancing soil quality have been highlighted as an alternative in the past few years – most notably, in the case of organic cacao which YCT is strongly and successfully promoting amongst its buffer communities – more options and effort are needed to ensure all farmers have the means and motivation to adopt less impacting agricultural methods. At present, the

cacao / agroforestry complex promoted by YCT is only benefiting 65 farmers of the buffer zone area, or approximately 20% of the farmers in these communities. Even if by these efforts YCT is successful in preserving the GSCP by working with farmers on their direct fringes, and maintaining constant vigilance of forest fires in the dry season months, without concomitant efforts to improve management and conservation of adjacent lands such as community areas or the CRFR, continued trends of unmonitored logging or small-scale agriculture could render the GSCP an island, with greatly diminished ability to realize its potential as a model conservation corridor for Belize.

Hunting

85.YCT's efforts in effectively patrolling the GSCP area have led to a marked regeneration of indicator species, particularly the white-lipped peccary that were observed in large numbers in the GSCP in early 2005. Nevertheless, as the **economic needs** which drive local farmers to hunt for wild game show no signs of diminishing – indeed rather increase as a result of the deepening economic crisis mentioned in Section C.2.1 above – it is expected that communities will show renewed efforts to defy the YCT monitoring programme. Given the size of the area concerned, monitored by only 6 rangers, and given moreover that as a result of YCT's programme these prize hunting targets are showing clear signs of regeneration, the YCT rangers might well find their positive patrolling experiences becoming more problematic in years to come.

86.In addition to hunting for consumption or subsistence, the threat of key species being killed due to new motivations and circumstances is occurring. One of the species that is not normally hunted by the Mayans but is increasingly coming into a collision course with local villagers is the jaguar. As a result of the hurricane, the jaguar's traditional prey diminished, and reports of jaguars targeting villagers' dogs, livestock and chickens became increasingly prevalent. For example, in March 2005, a villager in Golden Stream reluctantly shot a starving female jaguar, after it had paid a repeated visit to the village to feed on chickens, and had refused to be frightened away despite concerted efforts to do so. It is not clear if the regeneration of jaguar's prey is occurring sufficiently quickly to mitigate these **clashes between predators and humans**; clearly, continuous and extensive landscape level biological monitoring encompassing PAs and buffer areas alike is needed in order to effectively answer these questions. In the meantime, conservationists remain concerned that local villagers might become motivated by economic need and the relatively low fines they must pay for killing jaguars to begin – as a Mennonite farmer in northern Belize has been doing over the past year – to target the animals for sale of their pelt, which receives 10 times the **inadequate fines** they must pay the Government for killing it. In sum, economic need aggravated by post-Hurricane ecological trends are aggravating the human threat to critical wildlife in the GSW; a pattern which will only be ameliorated as a result of improved research and monitoring, coupled with comprehensive programmes to address the livelihood needs of the communities concerned.

Marine resource exploitation

87.Prior to being declared a MPA, the PHMR's critical marine resources were subjected to continuous and unmonitored **exploitation**. Local fishermen practiced overfishing to only a limited extent; most threatening were unscrupulous Honduran and Guatemalan fishermen, who actively exploited the virtual absence of marine patrols by Belizean authorities to extract marine resources, in defiance of the closed fishing seasons that exist in Belize for many shellfish. After successfully lobbying for the area to be declared a marine reserve in 2000, at which point they became the co-managing authority for the area, TIDE was able to successfully fill the management vacuum left by the Fisheries Department. Whereas in the past, the Fisheries Department had been unable to conduct more than a weekly patrol of the area, TIDE's daily and multiple patrols coordinated from its marine ranger station at Abalone Caye, in the heart of the PHMR, have over the past 5 years achieved a dramatic reduction in unsustainable marine resource exploitation practices. That said, **new legislation** passed in 2005 by the Government of Belize facilitating the issuance of fishing licenses to non-Belizeans, including the Hondurans and Guatemalans TIDE worked so hard to evict from Belizean waters, has considerable potential to undermine the past five years

of PHMR conservation achievement. In order to counter this looming threat, concerted policy advocacy efforts substantiated by environmental monitoring data are urgently needed, to ensure that marine conservation efforts are mainstreamed across relevant Government ministries and policies. However, as long as TIDE stands alone in this effort, without strong NGO coalitions and partners to support them, it will be difficult for the organization alone to effectively address the effects of the Central American fishermen's re-entry into Belizean waters.

GSW BASELINE SCENARIO

88. Viewed collectively, the broad categories of threats identified in the GSW create substantial pressure upon its ecosystems and biodiversity integrity. Existing efforts to develop coordinated management of the GSW and establish it as a demonstration site of integrated protected areas and watershed management / conservation corridor in practice will not be achievable under the baseline scenario.

89. In the absence of any new intervention, existing strands of collaborative conservation in the GSW are unlikely to be consolidated into an overarching and sustainable management system for the watershed. Without a strong inter-stakeholder body to counter regional trends towards continued unmonitored and unregulated development, unique opportunities that exist in the GSW context to demonstrate the conservation potential of coordinated management among adjacent, diverse PAs, and to translate the MBC and MMMC corridor concepts into tangible, replicable models of conservation action, will remain unrealized. Conservation programmes in the GSW will continue to be defined in isolation from one another, while the integrated landscape management approach required to maintain the integrity of GSW ecosystems would fail to materialize. It is entirely possible that without the GEF-supported efforts to mainstream PPAs into Belize's NPAS, over the medium to long-term, PAMOs such as YCT and TIDE would find sustaining their respective PPAs so financially prohibitive (due to the combined high costs of both land taxes and management, ever more burdensome as encroachments from the buffer zones increase) that they might eventually be forced to either sell them off, or stand by helplessly and watch their PPAs be invaded and fragment. As such, there is a very real threat that without concerted support to ensure that the incipient GSW model of collaborative conservation management is consolidated, the area's integrated ecosystems and conservation corridors could be fatally compromised.

### *C-2.3 Project structure*

90. Based on the analysis of the threats and causes that are leading to a loss of globally significant biodiversity within the project area, *BD-1, Catalyzing sustainability of the protected area system*, has been selected as the most effective framework for GEF support to improve the situation.

91. The project **goal** is for Belize's system of protected area management to function as an integrated, coordinated and cost-effective tool for biodiversity conservation and sustainable use. Its **objective** is for the Golden Stream Watershed (GSW) to function as a replicable model of how multiple protected areas working within an ecologically interconnected and interdependent area can jointly achieve conservation and sustainable use objectives, thereby catalyzing the sustainability of Belize's national protected area system.

92. The project envisages four **outcomes**, which are described below.

**OUTCOME 1: PROTECTED AREA MANAGEMENT AUTHORITIES, WITH THE SUPPORT AND PARTICIPATION OF BUFFER AREA STAKEHOLDERS, HAVE JOINTLY DEVELOPED AND ARE COLLABORATING TO IMPLEMENT A STANDARDIZED AND COMPLEMENTARY SET OF MANAGEMENT PLANS FOR THE GSW'S FOUR PROTECTED AREAS.(GEF -$363,200; CO-FINANCING - $677,006)**

93. The fragmentation of Belize's NPAS has been described above as a key barrier limiting the system's sustainability.[43] It has important impacts on both the cost effectiveness and the conservation effectiveness of existing PAs nationwide. Fortunately, baseline efforts to address this barrier have already begun both nationwide and within the GSW context.[44]

94. This outcome will respond to the above barrier by ensuring that management of the individual PAs within the watershed (CRFR, GSCP, Block 127 and PHMR) are reoriented to achieve a common, integrated, watershed-level and corridor-level management system able to effectively conserve biodiversity on a landscape level within the GSW, while simultaneously functioning as a demonstration area to generate national learning and replication of the collaborative lessons learned. Among other advantages, the integrated GSW approach is expected to lead to economies of scale and other cost savings through information sharing, integrated and inter-comparable biodiversity and environmental monitoring programmes, and coordinated programmes for compliance monitoring. The GSW PAs will moreover be the first cluster of protected areas in the country to consciously and comprehensively adopt a new national template guiding the design of protected area management plans,[45] which ensures that biological and socioeconomic interests and concerns are duly addressed and incorporated in the management documents. Global environmental benefits will be accrued through effective preservation of the GSW's core conservation areas, through improved management and rehabilitation of multiple-use areas located within the implicated PAs, and through the active encouragement of sustainable economic alternatives in the buffer zones and productive landscape areas of the watershed's non-PA zones.

95. As a result of this component, core areas will be allowed to recover from the effects of untenable resource use practices, while resource use in buffer zones will take place according to collectively determined and ecologically sustainable management guidelines. Habitat loss will be reduced as local communities and stakeholders – whose input and participation will be critical to the PA planning process – increasingly come to recognize the importance and fragility of these habitats, and consciously adopt measures to reduce their impacts on them. This process will be greatly facilitated by the several years of community outreach, collaboration and education experience with the key buffer communities that YCT brings to the process, which provide clear and existing avenues for consultation between recognized leaders and community groups. Wildlife populations including key indicator species such as the white-lipped peccary, which is unable to persist in fragmented landscapes and plays a key role in Mesoamerican forest ecology, will be given the opportunity to recover as a result of the integrated PA, landscape management and conservation corridor approach. Ecosystem health will be improved as resource degradation resulting from unmonitored logging, unregulated hunting, and unfettered agricultural expansion is reduced through coordinated management and support for the overriding GSW management objectives. Meanwhile, the NPAS and non-involved PAMO agencies will benefit from having the opportunity to learn from and replicate the experiences provided by the model GSW area, working at an integrated, landscape and ecosystem level, as opposed to operating inefficiently within arbitrary PA boundaries, and thereby failing to meet their conservation objectives.

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[43] See paras. 27-30.

[44] See paras. 31-33 and para. 69.

[45] To be finalized July-August 2005.

96. The outcome will be achieved through completion of the following outputs:

**Output 1.1 An agreed watershed-level strategy for PAs and timetable among PA management authorities concerning individual PA management plan development, together with co-ordination in implementation of latter**

97. GEF financing will support meetings among the respective GSW PA managers, where standardized formats for their respective PA management plans will be agreed upon, thereby enabling ready comparison and monitoring of management components. Management plans will follow the MNRE's standardized guidelines, which according to the available draft template will cover the following areas, amongst others:

- Management objectives;
- PA biological importance, eco regions;
- Threats to its integrity, and strategies to address them;
- PA zoning and demarcation;
- Biodiversity and environmental monitoring;
- Evaluation and monitoring indicators;
- Implementation schedule;
- Socio-economic context and local stakeholder involvement;
- Long-term financing plan (linked to output 2.2 – business plan component of the overall GSW management plan - below).

98. The process of drafting the management plans will be coordinated at a macro level by the PSC, on which all the protected area management entities of the GSW will sit. Supporting the PSC and Project Coordinator in this task will be an outside consultant, expert in the production of management plans for protected areas. This person, selected by the PSC, will ensure that standardized activities and planning approaches are utilized to produce each of the respective plans outlined in Outputs 1.3-5. The need for consultant input is expected to be greater in Block 127 and CRFR than in GSCP where groundwork towards the process has already been laid; as such, their time dedicated to the development of each of these plans is likely to approximate a ratio of 2:2:1 (127:CRFR:GSCP). The consultant will also guide the stakeholder consultations and socioeconomic research in the buffer community areas, which will primarily be conducted by local staff. In addition to this consultant, the project will hire a national biodiversity expert – ideally one involved in the recently completed NPAPSP process – to collect the considerable baseline biodiversity data needed for the respective PAs' management plans.

99. Under the guidance of the PSC and the management planning / biodiversity research consultants, the respective PA managers' inter-institutional technical staff, who will meet regularly during the management planning process, will ensure that specificities such as methodology for collecting socioeconomic data, conducting community consultations and conflict resolution efforts, and biodiversity monitoring information are understood and streamlined across the organizations. The PSC will also ensure that the broader stakeholder body, the GSWAC (see Output 2 below), is kept fully informed of the PA management planning efforts, to ensure their input is secured, and to maintain close synergies between the PA and GSW management planning processes. Responsibility for overseeing the overall process on a daily basis will lie with the Project Manager, who with close support from the Biodiversity Coordinator, will ensure that planning momentum is sustained and that any concerns of the respective PA agencies are immediately and effectively addressed.

**Output 1.2 GSW's PAMO staff's capacity for protected area management design and implementation strengthened through theoretical and participatory training.**

100. In addition to designing the overall process and drafting the management plans, the protected area planning consultant will be contracted to provide training in relevant management planning and research techniques (including zoning of sites, conflict resolution with local stakeholders, strategies to abate threats and ranking techniques), that will ensure local capacity exists to sustain the process following the end of the consultancy. Meanwhile, the biodiversity consultant will ensure that local field rangers from the respective organizations are trained in data collection techniques, and are moreover able to sustain and interpret the watershed-level biodiversity monitoring data system by the conclusion of his or her consultancy. In addition to these two consultants, the Project Manager and Biodiversity Coordinator, whose TORs will ensure they are experienced in PA management and monitoring practices, will provide regular refresher training to the PAMO staff teams during the course of the project implementation process. Funds have also been budgeted to produce ranger manuals and community consultation manuals to further ensure local staff capacity to maintain given processes.

**Output 1.3 GSCP management plan: designed and implemented**

101. GEF financing will supplement funds provided by PACT to produce the GEF management plan, including updated or supplemental baseline biodiversity research of the GSCP to augment data that already exists, and support to hire a consultant to draft the plan. Co-financing will assist in mapping the GSCP land use zones, and will enable socioeconomic research in the community buffer areas to be conducted by PAMO staff, with technical support and guidance provided by GEF project staff. Acquisition of ranger gear and communications equipment, and establishment of a shared ranger monitoring station in the lower GSW through GEF support will assist in ensuring effective implementation of the plan; supported by co-financed institutional running costs managed by YCT.

**Output 1.4 Block 127 management plan: designed and implemented**

102. GEF financing will enable the biodiversity consultant expert to collect baseline data of Block 127, to determine the biodiversity content and appropriate zones of Block 127. It will also enable TIDE field staff to benefit from the expertise of the management planning consultant who will guide their staff through the preparation of the PPA's management plan, in close coordination with the neighbouring PAs and local communities. As with the GSCP, Block 127's management zones, once determined, will be comprehensively mapped. The latter will be made possible with co-financed support from TIDE, which will meet costs of ranger monitoring in Block 127 and transport to the area. GEF support will ensure standardization of monitoring practices between GSW's field ranger teams, in terms of gear, communications equipment and establishment of a shared ranger monitoring station in the lower GSW for use by TIDE, YCT and BLE rangers.[46]

**Output 1.5 CRFR (ex-MMFR) management plan: designed and implement**ed

103. GEF financing will enable supplemental baseline research to be conducted by the short-term biodiversity consultant in the CRFR, to enhance YCT/FFI/TIDE's 2004 REA survey of the area, and to determine the ecological composition and appropriate management zones of this portion of the CRFR. GEF support will also enable input by the project's management planning expert, who will guide the design of a compatible plan for the PA, which will take into account the suitable land use practices of this productive protected area. As with the other terrestrial PAs, zones will be mapped with GEF support. The GEF intervention will also enable coordinated implementation of the plan with neighbouring PAs, a process that will be facilitated by the establishment of harmonized data and harmonized M&E indicators.

46 The management planning process will determine the best locale for this station; either in the lower GSCP, TIDE's 127, or conceivably, BLE's Rosewood landing (a few acres of land held by BLE located on the north side of the Golden Stream, between GSCP and 127).

Implementation of these processes will be made possible by a GEF-supported field ranger team for the CRFR, acquisition of ranger gear and communications equipment, and a shared ranger monitoring station at La Sierra, which will be rehabilitated as a result of the GEF intervention.[47] The strengthened CRFR ranger team will enable FD to more effectively monitor and control not only biodiversity trends in the reserve, but the impacts, incursions and activities of local communities and loggers in the area, which in the present state of weak and ineffectual management, go largely unchecked. Co-financing support from the Forest Department will help meet these costs, particularly with regards to staff time, resources and technical expertise.

**Output 1.6 PHMR management plan implemented in coordination with terrestrial PAs**

104. GEF financing will enable implementation of the PHMR management plan to be integrated and made compatible with the newly drafted terrestrial management plans of the broader GSW area. The biodiversity coordinator will lead efforts to compare and reconcile monitoring data yielded from the terrestrial system with aquatic research findings produced by TIDE staff, to evaluate impact of the coordinated management approach over time. GEF costs in this output will be limited to meetings of the technical protected area management staff to ensure that management streamlining takes place. All other costs met by TIDE co-financing contribution.

**Output 1.7 Coordinated PA management at the watershed level – including inter-PA biodiversity monitoring system – established and sustained**

105. Under this output, coordinated management of the interconnected PA system will be established and maintained through meetings of the technical staff, and the PSC, through the establishment of harmonized monitoring and evaluation indicators to be overseen by the respective PA managers and through the introduction of standardized equipment, communication and monitoring practices amongst the respective PA ranger teams. Ranger training and monthly head ranger meetings for patrol scheduling to enhance coordinated management will be supported by both GEF and co-financed sources. The existing biodiversity monitoring system encompassing most of the GSCP and portions of TIDE's 127 will be extended throughout all the GSW's PAs. This data will be supplemented by feedback secured from regular community meetings to be organized by the PA managing entities, to determine whether the new management regimes are proving harmonious with the broader socioeconomic context. Data from each PA will be collated on a bimonthly basis in a centralized database to consolidate the conservation corridor effort, and ascertain whether interconnected PA management is indeed encouraging enhanced GSW biodiversity health.

47 Management costs for the centre are likely to be met with financed support provided by the Bladen Management Consortium, since BMC is interested in utilizing this centre – which is near the border with BNR – for their own ranger patrols. As a nature reserve, no structures can be built in BNR, so this centre is perfectly located for BNR's monitoring purposes. Funds from Conservation International are anticipated to support this activity; at the time of proposal submission, it was not however possible to definitively include these as co-financed costs. Clearly, a shared ranger-monitoring centre between GSW-CRFR and BNR further enhances prospects for project replicability.

**OUTCOME 2: PROTECTED AREA MANAGEMENT AUTHORITIES, LOCAL GOVERNMENT BODIES, PRIVATE SECTOR LANDHOLDERS AND LOCAL COMMUNITIES HAVE JOINTLY DEVELOPED A STRATEGY FOR SUSTAINABLE DEVELOPMENT OF THE GSW LANDSCAPE THAT STRENGTHENS THE FINANCIAL SUSTAINABILITY OF THE PROTECTED AREA SYSTEM AND PROVIDES WIDESPREAD BENEFITS TO THE COMMUNITIES AT LARGE, AND ARE CO-OPERATING TO SUSTAIN ITS IMPLEMENTATION OVER THE LONG-TERM (GEF - $268,130; CO-FINANCING - $238,300)**

106. As described in detail above,[48] biodiversity within Belize's many PAs is becoming increasingly isolated due to the transformation of historically connecting landscapes. This is taking place within a context of indifference and even opposition on the part of surrounding communities. The historic roots of this process and current activities designed to address the barrier –both nationally and within the GSW context –have also been described.[49]

107. The GSW offers a compelling demonstration site at which to address these challenges. It contains a nationally representative mosaic of landholdings, including two private protected areas, a national forest reserve and a marine reserve, private lands and a patchwork of legally and non-legally held communal lands, creating a complexity of actors and perspectives with which most PAMOs would be familiar. A successful demonstration at GSW would convince PAMOs nationwide that diverting a portion of their limited energies and resources into collective efforts that focus beyond their protected area boundaries, and more effectively engage local communities, would be a cost effective course of action to pursue.

108. GSW has added advantage over many other PA landscape complexes, in that the foundations for collective action and sustainable land use planning efforts already exist. TIDE and YCT are acutely aware that the limited direct financial benefits generated by PAs to secure buffer communities' support and PAMOs' institutional longevity represent key barriers to effective biodiversity conservation, and have thus attempted to create innovative solutions by which to overcome them. They have to date achieved significant success in initiating sustained, alternative development ventures in the realms of ecotourism, agroforestry and forestry management, both within, between and beyond their respective PA boundaries. GSW is therefore a highly representative area, which also has great potential to successfully consolidate existing processes, and provide a replicable model of successful integrated management to galvanize the sustainability of the NPAS nationwide.

109. While Outcome 1 will help to ensure that the four protected area management authorities coordinate with one another at the level of management planning and implementation, and engage with local communities to ensure their support for the plans, Outcome 2 will ensure that broader, collaborative development strategies are agreed upon among the watershed's private, community and other stakeholders. Such strategies are needed to balance conservation priorities with sustainable use goals. This will require building capacity to develop and sustain integrated, long-term planning, while consolidating and extending ongoing or new sustainable alternative enterprises.

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[48] See discussion of barrier B-2, paragraphs 34-44

[49] Baseline sustainable development efforts are highlighted in paras. 69-72.

110. In order to ensure that such opportunities are identified, capitalized upon and stem from a bedrock of comprehensive local participation, a key stakeholder forum will be established, provisionally known as the Golden Stream Watershed Advisory Committee (GSWAC). In addition to the protected areas managers of the GSW (FFI, YCT, TIDE and FD) whose participation will ensure direct synergies and compatible activities are maintained between the management of the GSW's PAs and non PA areas, this body will include community, private sector and local government agency representatives from the GSW. The Committee, which will have an advisory role, will meet every trimester, and will build upon existing partnerships between GSW private, local governance and community representatives (e.g. with BLE to pursue shared monitoring of the GSW; with buffer communities and their leaders to develop increased environmental awareness and alternative development practices in the area). The GSWAC will function as a democratic forum where stakeholder input will be elicited and a shared development vision for the GSW can be created, which complements and enforces the management plans and conservation efforts of the area's PAMO agencies. The GSWAC will also build upon an initiative launched by YCT in 2005 - bimonthly community forums, where issues affecting the area and nation as a whole are openly discussed amongst key village leaders – which has met with considerable success in garnering free exchange of ideas and participation between local communities. [50]

111. Among other responsibilities, the Committee will guide the mapping and zoning of the GSW area into appropriate productive sector zones (e.g. for agroforestry, ecotourism or carpentry / woodwork product development). The GSWAC will also inform and guide the development of investment strategies for the overall watershed. A modest portion of funds will be deployed as strategic investments in viable enterprises identified for in the business plan, whose expansion and consolidation will be further enabled by complimentary marketing activities designed to catalyze and leverage additional private sector investment and support. The PSC, working in partnership with the GSWAC, will determine criteria to determine what type of enterprises to support, which entities should receive this support, and how it should be disbursed (e.g. in micro credit loans or grants). Such criteria will be drafted to ensure compatibility with the GSW management plan and individual protected area plans, as well as marketing strategies, to ensure that conservation and development objectives remain harmonious, and to maximize prospects of such initiatives securing additional investors support[51].

112. Enterprises receiving investments from the GEF mechanisms will need to have a demonstrable capacity to address and reduce threats to the core conservation areas emanating from the buffer areas and sustainable use areas of the PAs where they will largely be applied. By way example, funds could be invested in certifying long-term, family owned timber concessions in the GSW buffer area, to reduce the threat of unregulated logging practices on the borders of GSCP, and demonstrate the opportunities for increasing revenue and sustainability of the industry through longer-term management and international branding. Small-scale loggers operating in the buffer areas and Columbia River Forest Reserve PA could

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50 Topics covered so far have included the Belizean political crisis of early 2005, and indigenous community land tenure.

51 Potential partners / investors for each likely sector to be highlighted by the business plan have already been identified. In the case of agroforestry, Green & Black's / Cadbury's chocolate company, Rainforest Alliance, the British Government-DFID and the Community-Initiated Agricultural Rural Development project are all key actors and complimentary investors whose financial support will be solicited during the process of enterprise consolidation. In the case of ecotourism, TIDE Tours, Belize Lodge & Excursions, Belize Tourism Industry Association (BTIA) TNC-EcoEnterprises, the Oak, Summit and Peretti Foundations have all provided or have indicated interest in investing to develop tourism in Belize. SIF-Ministry of Economic Development and British Government-DFID have shown support to the least consolidated but potential sector – timber industries, either carpentry or certified product production. A potential business partnership between YCT and Programme for Belize to develop certified products for the export and tourism sectors from PfB's FSC certified wood, in YCT's woodwork shop, is also currently being discussed.

be retrained to work in such certified operations or the manufacturing sector, with a currently expanding YCT woodwork shop providing a potential site where value-added forest products marketed with indigenous / rainforest appeal might be produced, linked into a certified chain of command process with either GSW certified timber operations, or existing ones at a national level[52]. Perhaps even more compelling than certifying timber production are the considerable opportunities for development of NTFP industries in Toledo, as demonstrated by parallel experiences across the borders in Guatemala and Mexico. Cacao is already a successful NTFP with a secure international market which is being developed in buffer areas and sustainable use areas of PAs alike. Other products such as xate, breadnut, cashew, allspice, or bay leaf palms, if proven to be viable in the GSW context, could be added to the existing agroforestry complex to strengthen local livelihoods further, and thereby reduce stakeholders' need to engage in logging or forest clearing to grow traditional agricultural products.

113. Preventing forest fragmentation would moreover support Toledo's growing ecotourism industry by protecting the ecological basis upon which its future directly depends. The PSC/GSWAC could choose to invest in the development of ecotourism attractions and activities in the GSW buffer area and PAs alike, to thereby provide further economic opportunities to local communities, and increased incentives to protect the natural habitat. TIDE Tours, TIDE's for-profit associated company, which in a short period of time is already turning over a healthy profit (indicating the untapped potential of the tourism sector in Toledo) is poised to act as southern coordinating agency for an emerging NGO tourism network which YCT and TIDE are both members of, with Programme for Belize identified as its coordinating counterpart in the north. By creating attractive packages which showcase the diverse attractions of protected areas and their surrounding lands, PAMOs and communities alike can benefit from this growing industry. Given that the GSW contains TIDE and YCT's private lands, stretching across different ecosystems and habitats from the foothills to the tall mangroves downstream and the marine reserve above, has an established ecotourism resort (BLE) with accommodation on the roadside and midway downstream, encompasses one of the two most visited archaeological sites in southern Belize (Nim Li Punit in Indian Creek), has culturally-rich Mayan communities, as well as multiple opportunities for caving, hiking and kayaking / canoeing along the river, prospects of collective benefits accruing from a consolidated GSW ecotourism strategy are high. In sum, as opportunities for income-generation through all the sustainable alternatives listed above are enhanced through coordinated effort, local stakeholders' motivations to engage in the usually less lucrative, traditional income-generating activities will consequently be reduced, thereby reducing overall threats to GSW's biological integrity.

114. By strengthening the GSW's biodiversity-friendly productivity, the area will moreover provide a much-needed national example of how protected area management can yield significant and comprehensive livelihood benefits enhancing both local livelihoods and the PAMO agencies' institutional sustainability alike. As noted above, these investment initiatives will be designed to be compatible with the GSW's respective PAs' management plans, and address key threats to ensure that conservation and development become mutually reinforcing. Given that the Committee will address different interest areas from conservation to development, and will produce strategic plans and discrete investments designed to address them, Committee members are expected to have strong motivations to participate. To strengthen their natural disposition to see sustainable development processes grow and become consolidated in the GSW, GSWAC members will be supported by training and focus exchanges, to ensure that their capacity to meaningfully engage in the process is built. Again, by bridging the private / NGO / government / community sectors to develop mutually beneficial models of sustainable management of resources both within and beyond the PA zones, to thereby produce a practical model of how protected areas management can provide livelihood and developmental benefits to the direct stakeholders and broader

[52] Such as Programme for Belize's, discussed in the previous footnote.

nation involved, the project will directly enhance the goals of the NPAPSP reform process and governmental policies for Toledo on a whole.

115. Specific Outputs under Outcome 2 are as follows:

**Output 2.1 Golden Stream Watershed management advisory body created and sustained**

116. GEF and co-financing support will enable meetings of this group to be held on a trimester basis, for materials to be secured to facilitate group discussions and training on pertinent management / development topics as per the YCT community forums mentioned above, and for advisory body members to actively participate in the elaboration of the watershed management and business plans discussed below.

**Output 2.2 A watershed-level management plan to direct and enhance conservation and sustainable management of the GSW over the long-term**

117. To deliver this output, consultants with expertise in land management planning and business development will be hired to work with the GSWAC to draft a plan for the GSW that encapsulates and reconciles local stakeholders' conservation and development objectives. Production of the plan, which will reconcile the conservation objectives of the GSW's protected areas with the developmental aspirations of the area's stakeholders, and will directly include the PA plans presented as outputs 1.3-5, will involve extensive consultations, focus training sessions with the GSWAC members, biodiversity research in the GSW, GIS mapping and land use assessments to determine best management practices for each management zone. The planning and business experts will spend an extensive period working *in situ* alongside GSW stakeholders, supported closely by YCT staff and co-financed support to not only develop the business plan, but strengthen local business acumen to ensure its effective implementation. The plan will incorporate existing tourism strategies and management recommendations developed by GEF and non-GEF financing, to establish a financially viable and consensual development strategy for the watershed. The business component of the overall watershed management plan will represent a marketable product which the GSWAC and PSC can utilize in attracting investor interest to the area.

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**Output 2.3 Local stakeholders' capacity to capitalize on secured and coordinated GSW investments increased, enabling sustainable development and consolidated stakeholder support for the integrated watershed management approach.**

118. Co-financing will ensure that YCT/FFI's and TIDE's respective, ongoing efforts to strengthen local stakeholder capacity to capitalize upon alternative development / sustainable resource use opportunities continue and are consolidated through the support and guidance provided by the watershed management plans produced in 2.2. Specifically, funds will be invested into the following areas and activities:

- *Ecotourism*; providing technical support for communities to plan ecotourism initiatives; provide scholarships for community members to become certified as ecotourism guides, providing investments to help develop PAMO / community ecotourism ventures.
- *Agroforestry and NTFPs*; training to GSW buffer communities in agroforestry and NTFP alternatives such as cacao, flowers, vegetables and xate, small investments in such industries;
- *Value-added timber products:* provide planning, training and marketing assistance for small community value-added enterprises such as carpentry (men) and crafts (women); provide resources for these ventures from sustainable / multiple use areas of the PAs.
- *Additional:* organize marketing materials and investor forums to facilitate development of these and other alternative industries.

119. Through these activities, local capacity for successful application of the GSW management plan, including its business component, will be substantially consolidated. Under this output, technical support

will be provided to build local capacity in the focal areas, and small investments given to alternative community-based groups / initiatives managed by communities and PAMOs (e.g. the Indian Creek Gardeners' Group, TIDE Tours or the YCT-managed community woodwork shop). These investments will be in the form of both micro-credit loans (as YCT is already managing with the Indian Creek Gardeners' Group) and direct grants (such as are envisaged for the community ecotourism infrastructure developments or the woodwork shop). Resource users will be targeted using tried and tested strategies developed and identified by YCT and TIDE over their years of accumulated experience managing community development projects in the District. Specifically, these entail working through existing leadership structures, targeting underrepresented groups such as youth and women, and working with existing community organizations with a proven track record of experience in the given sector.

120. GEF and co-finance support will enable the GSWAC and PSC to target the local, national and international business sector through meetings, media events, publicity materials and an investor conference to market the GSW business plan produced in 2.2, and leverage investor interest and entry to the alternative enterprise sectors identified, such as those described above. These activities will be strengthened where appropriate by national and regional field trips to further showcase the opportunities that are not being capitalized upon in Belize. For example, the THFI Taskforce took key members of the government, TDC, private sector, communities and NGOs on a regional trip to visit the many successful examples of diversified community-based forest enterprises that exist in neighbouring Guatemala in July 2005, and Mexico at a later date, for which the Government, SATIIM and FFI/YCT have already pledged funding. Through these diverse strategies designed to stimulate the investment climate, it is anticipated that potential investors will be alerted and become engaged in promoting the many opportunities that exist for successful business in the GSW context. The participation of the TDC in this process, through their membership of the GSWAC, will moreover ensure that awareness of the GSW's successful businesses ventures will be disseminated district-wide. In sum co-financed and GEF enabled activities will play a critical joint role in ensuring the financial sustainability of the overall GSW process.

**OUTCOME 3: FISCAL AND LEGISLATIVE ENVIRONMENTS AFFECTING PRIVATE PROTECTED AREAS HAVE BEEN CLARIFIED AND IMPROVED AS A RESULT OF COLLABORATIVE NPAPSP / BAPPA / GSW EFFORTS, PROVIDING MECHANISMS TO EFFECTIVELY INTEGRATE PRIVATE PROTECTED AREAS AND PRIVATE LANDS WITHIN LANDSCAPE LEVEL MANAGEMENT SYSTEMS (GEF - $46,000; CO-FINANCING - $74,500)**

121. The potentially critical role of PPAs in helping to ensure NPAS sustainability through financial support and by enhancing connectivity has been described above.[53] However, significant barriers have also been identified which are serving to limit this potential;[54] the present outcome is designed to address these barriers.

122. Given the critical role played by private protected areas in creating physical conservation corridors in the GSW between key national terrestrial and marine protected areas, and also given that two of the three key national PAMO agencies involved in the project (TIDE and YCT) manage private protected areas and are key and active members of BAPPA,[55] the proposed GSW project intends to make a particular

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[53] See paras. 32 and 33.

[54] See paras. 45-47.

[55] The TIDE Executive Director is the BAPPA Co-Chairman; the YCT Programme Coordinator is also a member and has been appointed to represent BAPPA at an international convention of private protected area managers in Caracas, Venezuela, sponsored by TNC, 23rd May 2005.

contribution to clarifying and improving the role and contribution of PPAs in the NPA system. As discussed extensively in previous sections, and particularly in section C.2.1, the lack of clarity regarding the classification and integration of PPAs in the NPAS has undermined the stability of PPAs and the NPAS combined. Initial recommendations emerging from the NPAS process have already confirmed the need to comprehensively integrate PPAs within the NPAS system. This favorable policy climate is complemented by the growing mobilization and organization of PPA agencies through BAPPA, making this a particularly auspicious moment for intervening to strengthen the enabling environment within which PPAs are managed. As noted above, integration of PPAs within the reformed NPAS, and endorsement of criteria by which to recognize them are not only critical means of ensuring that financial sustainability and management clarity are built into the NPAs; they are moreover key objectives of the ongoing NPAPSP process, which this project intends to support and complement.

123. The primary policy focus of this initiative will be upon securing changes in the legislative framework pertaining to PPAs. Nevertheless, given the involvement of the key GSW PAMO agencies in the THFIT - an initiative designed to provide policy responses and alternative pilot examples demonstrating the economic and ecological viability of sustainable forest management alternatives - the creation of practical, sustainable enterprises in this sector that will be facilitated in that Outcome 2 will serve to educate key decision makers about the many revenue-generating possibilities of alternative forest management. As a result, policy reforms pertaining to commercial forestry will also be encouraged by the GEF initiative.

124. Specific outputs that will be secured in order to meet the objectives of Outcome 3 are:

**Output 3.1 Key policy makers and general public's awareness of critical role played by private protected areas in enhancing protected areas management and integrated ecosystem conservation in Belize enhanced**

125. As a network of NGOs or private entities with no formal office or staff to ensure continuity of activities, BAPPA suffers from institutional limitations that could well prevent it from capitalizing upon the opportune political juncture in which Belize finds itself regarding recognition of PPAs. As such, the additional concerted support that the GSW project staff, supported by the PSC and TIDE/YCT, will be able to provide BAPPA will be both critical and timely in meeting their joint objectives. Specifically, this support will be manifested through institutional pressure and follow up, technical assistance in drafting of the criteria, staff time for lobbying key ministries and sustaining the process through to its conclusion while ensuring thorough liaison with BAPPA members. As a result of the coordinated GSW/BAPPA strategy, GSW will moreover be able to function as a showcase national model of how the integration of PPAs within the NPAS can enhance the protection of other PAs, integrated ecosystems and biodiversity corridors alike**.**

126. GEF funding will enable the key PAMO agencies within the GSW to work closely with BAPPA in preparing information tools that demonstrate the practical value of integrating PPAs within the revised NPAS. Materials translating scientific and technical information into accessible layman's language and formats, tailored specifically towards educating critical decision-makers and government agencies (e.g. Lands, National Development, Natural Resources, Agriculture, Finance, PM's office), will be produced. Such materials, be they documents, powerpoint presentations or brochures, will be delivered to key policy-makers (likely Ministers) through a concerted and sensitive lobbying strategy to be determined in consultation with the PSC and BAPPA. At the same time, project staff and BAPPA will design materials (potentially handouts in national newspapers) to educate the national public about PPAs, while GSW staff and PAMO agencies will include the topic within its regular community outreach and education efforts in the direct project area.

**Output 3.2 PPAs officially recognized by and incorporated within revised legislative framework governing Belize's NPAS**

**127.** Once Output 3.1 has helped create a receptive audience amongst which to promote the legal recognition of PPAs within the reformed NPAS system – groundwork for which has already been laid by BAPPA and initial recommendations of the NPAPSP process – project staff will focus upon providing much-needed assistance to BAPPA to clarify and consolidate draft criteria for PPA recognition, and help lobby to ensure their adoption.

**128.** Whilst the GSW project cannot and should not be in control of the legislative reform process, which is being directed by the NPAPSP board and their consultants, project staff and involved agencies can ensure through proactive but sensitive lobbying efforts that their recommendations are heard and recognized by those responsible for overseeing the consultants drafting the legislative document. Since the Forest Department represents the MNRE on the NPAPSP Board and the GSW PSC alike, a direct linkage between the two forums is already guaranteed to facilitate this effort. Again, the project will work closely with BAPPA as well as NPAPSP Board and staff members to ensure that their policy recommendations are adopted.

**Output 3.3 GSW develops and implements the first legal national model of conservation easements between property owners, TIDE's (for Block 127) and YCT (for their GSCP lands), raising awareness about the mechanism in the process, and further strengthening the legislative context for private / protected area partnerships to enhance effective management of corridors and PA buffer zones.**

129. In addition to ensuring that PPAs become officially recognized and incorporated within Belize's NPAS, the project intends to work towards an additional measure to enhance the potential both PPAs and also regular private landowners, to commit towards managing their properties in a manner which strengthens the integrity of protected areas and conservation corridors alike. This mechanism is namely a conservation easement, a standard conservation tool utilized in the U.S., for which there is unfortunately no parallel example in Belizean law.

130. BAPPA has, with the support of TNC, been attempting for some time to reform the law so as to allow for conservation easements in Belize, and to establish a model of conservation easements in practice in the country. Working in partnership with TNC and BAPPA, the PSC, project staff, TIDE and YCT in particular will collaborate to create the first model of a conservation easement in Belize through additional lobbying efforts and with the support of TNC's legal advisors. The projected conservation easement between YCT's GSCP lands and TIDE's Block 127 will provide further guarantee of the conservation corridor's longevity far beyond the conclusion of the GEF project. In case either YCT or TIDE face financial challenges or new board members who might encourage a weakening of current conservation objectives for their respective PPAs in the future, the conservation easements will provide management guarantees to prohibit them from slipping into unsustainable use practices. Rights under a conservation easement agreement would provide the other managing entity with the legal authority to intervene to compel its partner to comply with set standards, or in a drastic scenario, to assume management control for the PPA itself. As such, conservation easements provide long-term and legal guarantees that the PPAs will continue to underpin the GSW management unit, while providing fiscal incentives for private landowners to create conservation easements over their lands with the PPA managers or other entities as well. Once established, the YCT-TIDE conservation easement partnership will also seek to include the BLE lands within this mechanism, to further strengthen the sustainability of the GSW management system.

**OUTCOME 4: PROTECTED AREA MANAGEMENT AUTHORITIES AND OTHER STAKEHOLDERS THROUGHOUT BELIZE HAVE BENEFITED FROM, AND ARE BEGINNING TO APPLY,**

**LESSONS LEARNED FROM THE GSW EXPERIENCE, THEREBY CONSOLIDATING THE NPAS (GEF – $297,670; CO-FINANCING - $130,712)**

131. Beyond the boundaries of the demonstration site itself, the project is expected to provide important biodiversity benefits through its demonstration effect on the NPAS at a regional and national scale. There are numerous areas within Belize, including some of the remaining watersheds within the MMMC, where the project approach has great potential to be adapted and applied. Although specific sites for targeted replication efforts will need to be determined during the course of the project itself, through feedback from the PSC and GSWAC as well as project staff, the most likely areas of replication are indeed the watersheds of the MMMC, most notably Rio Grande, Deep River and Bladen. Rio Grande and Bladen have perhaps the greatest potential in this regard, since they are both already benefiting from TIDE/YCT and in the case of Bladen, TIDE/YCT/FD collaborative conservation efforts, and both also contain PPAs owned by TIDE. Clearly, activities detailed in Outcome 3 above will contribute significantly towards strengthening an enabling environment for replication of project processes at regional and national levels. For greater details on these likely areas of engagement, as well as discussion of other potential areas for national dissemination, please refer to C.4 and Table 6 below that detail strategies that will be pursued to ensure project replicability.

132. Ultimately, through the project's primary emphasis on co-ordination among PAs, as well as its demonstration of positive approaches to other key NPAS challenges such as buffer zone integration, conservation corridors and integrating PPAs within the NPAS, the project will produce timely lessons to inform national protected areas debate and practice. In order to ensure that the project experience and results are made known to the broader community of PAMOs, relevant government agencies, foundations and international NGOs active in Belize, specific dissemination strategies and activities have been embedded in the project, as reflected below.[56]

133. The Outputs necessary to achieve this Outcome are outlined below.

**Output 4.1 Adaptive management**

134. Adaptive project management will be based on the following elements:

- A project co-coordinator and team to co-ordinate overall project activities and adapt project strategies in light of evolving circumstances and experiences gained;
- A monitoring system for biodiversity and socio-economic impact measurement, to be implemented by the project team, including watershed level integration and analysis of PA and landscape level monitoring data and links to impact indicators found in the project's logframe matrix (see Annex A);
- A rigorous programme of project evaluation, including mid-term and final evaluations, and;
- A system for generating lessons learned based, *inter alia*, on findings of above monitoring system.

**Output 4.2: Dissemination of lessons learned**

135. This output will ensure that the lessons learned from the experience of coordinated PA and collaborative stakeholder management are made widely known to other PA managers of Belize, Government and NGO alike. Unfortunately, the norm of past GEF projects in Belize has been that local or national stakeholders have not been made aware of experiences or problems in project execution during the course of implementation itself. Any involvement is largely confined to participation at the final project evaluation meeting, which greatly limits their potential for learning. The modality of

56 Section C.4 below presents further details of the project's approach to replication.

dissemination envisaged for this project is far more extensive, participatory and iterative. Several strategies, including publications, meetings and field trips will be organized during the course of project execution, providing opportunities for PAMO to translate the GSW experience to their own management context. At the same time, their insights and experience will be solicited to resolve any emerging constraints or problems in project execution that might be encountered during the process implementation. The fact that FD is not only the local authority in question but moreover a primary and integral partner of the GSW initiative – by virtue of its management of the CRFR and membership of the PSC and GSWAC bodies – creates a direct avenue for replication of lessons learned. Replication may thus take place within the many other PAs directly or collaboratively managed by FD in the country.

136. Activity areas will include the following:

- **Production of materials detailing the GSW collaborative, coordinated management experience:** These materials will target a variety of audiences, in the form of pamphlets, brochures, extensive project information and updates posted on the YCT/FFI website, and powerpoint presentations to be delivered at meetings below. In addition, the proponents will produce an interactive CD-Rom in Year 4 produced from documentary and visual information collected during the course of the project, which will critically analyze experiences gained and lessons learned. The CD-Rom will be launched at a specific workshop to which key decision-makers from the MNRE will be invited, and distributed widely amongst NGO and GOB representatives.
- **Small and large meetings and field trips organized for relevant national stakeholders and PAMOs (e.g. APAMO, BAPPA, BMC, FD, CZMAI, Fisheries Department) to alert them as to the GSW integrated PA and landscape management experience:** Although meetings in and outside of the GSW, and field trips to the area will be concentrated in the final year of project execution, they will also be incorporated during the course of the earlier project years, to ensure that a) PAMOs are well-informed of project experiences at the very stages of project implementation, not just at the end and b) that they therefore will have the opportunity to advise the project implementers on ways of improving project performance where necessary.
- **Support to replication of GSW example of coordinated PA and landscape-level management elsewhere in Belize.** By ensuring that interested agencies are engaged in the project process from its earlier stages, opportunities for replication of the project experience will be greatly enhanced. Through consultation with the PSC, the PAMO with the perceived greatest interest and potential for applying the GSW lesson learnt will be given particular support during Year 4 of the project to achieve these goals. Conceivably, the agency selected could be the FD itself; as the entity that manages the greatest number of terrestrial PAs, this would appear a compelling choice. Regardless of the entity selected, the support is likely to include: paying 1/2 staff members from other areas or Districts in the country to spend a fortnight accompanying GSW project staff in execution of their activities; attending PSC and GSWAC meetings; becoming acquainted with project documents and supported projects, amongst other activities.
- **Capacity building / training for key stakeholders in the GSW** in the fields of participatory planning, conflict resolution, sustainable land and resource management, small business enterprise development, and several other areas besides. Training will be enhanced by field visits and exchange trips organized with national and international counterparts, experienced in the protected area management and alternative investment activities and issues of interest to the GSW stakeholders; as identified by the PSC and GSWAC themselves.

*C-2.4 Risks*

137. Key risks identified to successful project implementation are analyzed in the risk table below, together with measures taken to mitigate them.[57] Overall, the project risks are considered to be low to medium.

**Table 4: Risks and mitigation measures**

| Risk | Risk Description | Rating | Risk Mitigation Measure |
|---|---|---|---|
| **1. Local stakeholder support for the project dissipates** | This risk is inherent to any initiative based upon co-management principles. The idea behind co-management is that conflict between different parties over common resources can be resolved by recognizing common interests, and that resource management can be improved for the collective good by sharing technical and financial resources. However, consensus is often a challenge to secure and maintain in practice | Low-medium | Conflict resolution mechanisms and guidelines will be included in management plans to address stakeholder disagreements as and when they arise, while specialist training for the implicated agencies in collaborative management is included amongst project activities. Quarterly meetings of the project steering committee and meetings of the GSWAC every trimester will provide a regular venue for concerns to be aired and resolved, as will mid-term monitoring and review activities. |
| **2. Traditional development patterns undermine sustainable development alternatives** | There is a risk that the emergence of sustainable livelihood and business alternatives will not occur swiftly enough to deter the threats posed to the GSW by for example, continued unmonitored logging of the CRFR. | Medium-low | In response to this risk, the project proponents have placed a strong emphasis on the need to develop biodiversity-friendly income-generating alternatives, supported by a clear business planning component, capacity training, a marketing strategy, and co-financed investment, to ensure that these occur in a timely and effective manner. Models of alternative, viable forest-based enterprise will be showcased through the THFIT policy / advocacy vehicle, a body conceived by the Government which enjoys strong support from the Minister of Natural Resources, Environment & Local Government in the wake of a successful awareness-building field trip of the Taskforce to Peten in July 2005. It is clearly an auspicious time for models able to challenge long-held assumptions that forest revenue can only be generated from commercial logging to emerge, to help build greater awareness and thereby facilitate fundamental policy reform of the forestry sector. |
| **3. Government support of the project is reduced or withdrawn** | As shown by the experience of past GEF interventions in Belize, the lack of sufficient GoB support for such initiatives can fatally undermine their long-term sustainability prospects. This has been particularly borne out in the recently completed Belize Barrier | Low | The risk of the GoB reducing its support for the process has been addressed thorough constant consultation with and involvement of GoB officials in project development, particularly the relevant GoB agency in this regard, the Forest Department. Activities and processes have been incorporated to enhance GoB policies and existing initiatives for Toledo, while the GoB |

57 See also Annex A, Logical Framework Matrix.

| Risk | Risk Description | Rating | Risk Mitigation Measure |
|---|---|---|---|
| | Reef-Coastal Zone GEF FSP (where commitments to assume responsibility for project processes were never met by the GoB). | | continuous participation in project implementation is ensured through their membership of both the PSC and the GSWAC. The GoB has moreover demonstrated their commitment to innovative reform and improvement of PA management in Belize as a result of the energies invested in the NPAPSP process. Moreover, since this project represents a partnership between different PAMOs, NGOs and FD, which encompasses different types of PAs in which private PPAs dominate, the level of dependency upon Government support to ensure the success of the initiative is – compared to projects focused on national PAs alone - substantially reduced. Moreover, in the case of southern Belize and the management of forest reserves, the GOB's creation and continued active support of the THFIT provides clear demonstration of the FD's readiness and willingness to involve local agencies and stakeholders in natural resource management |
| **4. Natural disasters destroy project area** | Natural disasters such as category 4 Hurricane Iris which impacted the project area on 8 October 2001 with such devastating affect can undermine conservation efforts such as monitoring transects or reforestation programmes, while damaging critical infrastructure and disturbing ecosystems and wildlife species alike. | Low | Since natural disasters such as hurricanes cannot be controlled or prevented, three strategies are useful in mitigating their impacts. First, the collaborative planning and response capacity of stakeholders can be improved. Local stakeholders' interest and ability to collaborate in preparing and responding to disasters has previously been demonstrated by the widespread participation in FFI/YCT's forest fire campaign, which has been ongoing since 2002. Second, appropriate environmental management can reduce vulnerabilities and impacts. Planned sustainable resource use activities related to forestry and agroforestry will thus reduce the vulnerability of the GSW to natural disasters, by reducing manmade disturbances such as unplanned logging or agriculture that intensify soil degradation and erosion. Thirdly, the use of appropriate technology, such as the construction of a hurricane-proof field centre in the GSCP in 2003, provides hurricane-proof infrastructure to protect project and institutional property should a hurricane threaten again. |

*C-2.5 Project cost to be financed by the GEF*

138. The GEF has supported the development of the present project through a PDF-A grant of $25,000. The present medium-sized project will provide a GEF grant of $975,000. These funds will generate biodiversity benefits by creating an interlinked corridor of coordinated protected areas, all managed according to standardized conservation management plans and procedures. The project will furthermore help to remove barriers to sustainable use and conservation aggravated by traditional development approaches and protected area fragmentation. It will do this by couching the physical PA corridor within a

broader and innovative management framework encompassing the entire GSW landscape. Inter stakeholder consultation mechanisms, landscape-level research, business and management plans, biodiversity-friendly enterprise development, local capacity building and investor solicitation activities will all be enabled by GEF. Finally, GEF support will ensure that the GSW project's potential as a demonstration site for coordinated protected area and landscape-level management can be replicated elsewhere in Belize. Substantial baseline and incremental co-financing has been made available to work in conjunction with the GEF funding (see Section D and Annex H below).

## C-3. SUSTAINABILITY (INCLUDING FINANCIAL SUSTAINABILITY)

139. To ensure that processes launched by this initiative continue beyond the 4-year project, factors able to facilitate or undermine long-term project sustainability were given due consideration during the planning stage. These issues include:

- ***Financial.*** The GEF alternative will be used to overcome key barriers, and to attain and achieve a new management plateau. Project success will ultimately reduce the need for the relatively large investments currently demanded by discordant management efforts in a period of critical threat. Financial sustainability strategies are diverse, and include:

    - Facilitating and strengthening the development of biodiversity-friendly income-generating opportunities for communities and stakeholders, under the auspices of a comprehensive and professional business plan to be produced for the watershed by the project, of which the eco-tourism component is co-financed;
    - Promoting income-generation strategies to directly sustain protected areas, e.g., strengthening the ability of PAs and local communities to benefit from eco-tourism visitation income through investment in capacity, infrastructure and planning;
    - Providing strategic investments and capacity-building support in existing or targeted sectors / enterprises in the broader productive landscape which are dependent on sustainable use of natural resources, and create new / increased income-generation opportunities for local stakeholders. By strengthening key local stakeholders' financial prospects and livelihoods through strategies predicated upon biodiversity-friendly resource use, stakeholders' economic motivation and ability to sustain support for the processes established through by wise and long-term use of natural resources will in turn, be consolidated.
    - Organizing investor meetings and publicity materials to highlight GSW's sustainable development and income-generating potential, and;
    - Financial management capacity building amongst local NGOs and communities to improve internal financial management systems / long-term financial sustainability.

- ***Socio-economic*:** Despite the diversity of stakeholders, remarkable consensus and support exists for the project's core goals and objectives. Strong foundations for sustained stakeholder involvement have been established by YCT/FFI amongst the local communities through projects, outreach and education, as well as direct employment. By scaling-up existing FFI, YCT and TIDE efforts to stimulate biodiversity-friendly income-generating activities and incentives within the GSW productive landscape, stakeholder interest and commitment to the process will be further consolidated.

- ***Institutional & policy*:** The project has been designed to specifically complement and help implement the GoB's sustainable development policies for Toledo and Southern Belize as discussed in previous sections, a fact which in turn strengthens its sustainability prospects. By specifically tailoring activities to national priorities (listed in Table 1, pg.4 above), the processes

set in motion by the project will be able to benefit from government support far beyond the project's lifetime. The project has moreover been designed at a favorable institutional and programmatic juncture for sustainable, integrated, and participatory management in Toledo. In addition, the principle of collaborative management is garnering increasing support amongst the different regional NGOs active in environmental management. Through the various organizations and initiatives of which YCT is a member and FFI contributes to – such as the THFIT, BMC, APAMO and BAPPA – diverse efforts are afoot to improve coordinated and sustainable management of Toledo's protected areas and associated ecosystems.

As described in Outcome 3, moreover, the project will specifically contribute to the classification and integration of PPAs in the NPAS. This is an important objective of the ongoing NPAPSP process, which this project will support and complement.

Considering the issue of institutional sustainability from a localized perspective, significant cost-savings will be achieved by the GSW's PAMOs, as a result of the integrated, inter-institutional approach to protected areas management to be consolidated by the process. These range from PA management benefits, such as shared equipment, ranger stations, training programmes, and patrolling / monitoring activities and systems, to ongoing collective and strategic efforts in the realms of policy reform, stakeholder awareness and sustainable development initiatives. As these collaborative processes become institutionalized, the associated PAMOs are likely to notice and benefit from a broad range cost-savings, thereby strengthening their prospects for collective and respective institutional sustainability, while strengthening their motivation to sustain their association and such processes for the long-term.

- ***Biological*:** By improving coordinated management between the GSW's protected areas, and by zoning the GSW according to appropriate ecological criteria, the project will effectively protect the full range of habitats needed for the long-term survival of the watershed's biodiversity while ensuring that interconnectivity among them is sustained. Information accrued from the GSW-wide biodiversity monitoring system will provide feedback and guidelines on whether the project is meeting its ultimate goal of conserving the GSW's biodiversity and critical habitats.

140. In addition to the preceding considerations, **Table 5** below describes how the project designers have taken into account additional issues that have arisen as a result of previous GEF projects in Belize (namely, two MSPs, the Community Co-Managed Parks System Project (PACT/UNDP/GEF), the Northern Belize Biological Corridors Project (PfB/WB/GEF) and one FSP, the Conservation and Sustainable Use of the Belize Barrier Reef Project (UNDP/GEF), as well as the broader national NPAS context, to lay strong foundations for project success

**Table 5. Lessons learned and how incorporated**

| Lesson learned | Action taken |
|---|---|
| 1. Need to build capacity of the key government entity responsible for management of PAs, i.e., the Forest Department, so they can more effectively implement their PA responsibilities | The GoB has since taken action to strengthen its operations, by for example securing PACT support (in a $400,000 US grant) to enhance FD's capacity to manage its terrestrial PAs. At the same time, FD recognizes its continued need to work with local organizations, and has taken steps to develop closer relationships with agencies in Toledo where forest resources are most intact, e.g., through the THFI Taskforce. The project will both build FD's respective PA management capacity by producing a much-needed management plan and collaborative monitoring system for a biodiversity-significant but neglected forest reserve, CRFR, while involving its staff in the application of a tangible demonstration model of effective interrelated PA management practice which they will as a result, have the experience to replicate nationwide. |
| 2. Biodiversity conservation in | The GoB has also taken steps to address this barrier, by launching a locally- |

| Lesson learned | Action taken |
|---|---|
| PAs and co-management of PAs will be ineffective without an adequate policy and legislative framework | funded process to revise the NPAS. As such, a stronger policy context for PAs in Belize will be established at the early stages of the project. The project proponents have ensured that this project can function as a demonstration model of how the enhanced policy framework related to PA management will directly improve Belize's capacity for effective biodiversity conservation. Additionally, the project will specifically contribute to the classification and integration of PPAs in the NPAS. |
| 3. Need standardized format for PA management plans, and means to review them, otherwise quality of plans is not assured | Since the widely criticized co-management project from whose review this problem emerged, the FD has designed a draft template for PA management plans to follow in the interim as it waits the full results of the NPAPSP process from which a more definitive framework is expected to emerge. This project will likely come on board at a stage after the final template has been produced, which will be followed in the design of the respective PA plans. Inclusion of the FD in the PSC will ensure that this new national template and planning process is coordinated with and applied in the GSW context. As the first time diverse PA managers have developed standardized and interrelated PA management plans according to set national criteria, with the objective of enhancing management effectiveness within and between PAs, its potential to function as a national demonstration model will be greatly enhanced. |
| 4. Need to achieve effective vertical stakeholder integration to ensure success of co-management ventures, which will require capacity-building support | This project is pursuing a pronounced cross-scale management approach, by incorporating the entire gamut of stakeholder management levels, from national government, regional and local governance authorities, NGOs, private sector and communities. At the same time, capacity-building at the different levels (community, management, private sector) in order to ensure that each level operates effectively in meeting common conservation and sustainable development goals has been included. |
| 5. Need to build financial sustainability into the project mechanism from the onset | As strongly demonstrated by the Belize Barrier Reef FSP project, building adequate mechanisms into project design to ensure financial sustainability of project processes after GEF support is finished are critically important, if biodiversity protection is to be ensured. The project is addressing this need by incorporating development of a business plan early into the project process, including strategies to attract investor support, and using GEF finances to provide key investments to specific enterprise initiatives. In addition, a series of successive indicators to evaluate financial sustainability are to be built into the work plan to help track the situation. |
| 6. Need to work at a landscape and integrated ecosystem level to ensure sustainability and effectiveness of PAs | This project is clearly appropriating this lesson learned from Phase 1 of the Belize Barrier Reef project, which noted the need for greater integration and linkages between the MBC and MBRC initiatives, i.e. between marine and terrestrial conservation management. Moreover, a recent study identified the coastal-marine zone within which the GSW is situated – from the Maya Mountains to the Port Honduras Marine Reserve (PHMR) – as an ideal zone for developing a viable integrated ecosystem management system that could subsequently be replicated throughout PHMR's five other watersheds and beyond. The GSW's project's watershed-level, coordinated PA management approach is therefore ideally poised to provide this demonstration model of integrated ecosystem management. |
| 7. Importance of delivering tangible community benefits | The project will directly or with the support of co-finance sources, deliver tangible community benefits by enhancing alternative business ventures, with an emphasis on agroforestry, ecotourism and certified forestry. The watershed-level business plan and investor meetings are also expected to facilitate sustainable economic development, in a manner compatible with the parallel conservation objectives of the project. Having developed strong project foundations over the past 6 years as a result of their success in addressing livelihood concerns of the communities, the project proponents and their local partners have both the capacity and intention to continue on this path. |

## C-4. REPLICABILITY

141. Successful replication of the project depends greatly the strength of project design – to ensure that the planned project effectively ensures the longevity of the GEF investment, and is clearly responding to the experience of prior GEF projects implemented in Belize – and the sophistication of analysis to ensure that strong synergies exist between the project context and other national / regional areas where dissemination is expected to occur. Analysis of how the proponents have taken into account lessons yielded by past projects in the design and projected implementation of this project has already been discussed in the preceding section and Table 5.

142. In terms of replicability, analysis of district, national and regional contexts strongly suggest great potential for replication of the coordinated protected areas management, watershed-level model to be produced by this project. First of all, potential for replication at the level of southern Belize and the MMMC area in particular is considerable, given the high level of convergence of actors and activities across the five implicated watersheds. In the case of Rio Grande, YCT and TIDE are both already operating in this watershed, with TIDE managing several private lands it owns there, and both YCT and TIDE engaged in several community-outreach education and livelihood projects in the watershed's implicated villages. The Rio Grande's source is, like the GSW's, within the CRFR, so improvements in the management regime for this critical forest reserve achieved through the present project will result in direct benefits to Rio Grande's ecosystems and management as well. The situation in Deep River is also extremely comparable, since YCT has a strong community-outreach programme in the settlements of this watershed, and also works closely with other private stakeholders operating in the Deep River Forest Reserve. The CRFR also impacts Deep River and its Forest Reserve, both of which FD manage, making the Government a clear partner in the process. Punta Ycacos or Paynes Creek is a watershed where TIDE is greatly involved, in its capacity as co-manager of the Paynes Creek National Park in collaboration with the Forest Department and local communities. The principal of these communities is Monkey River village, located at the mouth of the Monkey River, which is both concerned and involved with effective management of both of these watersheds. Both Paynes Creek and Monkey River originate in the Bladen Nature Reserve, which is managed by TIDE, YCT, FD and other partners, creating additional management synergies that the project can capitalize upon. In sum, prospects for replication of the key lessons emerging from the GSW demonstration project, namely coordination and standardization of PA management, integrated landscape management of PA and non-PA areas, and the realization of PPAs' potential as critical components of the NPAS system are considerable.

143. In addition to the broader project context and District, the model of coordinated protected areas management at a landscape level can be seen as applicable to watershed and non-watershed contexts. New River in the Orange Walk and Corozal Districts, and Sibun River in the Cayo District where an incipient watershed association already exists are two cases in point. In a country with so many protected areas, clearly many are directly and indirectly interconnected, so the experience of PA coordination produced by the GEF project in enhancing PA effectiveness will be extremely significant for Belize. Examples of potential PA clusters which might benefit from this example include Cockscomb Basin Wildlife Sanctuary, Bladen Nature Reserve and Columbia River Forest Reserve; the Chiquibul National Park and Forest Reserve, Caracol Archaeological Reserve and the Mountain Pine Ridge Forest Reserve; Shipstern Nature Reserve, Corozal Bay Wildlife Sanctuary and Bacalar Chico Marine Reserve and National Park.

144. Finally, on a regional level, Belize's ability to showcase a functioning conservation corridor, incorporating coordinated management between protected areas will be of seminal interest to the regional

MBC programme and associated governments and conservation agencies. The GSW has already been recognized by the MBC as being the area within Belize with the greatest opportunity for becoming a practical conservation corridor. Should this be realized, regional replication, fuelled by FFI's Central American remit and significant programme in Nicaragua in particular, will readily ensue.

**Table 6. Replicability**

| Level of replication | Nature and potential of replication |
|---|---|
| **MMMT / Toledo**<br>- Rio Grande | - YCT and TIDE both already operating in this watershed, with TIDE managing several distinct PPAs along the river, and both YCT and TIDE engaged in several community-outreach education and livelihood projects in the RGW's implicated villages.<br>- The RGW's source is, like the GSW's, within the CRFR, so improvements in the CRFR's management regime achieved through the present project will result in direct benefits to RGW's ecosystems and management as well. |
| - Deep River | - The CRFR also impacts Deep River and its Forest Reserve, both of which FD manage, making the Government a clear partner in the process.<br>- YCT and TIDE work with Deep River communities. |
| - Punta Ycacos or Paynes Creek | - TIDE is co-manager of the Paynes Creek National Park in collaboration with the Forest Department and local communities.<br>- The principal of these communities is Monkey River village, located at the mouth of the Monkey River, which has strong social capital, and is actively involved with management / ecotourism initiatives in both watersheds.<br>- This watershed originates in the BNR, which YCT, TIDE and FD with others manage. |
| - Monkey River | - Watershed originates in the BNR, which YCT, TIDE and FD with others manage<br>- Local communities' existing conservation ethics.<br>- Presence of TIDE, which also owns private lands, which it is working to have recognized as official PPAs, along the river. |
| **National Watersheds**<br>- New River<br>- Sibun River | - Incipient efforts at watershed management between private / community / NGO / Government already exist in these sites. |
| **Interconnected PA clusters**<br>Some potential groupings listed, although more exist | - Cockscomb Wildlife Sanctuary, Bladen Nature Reserve and Columbia River Forest Reserve;<br>- Chiquibul National Park and Forest Reserve, Caracol Archaeological Reserve and the Mountain Pine Ridge Forest Reserve;<br>- Shipstern Nature Reserve (PPA), Corozal Bay Wildlife Sanctuary and Bacalar Chico Marine Reserve and National Park |
| **Regional**<br>- MBC Network<br>- FFI | - Throughout Mesoamerica<br>- Greatest potential being in Nicaragua, where FFI like Belize is involved with a significant, multi-faceted landscape conservation project. |

## C-5. STAKEHOLDER INVOLVEMENT

### *C-5.1 Stakeholder involvement in project development*

145. The lengthy PDF-A process aimed to ensure broad stakeholder involvement in the preparation of this proposal. The result is a document that has benefited from substantial inputs provided by a representative cross-range of relevant stakeholders. Stakeholder consultation sessions funded by the PDF-A process included three stakeholder planning and project design workshops and several smaller focus group sessions and meetings.[58] Stakeholder input resulted in identification of project components, including objectives, activities, membership of the GSWAC, current threats to watershed biodiversity, management approaches to address these threats, and potential sustainable income-generating alternatives. Stakeholder consultation activities have thus proven integral to the definition of project objectives, output and activities.

### *C-5.2 Roles and responsibilities of relevant stakeholders in project implementation*

146. The roles and responsibilities of relevant stakeholders in various aspects of project implementation may be summarized as follows:

- Project implementation: UNDP will be the GEF implementing agency for the project.[59]
- Project execution: Fauna and Flora International (FFI) will be the executing agency for the project and will establish the project team.[60] They will execute the project in close collaboration with their principle Belizean partner organization YCT, who will lead the day-to-day project activities, and under whom the majority of the project staff will be recruited.
- Project steering committee: At an executive level, the project will be overseen by a Project Steering Committee (PSC), which will consist of the managers of the GSW core protected area (Forest Department-MNRE, YCT, TIDE and FFI), plus UNDP. Responsibilities of the PSC, which will meet on a quarterly basis, include: providing general policy guidance and technical advice on implementation; reviewing progress of the implementation of project activities; ensuring consistency of activities with the project proposal and work plan; ensuring timely and effective implementation of project activities; ensuring that procurement of goods and services are consonant with relevant procedures and guidelines; approving work plans as well as quarterly and annual narrative reports; participating in annual project reviews; making recommendations for modifications to the project as it evolves, provided these are consistent with project objectives; approving all revisions in project document inclusive of financial revisions; assisting in facilitating collaboration among the relevant non PSC stakeholders; reviewing and approve terms of reference for consultants. Although the PSC will be established for the purposes of project management only, it is anticipated that the experience of successful collaboration will generate a continued association of the core, national PA members of the PSC (namely YCT, TIDE and YCT members) in a revised association, beyond the end of the project term.
- Golden Stream Watershed Advisory Committee: In addition to the PSC, the project will convene a larger body, known as the GSW Advisory Committee (GSWAC), which as well as FD, YCT, TIDE and FFI, will include the Fisheries Department (viz the PHMR) and all non-PA stakeholders such as community, private (BLE) and local governance agencies (Village Council representatives, Toledo Development Corporation representatives). This body, whose objective is to provide a vehicle through which all local stakeholders will be able to input and build

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58 Reports of these consultations are available at www.yct.bz/GSW_workshop_reports.PDF

59 See Section E.3 below.

60 See Section E.3 below.

ownership to the process, in a distinct fashion from the more technically-oriented PSC, will meet three times a year during the course of the project, providing sufficient collaborative experience to ensure sustenance of the inter-stakeholder association beyond the end of GEF support.

- Consultation with local communities, including indigenous ones: In addition to their role in GSWAC, local communities, including indigenous ones, will be afforded full opportunities for participation in project decision-making. Local livelihoods will be strengthened by the project's activities, and alternative income-generating strategies will be selected through consultation with village representatives. They will be designed to compliment and strengthen, as far as appropriate, traditional customs and practices. YCT's direct ties with the target communities, including board seats for village chairmen of Golden Stream and Indian Creek respectively, will provide the project with strong social and institutional avenues for maintaining continuous communication between project managers and community stakeholders and coordinators. YCT and community representatives' respective seats on the GSWAC will further guarantee that indigenous community interests are safeguarded by the project. As such, the project is also consistent with principles outlined in the UNDP Draft Guidelines for Support of Indigenous Peoples (1995).

## C-6. MONITORING AND EVALUATION

*C-6.1 Project Monitoring and Evaluation (M&E) system*

147. The project possesses outcome and output indicators as shown in the Logical Framework Matrix. The responsibility for collecting data and reporting results will fall to the project team, led by a project manager (PM). At the project start, the PM will deliver an inception report to the Steering Committee members presenting the full monitoring and evaluation work plan.

148. The project will use the WWF/WB management effectiveness-tracking tool as the basis to monitor effective progress towards optimal management of PAs. The project will establish a baseline using this tool at the start of the project and then repeat it twice: at mid-term and at project completion.

149. The project will be subject to standard UNDP/GEF monitoring requirements. The UNDP Country Office representative will perform field monitoring visits at least twice per year. The PM will prepare and submit tri-monthly narrative reports to the Project Director (PD), who in this case will be the FFI Belize Programme Manager, and UNDP. He/she will also be responsible for producing the Annual Project Report (APR). Decisions and recommendations of the Tripartite Review (TPR) will be presented to the Project Steering Committee (PSC). The UNDP Country Office will also produce annual Project Implementation Reviews (PIR) together with the project team for the submission to GEF. The Terminal TPR will be held in the last month of project operations. The Terminal TPR will consider the implementation of the project as a whole, paying particular attention to whether the project achieved its immediate objectives and contributed to the broader environmental objective, and will decide whether any actions are still necessary.

150. The project will undergo two formal and independent evaluations, mid-term and final, focusing both on the attainment of specified project outcomes and outputs, using the indicators provided in the logical framework matrix. The mid-term evaluation will be held by the end of the second year of project implementation. This evaluation will assess progress in achieving planned results and will also identify any difficulties in project implementation and their causes, and recommend corrective measures to minimize negative impacts. It will present initial lessons learned about project design, implementation and management. The final evaluation will be held towards completion of the project and will focus on the same issues as the first evaluation, but will also look at early signs of potential impact and

sustainability of results, including the contribution to capacity development and the achievement of global environmental goals. Replication potential will also be assessed. It will also provide recommendations for any follow-up activities.

151. The project will be subject to an annual financial audit as required by UNDP/GEF rules and procedures.

## D – Financing

D-1. FINANCING PLAN (PLEASE ALSO SEE ANNEX J: TOTAL BUDGET AND WORKPLAN)

**Table 7. Financing plan**

| Outcome | Output | GEF | Other | TOTAL |
|---|---|---|---|---|
| Outcome 1: Protected area management authorities, with the support and participation of buffer area stakeholders, have jointly developed and are collaborating to implement a standardized and complementary set of management plans for the GSW's four protected areas | Output 1.1 - An agreed watershed-level strategy for PAs and timetable among PA management authorities concerning individual PA management plan development, together with co-ordination of implementation of latter | $32,000 | $44,000 | $76,000 |
| | Output 1.2 Capacity of local APAMO institutions and staff to plan, implement and sustain PA plans strengthened. | $14,500 | $52,656 | $67,156 |
| | Output 1.3 - GSCP management plan: development and implementation | $81,450 | $161,350 | $242,800 |
| | Output 1.4 - Block 127 management plan: development and initial implementation | $32,500 | $48,000 | $80,500 |
| | Output 1.5 - CRFR (ex-MMFR) management plan: development and implementation | $96,150 | $118,000 | $214,150 |
| | Output 1.6 - PHMR management plan: implementation | $2,000 | $100,000 | $102,000 |
| | Output 1.7 – Coordinated management – e.g. with GSW Biodiversity Monitoring system – established and sustained. | $104,600 | $153,000 | $257,600 |
| | **Outcome total** | **$363,200** | **$677,006** | **$1,040,206** |
| Outcome 2: Protected area management authorities, local government bodies, private sector landholders and local communities have jointly developed a strategy for sustainable development of the GSW landscape that strengthens the financial sustainability of the protected area system, and provides widespread benefits to the communities at large, and are co-operating to sustain its implementation over the long-term. | Output 2.1 - Golden Stream Watershed Advisory Committee: establishment and initial operations | $31,000 | $28,000 | $59,000 |
| | Output 2.2 - A watershed-level management plan to direct and enhance conservation and sustainable management of the GSW over the long-term | $94,500 | $44,000 | $138,500 |
| | Output 2.3 Local stakeholders' capacity for sustainable and integrated resource use and management increased | $142,630 | $166,300 | $308,930 |
| | **Outcome total** | **$268,130** | **$238,300** | **$506,430** |
| Outcome 3: Fiscal and legislative environments affecting private protected areas have been clarified and improved as a result of collaborative NPAPSP / | Output 3.1 Key policy makers and general public's awareness of PPAs' critical role within the NPAS increased | $17,500 | $27,500 | $45,000 |
| | Output 3.2 PPAs officially recognized by and incorporated within revised legislative framework governing Belize's NPAS | $13,500 | $25,000 | $38,500 |

| Outcome | Output | GEF | Other | TOTAL |
|---|---|---|---|---|
| BAPPA / GSW efforts, providing mechanisms to effectively integrate private protected areas and private lands within landscape level management systems. | Output 3.4 GSW develops and implements the first legal national model of conservation easements between TIDE's 127 and YCT's GSCP, raising awareness about mechanism in the process | $15,000 | $22,000 | $37,000 |
| | **Outcome total** | **$46,000** | **$74,500** | **$120,500** |
| Outcome 4: Protected area management authorities and other stakeholders throughout Belize have benefited from, and are beginning to apply, lessons learned from the GSW experience, thereby consolidating the NPAS. | Output 4.1 Dissemination of lessons learned | $70,000 | $49,000 | $119,000 |
| | Output 4.2 Project Management & Evaluation | $227,670 | $81,712 | $309,382 |
| | **Outcome total** | **$297,670** | **$130,712** | **$428,382** |
| | **PDF-A** | **$25,000** | | **$25,000** |
| | **TOTAL** | **$1,000,000** | **$1,120,518** | **$2,120,518** |

## D-2. COST EFFECTIVENESS

152. Cost effectiveness has been ensured by building the initiative upon and through existing, local, institutional programmes, and by strengthening local institutions' capacity to sustain the project initiatives established. It is also being guaranteed by incorporating a suite of mechanisms to ensure financial sustainability of project processes once the GEF funding term has expired, including the formulation of the GSW business plan, training and investments in sustainable business activities (eco-tourism, agroforestry) and capacity-building of local stakeholders to engage in them. Cost effectiveness is also significantly enhanced by substantial co-financing and baseline costs (see Tables 8 and 9 below).

## D-3. CO-FINANCING

153. **Table 8** below specifies co-financing to be delivered during the period of the project.

**Table 8. Co-financing**

| Name of Co-financier (source) | Classification | Type | Amount (US$) |
|---|---|---|---|
| FFI | NGO | Grant | $126,600 |
| PACT | Semi- Gov | Grant | $17,350 |
| Oak Foundation | NGO | Grant | $89,890 |
| Sea World / Busch Gardens | NGO | Grant | $15,000 |
| Peace Corps | Bilateral | In-kind | $96,000 |
| Darwin / NHM | NGO | In-kind | $28,500 |
| Ecologic | NGO | In-kind | $80,000 |
| Nando Peretti Foundation | NGO | Grant | $194,822 |
| TIDE | NGO | In-kind | $170,000 |
| FD | Government | In-kind | $80,000 |
| USFWS | Government | Grant | $182,356 |
| BFREE | Private | In-kind | $40,000 |
| | | **Sub-Total Co-financing** | **$1,120,518** |

154. **Table 9** below describes the substantial baseline costs invested during the period immediately preceding the GEF project, much of it during the lengthy PDF process. A large part of these expenditures were for land acquisition in the project area. These baseline investments further raise the cost effectiveness of the GEF intervention to consolidate achievements within the GSW.

**Table 9: Baseline Investments, 2000-2005**

| Name of Co-financier (source) | Classification | Type | Purpose | Amount (US$) |
|---|---|---|---|---|
| FFI | NGO | Grant – | Land purchase in GSW, project work | $2,000,000 |
| WLT | NGO | Grant | GSCP ranger salaries | $120,000 |
| PACT | Semi-government | Grant | Field center, community outreach | $26,000 |
| DGIS- FFI | Government / NGO | Grant | Livelihoods | $9,000 |
| G&B's / TCGA | Private/ NGO | Grant | Livelihoods | $400,000 |
| OAK | NGO | Grant | Research, community outreach | $50,000 |
| Peace Corps | Bilateral | In-kind | Project management, community outreach | $96,000 |
| Nando Peretti Foundation | NGO | Grant | Institutional strengthening and capacity building (YCT), research, monitoring, livelihoods | $310,000 |
| TIDE | NGO | In-kind | Land purchase in GSW, PHMR and 127 management | $750,000 |
| FD | Government | In-kind | CRFR management | $160,000 |
| USFWS | Government | In-kind | Monitoring, sustainable livelihoods | $120,000 |
| IUCN | INGO | In-kind | Institutional capacity building | $46,000 |
| British Government | Government | In-kind | Sustainable forest management and enterprise development | $63,000 |
| Ecotourism Consulting Group | Private | In-kind | Financial sustainability of PAMOs / communities through ecotourism enterprise development | $50,000 |
| | | | **Total** | **$4,200,000** |

## E - INSTITUTIONAL COORDINATION AND SUPPORT

### E-1. CORE COMMITMENTS AND LINKAGES

155. Sustainable Management of Environmental Resources is the largest of UNDP Belize's three programmes. The programme includes several enabling activities, such as management of GEF projects and support for the development of Belize's first comprehensive National Protected Areas Policy and System Plan. At present, all GEF projects under UNDP auspices have been completed. The present project nevertheless links well with existing UNDP engagements, by for example providing a demonstration site for application of the NPAS reform process it is supporting, and by strengthening the Toledo Healthy Forest Initiative Taskforce Initiative which has already enjoyed concerted backing from the UNDP Belize Country Office. Both UNDP backed-processes will be strengthened by having the GSW project function as a practical demonstration site of how improved inter-PA coordination in core

protection areas, and promotion of alternative, sustainable forest-based industries in broader related landscapes, can function simultaneously to meet intertwined conservation and development objectives.

156. UNDP-GEF and YCT/ FFI are also currently involved with two full-size, regional programmes in which Belize is participating: the Mesoamerican Biological Corridor (MBC) and the Mesoamerican Barrier Reef System (MBRS). These programmes aim to enhance biodiversity conservation in the Mesoamerican region through organized and consolidated land-use planning - between protected areas, buffer zones, and multiple-use zones - and to promote inter-connections between established biological corridors. As mentioned previously, the GSW was showcased in January 2005 as Belize's best example of a practical conservation corridor; the result of YCT/FFI applied achievements and efforts in maintaining strong linkages with the MBC project initiative.

## E-2. CONSULTATION, COORDINATION AND COLLABORATION AMONG IMPLEMENTING AGENCIES, EXECUTING AGENCIES, AND THE GEF SECRETARIAT, IF APPROPRIATE.

157. Relevant past and ongoing World Bank-GEF projects in Belize are as follows:

- The Northern Belize Biological Corridors Project (PfB[61]/WB/GEF). In recent years, FFI/YCT have developed increasingly close ties with PfB, for example by participating in a PfB-TNC led regional effort to coordinate forest management and ecosystem conservation between Belize, Mexico and Guatemala. YCT has increasingly consulted with PfB for guidance in developing sustainable industries in PPAs, such as FSC certification and ecotourism; both processes which PfB has already initiated in its own PPA, the Rio Bravo Conservation and Management Area. With discussions currently underway between YCT and PfB to include PfB on the YCT BoD, there is considerable opportunity for collaboration between these agencies to increase.
- The Community-Initiated Sarstoon Temash National Park Management MSP Project (COMSTEC) was launched in October 2002, managed by a local indigenous NGO, the Sarstoon Temash Indigenous Institute of Management (SATIIM). Over the past few years, SATIIM has worked to develop a community-based co-management system to manage the Sarstoon Temash National Park (STNP). With many similar objectives and challenges to face, SATIIM and YCT have developed increasingly close institutional ties, exchanging experiences, cross-institutional training and the design of joint funding proposals, both submitted and pending. With YCT and SATIIM staff currently discussing the elaboration of a formal inter-institutional agreement between the organizations which would also include their respective international partner agencies[62], opportunities for the GSW project to learn from the COMSTEC project experience of transforming a paper park into a functioning protected area with community participation are considerable.
- SATIIM is also expected to function as the liaison agency in Belize for the recently approved (January 2006) World Bank GEF project to be implemented by Central America Indigenous and Peasant Coordination Association for Community Agroforestry (ACICAFOC), in coordination with the Central American Indigenous Council (CICA) and the Central American Commission for Environment and Development (CCAD). The project, entitled "*Integrated ecosystems management in indigenous communities"* is a regional Central American initiative that aims to strengthen the capacity of indigenous communities in the area to protect and manage their natural and cultural resources on a long-term basis. Meetings between ACICAFOC, SATIIM, YCT and

61 Programme for Belize

62 Fauna & Flora International and the Ecologic Development Fund respectively.

other indigenous entities in Belize in February 2005 indicated that funds from the project for agroforestry activities and capacity-building would be available, and that the GOB had already indicated YCT to ACICAFOC as a critical organization to receive such support. In addition, ACICAFOC is providing technical assistance to the THFIT initiative, and is offering to help organize visits of government, community and NGO representatives to the Peten in 2005 to learn more about their successful experience in sustainable forest management—activities which the WB project is likely to be able to support. As such, several synergies between completed and newly initiated projects in the country and region exist.

158. Looking ahead, the project proponents are aware of two WB-GEF project concepts that are being prepared for Belize, neither of which however has yet reached a formal PDF A or B stage. Nevertheless, the proponents are already ensuring a strong level of coordination and communication is maintained with the various agencies pursuing development of these project concepts. A brief description of these projects concepts and their status are listed below:

- A WB GEF FSP to support Belize in its efforts to implement the National System Plan for Protected Areas (expected to be formulated by July 2005), to be yielded by the nationally financed and near completed planning process mentioned previously in the document, the NPAPSP. In December, the Minister for Natural Resources and Environment met with World Bank officials to discuss the concept, and received favourable indications that WB would be interested. Preparation of a PDF B is anticipated to begin shortly. The Forest Department has already made note of the strong synergies between the present project, which will demonstrate key recommendations regarding PAM emerging from the NPAPSP and the proposed project, which intends to ensure the new guidelines are effectively streamlined in national level policies and procedures. Indeed, the FD have stated their interest in seeing the proposed UNDP GEF MSP function as an applied demonstration model of the reformed NPAS system in practice. Collaboration between the two projects will moreover be strongly guaranteed by the key role that the Forest Department will play in both.
- A binational WB GEF MSP has been proposed between SATIIM in Belize and Fundaeco in Guatemala, to ensure more effective management of the interdependent ecosystems that straddle the Sarstoon River and associated landscapes. Should this concept become a formal proposal, the proposed 4-way institutional MoU between SATIIM, YCT, FFI and Ecologic will have been formalized by that point, ensuring close coordination is maintained with SATIIM through the process of the bi-national project execution.

## E-3. IMPLEMENTATION / EXECUTION ARRANGEMENTS

159. The project will be implemented by UNDP and executed by FFI, according to the UNDP standards and regulations on NGO execution. The Project Team shall comprise of a Project Director (FFI Belize Programme Manager), the Project Manager, three technical project officers (Finance Manager, Biodiversity Coordinator, and Agroforestry Extension Coordinator), GSW field rangers and an administrative assistant. Several of these positions (Biodiversity Coordinator, Agroforestry Extension Coordinator, 6 of the 8 GSW Field Rangers and administrative assistant) will be cost-sharing positions with YCT existing staff. Only the Project Manager and Finance Manager will be solely GEF-hired positions. All staff positions will be subcontracted through YCT except for the Project Manager.

160. A Project Steering Committee (PSC) will be established by the Executing Agency to advise and guide project implementation. Commitment from PSC members will be formalized through a MOU included in the GSW management plan. The Steering Committee will meet four times a year to monitor

the project implementation, provide substantial guidance and advice, and facilitate communication, cooperation, and coordination among major stakeholders and project partners.

161. All reporting, evaluation and auditing requirements will be in accordance to UNDP procedures for GEF MSP projects. The local UNDP office will provide administrative project support.

162. GoB support is also demonstrated by the supporting letters from the Chief Executive Officers for the Ministries of Natural Resources and National Development which accompany this proposal, and will be further underlined by the role of GoB as tripartite signatory of the eventual MSP grant agreement.

- Overseeing daily project management and execution will be the project proponent agency, represented by FFI's Belize Programme Manager (in conjunction with the FFI Americas management team) in their capacity as Project Director. The Project Director will ensure the project fulfils FFI's contractual obligations with UNDP, including meeting its targets, and staying within budget.
- Responsible for managing the project on a continual basis, and taking day-to-day operational decisions is the Project Manager, who will be appointed by FFI with input from the PSC. The Project Manager, who will be contracted to FFI, will report regularly to the Project Director and will attend quarterly PSC meetings.
- The Project Manager will be responsible for overseeing local project staff and consultants.

**Part III: Response to Reviews**

**GEF Secretariat**

**Respond to upstream comments from GEFSEC, if applicable**

**Convention Secretariat**

**Respond to upstream comments from Convention Secretariat, if applicable**

**Other IAs and relevant EAs**

**Respond to upstream comments by other IAs and relevant EAs, if applicable**

## ANNEXES

**ANNEX A: LOGICAL FRAMEWORK MATRIX**

**Goal**

**For Belize's protected area management system to function as an integrated, coordinated and cost-effective tool for biodiversity conservation and sustainable use**

| Project Strategy | Indicators | Baseline | Target | Sources of Verification | Risks and Assumptions |
|---|---|---|---|---|---|
| **Objective**<br>For the Golden Stream Watershed (GSW) to function as a replicable model of how multiple protected areas working within an ecologically interconnected and interdependent area can jointly achieve conservation and sustainable use objectives, thereby catalyzing the sustainability of Belize's national protected area system | Overall human ecological footprint (Rees, 96) and threats level within GSW – to be measured as part of the watershed-level biodiversity monitoring programme that will be established, and which will span the 4 PAs and surrounding landscape areas | To be determined during year 1 | 50% reduction from year 1 levels by end of project. | GSW biodiversity monitoring system (data, synthesizing reports), social surveys<br>Aerial surveys / Satellite imagery from Yr 1 - Yr 4 | That the GoB will fully develop and implement the NPAPSP process and that the FD will continue to be involved in /support the project |
| | Annual rate of forest fragmentation in GSW stemmed, and active reforestation underway | Rate of fragmentation be determined during year 1; only sporadic reforestation efforts underway at present | 50% reduction in annual rate of forest fragmentation by end of year 4, with reforestation by the PAMO agencies improving forest ecosystems in at least 50% of the GSW's landscape | GSW biodiversity monitoring system (data, synthesizing reports)<br>Reforestation records / reports<br>Aerial surveys / Satellite imagery from Yr 1 - Yr 4 | That protected area managers and GSW stakeholders understand the benefits of a collaborative approach, and maintain support for the initiative until these benefits are realized |
| | Populations of faunal indicator species increase, indicating improved ecosystem integrity | To be determined during year 1 | 30% increase in faunal indicator species sightings by year 4 | GSW biodiversity monitoring system (data, synthesizing reports) | That the increase in faunal species due to improved protection is not undermined by increased levels of illegal hunting – motivated by increased game |
| | Alternative businesses developing on the basis of GSW's sustainable management | Limited, uncoordinated efforts to promote alternative enterprises in the GSW, with particular emphasis on agroforestry and ecotourism | Businesses, some certified, established and coordinated across each relevant sector – agroforestry, ecotourism, forestry (timber / NTFPs), | Business surveys, reports | That private enterprises are encouraged by the opportunities for investing in the GSW, as a result of GSW's stakeholders collaborative marketing efforts and plan |
| | Other groups of PAs in Belize have begun to apply GSW example | No examples of PAs working collectively to generate socioeconomic benefits and strengthen the sustainability of the NPAS | Beginning of replication of the GSW experience within at least 2 groups of sites elsewhere in Toledo and/or Belize. | Documentary evidence, references to GSW model in other PA's work | Commitment of the government and other Protected Area Managers / donors to replicate lessons elsewhere in Belize |

| Project Strategy | Indicators | Baseline | Target | Sources of Verification | Risks and Assumptions |
|---|---|---|---|---|---|
| **Outcome 1: Protected area management authorities have jointly developed and are implementing a standardized and complementary set of management plans for GSW's four protected areas** | Standardized, cross-referenced management plans produced for each of the GSW's terrestrial PAs | None of GSW's terrestrial PAs have management plans, and minimal standardization of management practices exists. | All 3 implicated terrestrial PAs within the GSW will have management plans, designed to be complementary (e.g., through shared BD system and data) and mutually reinforcing, while reflecting specific realities of the PA in question | Management plans for GSCP, Block 127 and CFRF, reflecting collaborative management objectives | Protected area managers see benefits of coordinated management in terms of enhanced biodiversity quality, and thereby maintain commitment to sustaining collaborative activities |
| | Terrestrial and marine PA managers are coordinating monitoring in an integrated manner across the GSW, as shown by meeting minutes / patrol reports / shared ranger equipment and facilities | No systematic coordination among PA managers exists | All PAs will be working jointly to secure systematic monitoring of the GSW's biodiversity | Documents (meeting minutes, reports), equipment inventories PHMR management plan and activities reflect coordination with terrestrial PAs<br><br>Ranger field reports and biodiversity monitoring data base | |
| | Self financing of PAs in the GSW has increased by the end of the project. | PAs are not self-financed, and APAMO agencies are not capitalizing on opportunities to do collectively | PAMO agencies will be capitalizing on sustainable, enterprise opportunities to ensure the system's long-term financial sustainability, with self-financing increased by 25-30% per implicated PAMO | Implicated PAMO agencies' annual audits / financial reports, detailing distribution of institutional funds | That PAMO agencies acquire sufficient business skills to develop and sustain self-financing ventures over the long-term, independently |
| Output 1.1 - An agreed watershed-level strategy for PAs and timetable among PA management authorities concerning individual PA management plan development, together with co-ordination of implementation of latter | A collective timetable and strategy for coordinating GSW-level management.<br><br>Meetings of the key PAMO agencies<br><br>Coordinated field patrols are being conducted by the 3 implicated PAMO agencies | No watershed level strategy exists to secure coordination between the GSW's respective PAs. | Model, replicable system of integrated watershed-level management endorsed by 3 PA managers, enabling incipient GSW conservation corridor to be consolidated and sustained | Timetable, strategy, meeting reports, patrol reports (documents) | PAMOs are able to agree upon and sustain a collective strategy throughout project period and beyond |
| Output 1.2 Capacity of local PAMO institutions and staff to plan, implement and sustain PA plans strengthened. | Continuous training and planning sessions provided to PAMO staff on an ongoing basis throughout project, based on skills gaps and needs assessment | Capacity of PAMOs to manage PAs limited due to lack of management plans, training, and infrastructure (equipment, facilities) | PAMO staff have assumed and are sustaining management of PA plans independent of GEF-funded staff / consultants' support | Mid-term and final project evaluations<br><br>Training sessions and field reports | PAMO organizations do not suffer from high level of staff turnover undermining capacity building efforts enabled by the GEF mechanism |

| Project Strategy | Indicators | Baseline | Target | Sources of Verification | Risks and Assumptions |
|---|---|---|---|---|---|
| | Field management reports and surveys showing PAMO staff assuming responsibility for management | | | (documents) | |
| Output 1.3 - GSCP management plan: development and implementation | GSCP management plan produced, in accordance to the agreed GSW PA management framework and priorities<br><br>Mid-term and final evaluation of management plan's implementation | No management plan for GSCP exists | Management plan for GSCP finalized and being implemented in conjunction with other PAs in GSW by Year 2 of the GEF project | GSCP management plan (document)<br>Mid-term and final project evaluations | YCT is able to secure permanent exemption of PPA from national land taxes, ensuring the sustainability of the PPA |
| Output 1.4 - Block 127 management plan: development and initial implementation | Block 127 management plan produced, in accordance to the agreed GSW PA management framework and priorities<br><br>Mid-term and final evaluation of management plan's implementation | No management plan for Block 127 exists | Management plan for Block 127 finalized and being implemented in conjunction with other PAs in GSW by Year 2 of the GEF project | Block 127 management plan (document)<br>Mid-term and final project evaluations | TIDE secure the means to sustain permanent field personnel in Block 127 |
| Output 1.5 - CRFR (ex-MMFR) management plan: development and implementation | CRFR block's management plan produced, in accordance to the agreed GSW PA management framework and priorities<br><br>Mid-term and final evaluation of management plan implementation | No management plan for CRFR block exists | Management plan for CRFR finalized and being implemented in conjunction with other PAs in GSW by Year 2 of the GEF project | CRFR management plan (document)<br>Mid-term and final project evaluations | GOB / FD continues to collaborate in the design and implementation of a new management regime for the block of the CRFR in question (formerly of MMFRS) |
| Output 1.6 - PHMR management plan: implementation | Revised PHMR plan reflects conscious interdependency with GSW management system, and is reflected by new collaborative activities on the ground | No terrestrial interdependency or coordination of management reflected in plan or daily management of the PHMR | Revised PHMR plan (due to occur end of 2005) reflects integration with GSW management system | PHMR plan<br>Reports of the PSC (documents) | TIDE staff ensure that linkages between terrestrial and marine PAs in the GSW are created and maintained |
| Output 1.7 – Coordinated management – e.g. with GSW Biodiversity Monitoring system – established and sustained. | Inter-PA BD monitoring system has been established and is being maintained across the GSW PA landscape | No inter-PA BD monitoring system exists in GSW or elsewhere in Belize | The GSW's PA managers are maintaining a systematic, model collaborative management system in the GSW, providing an example for national replication | GSW biodiversity database | All PAMOs prioritize equally the need to both create relevant and up-to-date database of biodiversity information in the GSW, and share findings with one another |

| Project Strategy | Indicators | Baseline | Target | Sources of Verification | Risks and Assumptions |
|---|---|---|---|---|---|
| **Outcome 2: Protected area management authorities, local government bodies, private sector landholders and local communities have jointly developed a strategy for sustainable development of the GSW landscape and are co-operating to sustain its implementation over the long-term** | The existence of a GSW management plan including business component produced as a result of collective stakeholder input by year 2, to guide decision-making with regards to management and conservation of the area | No joint strategy exists at a landscape level within the GSW or any comparative watershed within Belize as a model for collective action towards sustainable development | Joint strategy and planning achievements of GSW stakeholder association leverage sustainable business investments to the area. | GSW management plan, developed through joint consultation and participation of the stakeholders<br><br>GSWAC meeting reports | Traditional development patterns can be altered in the GSW through combined awareness, capacity building and alternatives |
| | Project has helped to stimulate new biodiversity-friendly investments in the tourism, agriculture and forestry sectors in particular, with 60% of total new investment in GSW by value being biodiversity-friendly | No coordinated effort exists to actively encourage or solicit biodiversity-friendly investments in the GSW | Local stakeholders have capacity to sustain and expand sustainable business investments beyond GEF process | Private sector investments surveys | Private investors prove responsive to the GSW stakeholders' business strategies, and invest in sectors identified by the GSWAC |
| Output 2.1 - Golden Stream Watershed Advisory Committee: establishment and initial operations | A GSW-level forum is created to promote systematic, coordinated management activities between PA managers and the broad spectrum of local stakeholders in or with an interest in the GSW | No systematic and sustained coordination between the GSW's stakeholders exists to guide management and development of the area based on shared interests and priorities | The GSWAC model has the potential to function as a model for inter stakeholder management replicable elsewhere in Belize | GSWAC meeting minutes and reports | Project can offer locally relevant benefits to address stakeholders' interests |
| Output 2.2 - A watershed-level management plan to direct and enhance conservation and sustainable management of the GSW over the long-term | GSW management plan including conservation and development strategies for the area produced | No management plan or business strategy exists for the GSW or other watersheds in Toledo or in Belize as a whole to provide an example for national replication | The watershed level plan and business strategy function to promote the sustainable development of the GSW | GSW management plan, including business plan | The GSW stakeholders can agree upon preferred strategies to focus upon in the development of the area |
| Output 2.3 Local stakeholders' capacity for sustainable and integrated resource use and management increased | 75% of GSW farmers have been trained and have adopted biodiversity-friendly (e.g., non slash-and-burn) agricultural techniques<br><br>60% of commercial operators in GSW are pursuing biodiversity-friendly ventures | Minimal biodiversity-friendly industry underway in the GSW, largely limited to cultivation of organic cacao and limited ecotourism, benefiting private sector and only to a limited extent, the local communities | Biodiversity-friendly businesses are prevalent in the GSW and the norm for new enterprise formulation, with majority of stakeholders in the area actively supporting or developing such opportunities | Survey of commercial operators in the GSW<br><br>Stakeholder surveys<br><br>End-of-project business survey of economic activities of GSW | The growth of traditional development or extractive industries (logging, large-scale plantation agriculture) expand into the GSW and undermine the resource base upon which the sustainable business alternatives depend |

| Project Strategy | Indicators | Baseline | Target | Sources of Verification | Risks and Assumptions |
|---|---|---|---|---|---|
| | At least one forest-based enterprise and one ecotourism initiative have been established and secured sustainable certification by the end of the project | | | Certification documents & reports | |
| **Outcome 3: Fiscal and legislative environments affecting private protected areas have been clarified and improved as a result of collaborative NPAPSP / BAPPA / GSW efforts** | Sustainability of GSW PPAs has been enhanced through one or more specific changes in the policy environment | PPAs are not recognized by national legislation, or incorporated within the NPAS | PPAs are recognized as an integral part of Belize's NPAS, and legal criteria are developed and instituted to guide their formation and management | New or reformed legislation pertaining to the NPAS / PPAs<br><br>Policy analysis reports | Relevant policy decision-makers appreciate critical role played by PPAs and private lands in consolidating national conservation efforts, and are willing to modify laws and fiscal constraints to enhance an enabling environment for PPA management |
| Output 3.1 Key policy makers and general public's awareness of PPAs' critical role within the NPAS increased | BAPPA awareness campaign, including circulation of GOB-endorsed criteria for defining PPAs, resulting in increased awareness and support for BAPPA's objectives of securing recognition and integration of PPAs within Belize's NPAS. | Little national awareness of importance of PPAs in Belize; BAPPA's level of advocacy and profile minimal | Widespread national awareness of the important role played by PPAs in sustaining the NPAS, and need to regulate their creation and formally integrate them within the national system | PPA criteria document<br><br>Surveys of public / policy makers | BAPPA becomes more organized, proactive and effective in its lobbying efforts, as a result of additional support from the GSW project |
| Output 3.2 PPAs officially recognized by and incorporated within revised legislative framework governing Belize's NPAS | National Protected Areas Act reformed to incorporate recognition of PPAs | PPAs not recognized within national legislation pertaining to PAs (the National Protected Area Act and System Plan) | PPAS recognized within national legislative system | NPAS reformed legislation (document) | Policymakers prove responsive to the need to incorporate PPAs within the NPAS |
| Output 3.3 GSW develops and implements the first legal national model of conservation easements between TIDE's 127 and YCT's GSCP, raising awareness about mechanism in the process | Conservation easement legislation and at least one easement agreement signed, providing an innovative mechanism for not only binding PPAs together in a collaborative PA system, but moreover presenting a platform for integrating private lands within the GSW into the broader watershed management strategy | No conservation easements exist in Belize | The GSW provides a model of conservation easement legislation, prompting extension of the practice to private lands and protected areas, thereby consolidating conservation corridors nationwide | Easement legislation and agreement (documents) | TNC continues to provide legal support required to create draft legislation and support its adoption |

| Project Strategy | Indicators | Baseline | Target | Sources of Verification | Risks and Assumptions |
|---|---|---|---|---|---|
| **Outcome 4: Protected area management authorities and other stakeholders throughout Belize have benefited from, and are beginning to apply, lessons learned from the GSW experience** | Minimum of 2 interconnected PA areas in Belize with at least 2 PA managing entities are applying lessons learnt from GSW | No concrete example of multiple, adjacent protected areas coordinating management across boundaries towards common conservation goals | At least 2 interconnected PA areas in Belize (preferably with a watershed / PPA context), consisting of at least 2 PA managing entities are applying lessons learnt from GSW | PA areas' reports<br><br>References to GSW experience in planning and project documents related to PAM. | Government continues to support the project |
| | The capacity of Belize's national PA system (NPAS) to address institutional barriers prohibiting the effectiveness of the system, in terms of collaboration and standardization of performance between individual PAs, and monitoring of their performance, has been significantly strengthened | Belize's NPAS remains limited in its capacity to promote effective collaboration and standardization of the system | That Belize's NPAS functions in an integrated, coordinated and cost-effective tool for biodiversity conservation and sustainable development. | Revised, adopted NPA Act, 2006<br><br>Reports on the application of the new NPAS 2006 onwards | Government maintains its commitment to the NPAPSP process until its completion, ensuring that coordinated management principles and objectives identified in the planning phase are applied in practice |
| Output 4.1 Dissemination of lessons learned | Communication tools (publications, reports and recommendations) specifically targeting park managers, policy decision makers and the communities that have been produced through the course of the project<br><br>Examples of management lessons being adopted as a result of dissemination of publicity tools throughout Toledo / Belize / the MBC | Minimal awareness of the GSW's potential to provide model of corridor and watershed level conservation | Widespread awareness of and interest in learning more from the GSW model demonstrated amongst Belize's PAMO community | Communication materials on the GSW experience, and records of dissemination strategies used to distribute them. | Other PAMO agencies in Belize are interested in learning from the GSW experience |
| Output 4.2 Project Management & Evaluation | Project evaluation reports (mid-term, final, financial, staff etc) demonstrating that the project has met its objectives, through an appropriate investment of available funds | No GSW-wide management, development or monitoring programme or strategy exists, nor are current, incipient efforts at collaborative work being evaluated | GSW GEF project is managed effectively, is achieving its objectives as shown by the project evaluation results. | Project evaluation reports (mid-term, final, financial, staff etc) - documents | No unforeseen disaster prevents the normal functioning of the project, and requisite evaluation of its achievements at the stipulated stages laid out in the proposal |

**Activities**

**For Outcome 1**

1. Hire core staff, set up office
2. Convene meetings of the GSW's PSC and key technical staff to agree on a watershed-level protection strategy for PAs, and processes for implementing it.
3. Hire 2 consultants (management plan design and biodiversity expert) to work with field staff in collecting baseline biodiversity data and design management plans.
4. Ensure consultants provide comprehensive training to project and GSW APAMO agency staff in their respective skill set areas, to ensure that they have the capacity to meaningfully participate and sustain the management systems designed.

| Project Strategy | Indicators | Baseline | Target | Sources of Verification | Risks and Assumptions |
|---|---|---|---|---|---|

5. Hire consultant to work with the PSC and APAMO technical staff in participatory management and planning processes, to strengthen their overall capacity for collaborative conservation management work.
6. Identify and map land use zones for each of the PAs, and develop respective management guidelines as a result of field research.
7. Conduct social scientific research and community consultations to ensure local participation in and ownership of the PA management plans is generated.
8. Draft 3 PA management plans according to respective and collective interests of PA managers.
9. Ranger manuals produced.
10. Present updates on PA planning efforts and results at the GSWAC meetings, and solicit broader GSW stakeholder input to their formulation in the process.
11. Establish field transects at appropriate stages and representative ecosystems throughout the GSW, and demarcate / signpost the PA boundaries.
12. Coordinate implementation of management plans through shared field communication systems, by training rangers in standardized monitoring procedures, through joint ranger schedule and meetings, and by establishing and equipping field monitoring / ranger sites in the lower GSW, at the GSCP field centre and in the CRFR.
13. Coordinate implementation of terrestrial PA management with the PHMR
14. Implement ecosystem rehabilitation strategies where appropriate, such as select reforestation efforts of areas degraded by the hurricane / logging.
15. Standardized biodiversity M&E indicators developed to enable assessment of management effectiveness / indicate amendments to system where necessary, with training provided to local agency staff to ensure methodologies are understood and streamlined across the associated PAMOs.
16. Develop monitoring system to evaluate socioeconomic impacts of project intervention, compatible with biodiversity M&E system produced, with training provided to local agency staff to ensure methodologies are understood and streamlined across the associated PAMOs.
17. Establish centralized database where all information gathered from different PAs will be amalgamated on a periodic basis.
18. Quarterly meetings of the PSC to review PA management effectiveness and reform fieldwork / strategies where necessary.

**For Outcome 2**

1. Invite key stakeholders to attend GSW advisory board meetings
2. Provide training to key stakeholders in participatory management, consultation and conflict resolution mechanisms, with manuals produced to guide such processes.
3. Hire consultant to design GSW management plan, identifying appropriate forms of activity (conservation, development) in respective zones of the GSW, in collaboration with project staff, local communities and key stakeholders.
4. Hire consultant to design business plan component of a GSW management plan that compliments the GSW's respective PA plans, in collaboration with project staff and key stakeholders
5. Define criteria for providing loans / grants to support development of key sustainable enterprises identified in plan, and processes for identifying / disseminating information about such opportunities amongst targeted resource users / community groups.
6. Build local stakeholders' capacity to manage and development sustainable enterprises , including:

- *Ecotourism*; providing technical support for communities to plan ecotourism initiatives; provide scholarships for community members to become certified as ecotourism guides, provide investments to help develop community ecotourism ventures, regional field trips.
- *Agroforestry and NTFPs*; training to GSW buffer communities in agroforestry and NTFP alternatives such as cacao, flowers, vegetables and xate, and including timber trees as part of the ongoing YCT effort to reforest degraded areas, small investments in such industries, regional field trips.
- *Value-added timber products:* provide planning, training and marketing assistance for small community value-added enterprises such as carpentry (men) and crafts (women); provide resources for these ventures from sustainable / multiple use areas of the PAs, regional field trips.
- *Additional:* organize marketing materials and investor forums to facilitate development of these and other alternative industries.

7. Produce materials and organize events designed to attract investor interest in the GSW, according to the indicated and supported development ventures identified in the GSW management and business plans.
8. Coordinate subsequent investor interest and sustainable business development through the GSWAC trimester meetings.

**For Outcome 3**

1. Convene meetings between GSW staff / agencies and BAPPA at which to develop lobbying and publicity strategies that ensure awareness of importance of PPA is raised amongst key policy decision makers and general public, clarify criteria for PPA recognition, and define respective roles and responsibilities in the ongoing process.
2. Develop publicity materials and strategies for disseminating them.
3. Convene meetings between GSW/BAPPA and key decision-makers and the NPAPSP board / consultants at which to present arguments for inclusion of proposed PPA criteria and model within the reformed NPAS legislation.
4. Assist BAPPA to clarify and consolidate draft criteria for PPA recognition
5. Secure legal technical support from TNC to work with BAPPA and YCT/TIDE in particular, to consolidate ongoing efforts to design an appropriate legislative model to legalize conservation easements within the Belizean context.

| Project Strategy | Indicators | Baseline | Target | Sources of Verification | Risks and Assumptions |
|---|---|---|---|---|---|
| 6. Lobby for legislative reform to incorporate suggested conservation easement model.<br>7. Hold meetings between YCT/TIDE and their respective boards / staff to define and sign an acceptable model for a conservation easement encompassing their respective PPA lands in the GSW.<br>8. Design and implement an awareness campaign to educate private landowners and relevant authorities about the potential benefits of conservation easements, focusing particularly on stakeholders within the GSW (e.g. BLE) and others in the likely areas of project dissemination (e.g. eco-tourism resorts on the Rio Grande; private landowners and developers on Deep River and Monkey River).<br>**For Outcome 4**<br>1. Materials detailing the GSW collaborative, coordinated management experience designed and produced, including reports, publications, CD-rom, website, brochure and poster.<br>2. Various meetings and field trips organized for relevant national stakeholders and PAM organizations (e.g. APAMO, BAPPA, BMC) to alert them as to the GSW experience.<br>3. Capacity building training in relevant management, marketing and conflict resolution areas.<br>4. Project immersion experience offered to 2 protected area management organizations demonstrating greatest interest and potential in replicating project experience. | | | | | |

## Annex B: GSW Conceptual Model[63]

| Ecological Impacts (including biological, physical and hydrological aspects) | Relates to these threats | Problems/ Threats ('Things People Do') 64 | Relates to these causes & barriers | Underlying Causes ('Reasons why people do things') and Barriers ('Factors standing in the way of solutions') | Relates to these outputs | Outputs |
|---|---|---|---|---|---|---|
| I1) Soil compaction | T1, T2 | T1) Industrial logging (CRFR) | C2, C3, B4, B5, B6 | C1) Poverty and limited economic alternatives | O1.2, O1.4, O2.2, O2.3 | O1.1) Watershed-level strategy for PAs |
| I2) Habitat fragmentation | T1-T4, T6, T7 | T2) Traditional logging methods (CRFR) | C1, B6 | C2) FD traditional way of earning revenues from its lands | O1.4, O1.6, O3.2 | O1.2) GSCP management plan: development and implementation |
| I3) Stream blockages | T1, T2 | T3) Agricultural encroachment (CRFR) | C1, C5, B2 | C3) Traditional 'unsustainable' development approach | O2.2, O2.3 | O1.3) Block 127 management plan: development and implementation |
| I4) Erosion and sediment run-off | T1-T4 | T4) Destructive agric. methods, including milpa agriculture (NPL) | C1, B3, B7 | C4) Demand for development | O2.2, O2.3 | O1.4) CRFR (ex-MMFR) management plan: development and implementation |
| I5) Unsustainable resource use | T5, T8 | T5) Illegal fishing (PHMR) | C1, B6 | C5) Population growth & associated land shortages | O2.2, O2.3 | O1.5) PHMR management plan: implementation |
| | | T6) Highway construction (GSCP, PHMR) | C4 | B1) Multiple PAs within ecologically connected areas are not well coordinated | O1.1-O1.4, O3.1, O3.2 | O1.6) Coordinated management established and sustained. |
| | | T7) Fire (CRFR, GSCP, B127, NPL) | B6 | B2) PAs are not economically or socially integrated with surrounding buffer zones | O2.1, O2.2, O2.3, O3.1, O3.2 | O2.1) Golden Stream Watershed Advisory Committee: establishment and initial operations |
| | | T8) Hunting (CRFR, GSCP) | C1, B6 | B3) Conservation corridors are ineffective in linking PAs | O2.1, O2.2, O3.2 | O2.2) GSW-level management and business plan produced and being implemented |
| | | | | B4) Traditional approach to forest management is only model available (CRFR) | O1.4 | O2.3) Local stakeholders' capacity for sustainable & integrated resource use & management increased |
| | | | | B5) Reactive management of forest reserves / no planning | O1.4 | O3.1) Adaptive management |
| | | | | B6) Limited or non-existent regulatory enforcement | O1.1-O1.6 | O3.2) Dissemination of lessons learned |

63 This table integrates and summarizes the relationships among impacts, threats, causes, barriers and outputs. The reader proceeds by column, from left to right to see the linkages, as indicated by the 'Relates to' columns. These issues are discussed more fully in C-2.1 to C-2.3 of the main text.

64 Key to sub-sites: CRFR – Columbia River Forest Reserve; GSCP – Golden Stream Watershed Preserve; B127 – Block 127; PHMR – Port Honduras Marine Reserve; NPL – National and private lands.

| Ecological Impacts (including biological, physical and hydrological aspects) | Relates to these threats | Problems/ Threats ('Things People Do') 64 | Relates to these causes & barriers | Underlying Causes ('Reasons why people do things') and Barriers ('Factors standing in the way of solutions') | Relates to these outputs | Outputs |
|---|---|---|---|---|---|---|
| | | | | B7) Limited capacities related to alternative agricultural techniques | O2.3 | |

## Annex C: Information on Sub-sites within the GSW

The Golden Stream Watershed (GSW) includes multiple ecosystems and multiple protected areas. The main text presents an integrated overview of the area, including threats, baseline activities to address them and a baseline scenario. This annex provides additional details, broken down at the level of the individual geographic components of the site. These include:

1. Columbia River Forest Reserve (CRFR)
2. Golden Stream Corridor Preserve (GSCP)
3. Block 127 and associated land parcels
4. Port Honduras Marine Reserve (PHMR)
5. Belize Lodge and Excursions (BLE)
6. National and private lands owned or occupied by indigenous communities

### C.1 Columbia River Forest Reserve

*C.1.1 Site description, threats analysis and baseline activities*

The Columbia River Forest Reserve (CRFR), located to the west of the GSCP, is a biodiversity-rich area in urgent need of more systematic management. The CRFR (see **Map 1**) is under the exclusive management of the Forest Department, but the GoB readily admits that its ability to effectively monitor this reserve is extremely limited due to **financial and personnel constraints**. These are not its only limitations: the Forest Department is also constrained by the institutional and economic legacy of forest management in Belize, forged in its early days as a colony whose sole purpose for existing was because of the precious hardwoods it contained. The forest industry remains undiversified, predicated upon extraction and lucrative personal contracts which provide minimal social or economic benefits for the country at large. The underlying objective of Belize forestry was never to develop the country over the long-term; rather to create immediate personal fortunes. Overcoming this **historical approach to forest management** will not only require greater investments, but also innovative ideas encouraging a diversified forest industry, supported by new policies, and collaborative private-public ventures. In the meantime, the ecological integrity of CRFR like other forest reserves in the country will continue to suffer from the inadequate management system that governs it.

The long-term prospects of the portion of the CRFR that falls within the GSW and directly impacts it are undermined by the fact **no management plan** exists for the area.[65] This represents a significant barrier to effective management of the 148,357 acre CRFR, of which the area in question represents approximately 25-33%.[66] The most recent study of the CRFR was produced in 2004, commissioned jointly by FFI, YCT and TIDE, who were all concerned to learn more about the ecological health of this critical reserve which directly impacts their respective protected areas. The study concluded that past management practices were endangering the CRFR's future value as a forest (extractive) and ecological reserve. It called for a new approach to CRFR including, *inter alia*, a management plan, criteria to incorporate the recently added CRFR section into the broader CRFR management framework, continuous monitoring of the area and active reforestation efforts.

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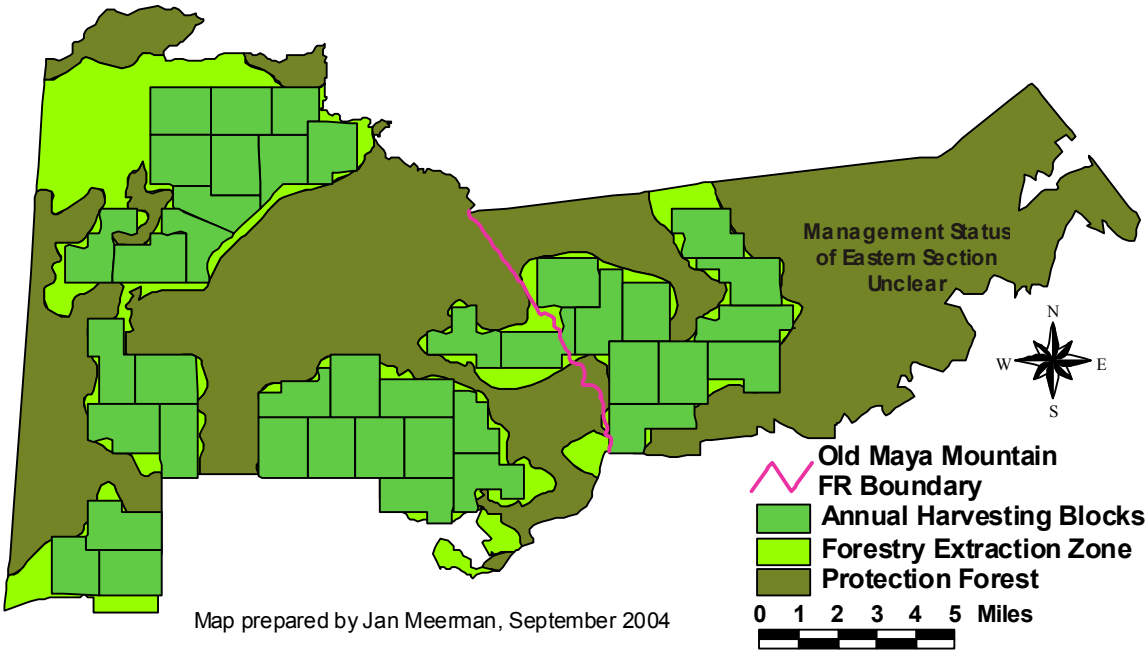
65 These lands were formerly known as the Maya Mountain Forest Reserve but amalgamated within CRFR in 1997, and thus not included in the CRFR management plan formulated in 1994.

66 Meerman, Jan. 2004. "Rapid Ecological Assessment of the Columbia River Forest Reserve Past Iris." Report commissioned by FFI, YCT, TIDE.

**Map 1. Columbia River Forest Reserve (Forest Department)**




With respect to the portion of CRFR lying within the GSW, this area has been traditionally logged in the past. More recently, **logging** has been conducted by a U.S.-based company called ECOFOR which was granted a salvage concession to 28,000 acres, or over half of this area, shortly after the 2001 hurricane. Under the terms of this concession, Ecofor was only allowed to salvage trees that had been irreversibly compromised by the hurricane. Additional restrictions, such as avoiding logging on hillsides also apply. However, a number of ecological **impacts** associated with this salvage operation have been observed by local partners and documented,[67] including: (i) soil compaction and habitat fragmentation due to logging road construction, (ii) stream blockage, (iii) erosion and sediment runoff into rivers, with increased flooding risks downstream. Informal monitoring has also suggested that, in light of FD's inability to oversee Ecofor's operations, the company has not abided by the terms of its concession, for example by logging on hillsides and extracting still viable trees.

Current FD management has stated that all post-Hurricane salvage permits will be reviewed and discontinued in 2005. It is unclear at present whether Ecofor will seek to replace its expiring salvage concession with a any additional non-salvage logging concession; however, given the company's investments in creating forest roads over the past few years, they will likely be interested in doing so. Since only long-term **concessions require holders do reforest or develop management plans** for their concession area, and given that the issuing of long-term concessions is not the norm the net effect is expected to be little different from the salvage concession logging in recent years. At the same time that the larger ECOFOR concession has been impacting the area, **small scale logging** on an individual basis by villagers or townsfolk from the District has also been underway, ranging from petty personal permits intended for domestic use only to 1 year forest licenses. Although these forms of small scale logging which have proven particularly intense after the 2001 hurricane are expected to decrease as timber felled by Iris is used up or decayed, the impact of unmonitored small scale logging still remains a management and conservation issue which FD has acknowledged needs to be addressed and replaced where possible with sustainable, community-based management alternatives.

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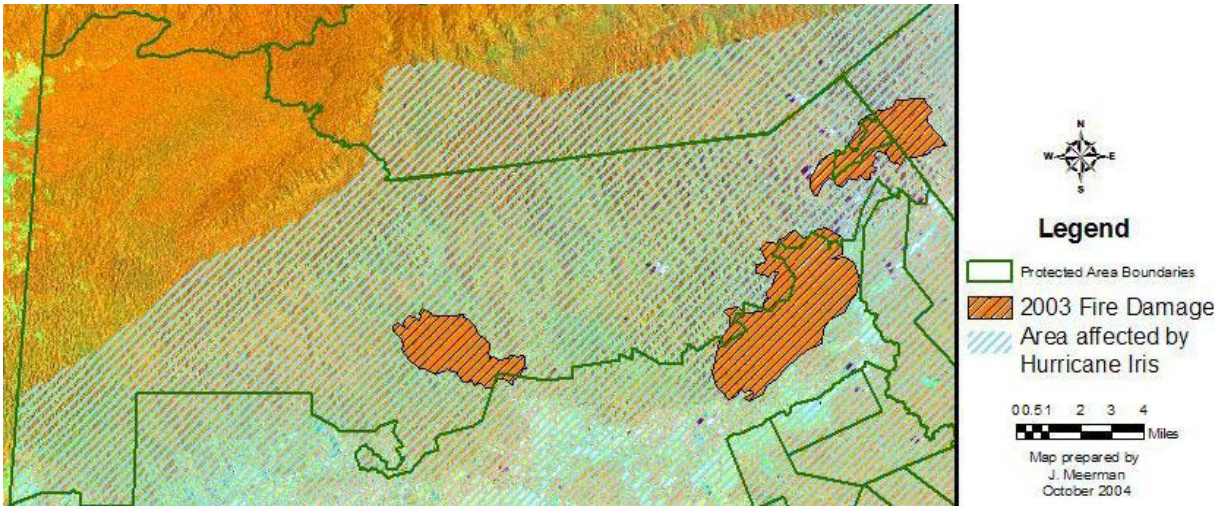
[67] Rapid Ecological Assessment of the Columbia River Forest Reserve Past Iris. Jan Meerman, 2004 (Report commissioned by FFI, YCT, TIDE).

Overall, the project development team estimated that ongoing logging activities within CRFR, including both small scale salvage and 5-year logging, were having moderate impacts on forest biodiversity within CRFR (particularly on forest structure), with low-moderate impacts on other areas within the watershed. These moderate impacts, if allowed to persist, could become more significant over time as degradation of forest resources continues. On the positive side, the new FD administration has welcomed the 2004 study and has shown considerable interest in changing the legacy of forest management in Belize by forming the Toledo Healthy Forest Initiative Taskforce. As such, it is an opportune moment for a concerted effort to transcend the unsustainable baseline scenario governing the management of the CRFR.

Although **encroachment** into the CRFR for the purpose of cultivation by local villagers is not a widespread phenomenon in the GSW area, this is a real threat affecting the southwestern fringes of the CRFRF, and villages such as San Pedro Columbia and San Jose. Of the GSW's focal communities, all are increasingly suffering from land shortages created by population growth, regional development, and lack of alternative income-sources. As such, although forest fragmentation within the CRFR because of agriculture is not a major present threat, it nevertheless is a very real one looming on the nearby horizon. Moreover, although agricultural is not directly encroaching within the CRFR, the affect of agriculture in terms of forest fires has impacted the fringes of the CRFR and GSCP; particularly in the post-hurricane Iris period as demonstrated in Map 2 below.

**Map 2. Fire Damage in CRFR and surrounding areas**




Within the CRFR, there is a 760 acre area of land known as La Sierra that was de-reserved in the mid 1990s and designated as a research centre to be used by the University of Cleveland as an ongoing biological and archaeological research centre, but owned by GOB-FD. Accommodation and research facilities were constructed, and La Sierra was approximately 5 years until the Cleveland project dissipated due to faculty changes and financial issues; a situation that was compounded in 2003 when the milpa forest fire destroyed the residential quarters of the facility (as depicted in the above map). The centre represents a valuable asset for research and monitoring of the CRFR. Nevertheless, as a result of GOB financial constraints, the centre is steadily becoming dilapidated, and will within a short time become an unsalvageable investment.

*C.1.2 Baseline scenario*

In the baseline scenario, GoB resource constraints and institutional weakness would preclude establishing a management presence in the Columbia River Forest Reserve, leading to continued degradation as predicted in

the 2004 REA report.[68] As noted in the same report, evidence of wildlife and habitat regeneration post-Hurricane Iris seem much more positive in the adjacent GSCP compared to the CRFR; the assumption given to explain this difference was the contrasting effectiveness of the respective management regimes for these areas. Since no concerted effort is being made to link management of these mountainous areas with the interdependent lowland areas being rehabilitated under NGO management, and no additional funds to enhance the management of CRFR by FD are envisaged to be forthcoming, natural regeneration of the watershed conservation corridor and related fauna and flora would likely be significantly retarded and undermined. Hunting and logging would continue to be concentrated in the more resource-abundant and intact upper reaches of the Maya Mountains. Such practices would be compounded by the continued financial inability of government and disinterest on the part of private investors to introduce and promote sustainable livelihood alternatives in such an under populated and economically marginalized area as Toledo. As land availability continued to constrain the local communities, infractions into the CRFR which are presently largely confined to hunting and gathering of fruits and traditional medicines would expand to include slash and burn agricultural in upland and lowland areas. The likelihood of the lowland PPAs becoming conservation islands as opposed to corridors interlinking critical mountain and marine habitats would be greatly enhanced, while the direct impacts on downstream terrestrial, riverine and marine ecosystems of continued forest fragmentation in the CRFR and national lands bordering it would also increase.

## C.2. Golden Stream Corridor Preserve (GSCP)

*C.2.1 Site description, threats analysis and baseline activities*

One of the most significant conservation initiatives to emerge in the GSW is the collaborative programme established in 1998 by Fauna & Flora International (FFI) and its local institutional partner, the Ya'axche' Conservation Trust (YCT). FFI is a UK-based international NGO with a century of innovative global expertise in protected areas management, institutional strengthening and sustainable business development. YCT is an indigenous-based and run NGO whose institutional objectives are to promote sustainable development opportunities and biodiversity conservation within the Golden Stream watershed, according to locally resonant priorities.

In 1999, FFI secured funding to purchase a 9,554 acre property within the Golden Stream watershed on the river's northern banks, saving its habitat from imminent conversion to a large-scale citrus plantation (see GSW map, page 7). The property was named the Golden Stream Corridor Preserve (GSCP), and transferred to the legal ownership of YCT. In 2004, FFI secured additional funding to purchase a 5,416 acre property lower downstream on the other side of the river, facing the southeastern most portion of the first property. This parcel, which was originally owned by a **shrimp farm developer** from Stann Creek who has also engaged in logging of other properties he owned in Toledo, and was expected to utilize the area in a similar fashion,[69] was amalgamated with the existing GSCP to create a 14,970 acre PPA. As such, its purchase was of critical importance to ensuring that the biodiversity and conservation corridor initiative being developed on the Golden Stream by FFI and YCT could be sustained.

Guided by a formal institutional partnership and management agreement for the GSCP, FFI and YCT have since 1999 developed a programme to promote conservation and sustainable development objectives in and around the GSCP and broader watershed. FFI and YCT's respective and joint programme in southern Belize has focused on the following broad areas:

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[68] Meerman, Jan. 2004. "Rapid Ecological Assessment of the Columbia River Forest Reserve Past Iris." Report commissioned by FFI, YCT and TIDE.

[69] Shrimp farming of coastal lands represents another threat to the GSW's integrity; representing a potential development of both this parcel and TIDE's adjacent 127, as discussed below.

- **Biodiversity Conservation.** Activities have included developing a biodiversity monitoring programme for the GSCP; establishing a tree nursery at the GSCP from which over 6,000 endemic trees have been grown and subsequently replanted within the wider watershed area.
- **Building local capacity and awareness for conservation management.** Activities have included training ex-hunters and loggers from the local Mayan communities to work as GSCP field rangers; providing a continuous education outreach programme for the GSCP buffer community schools; training local farmers in biodiversity-friendly, organic farming techniques to replace damaging slash and burn farming.
- **Sustainable Livelihoods.** Activities have included a widespread training programme in agroforestry agricultural practices, including the cultivation of cacao for international export and vegetables / fruits for local market and home consumption; training in sustainable forest extraction techniques; establishment of a community-managed carpentry woodwork shop; strengthening of community eco-tourism capacity.
- **Policy & Advocacy in Conservation Management.** Activities have included advocacy for reform of the NPAS related to private protected areas through BAPPA, and support for policy reform to enhance community-based forest management in Toledo through the Toledo Healthy Forest Initiative Taskforce.

These combined activities have helped FFI and YCT to address many of the pre-existing threats to the GSCP, such as incursions by villagers from the buffering communities, mostly to hunt animals, but in some cases, to clear land for farming or grazing of domestic animals. Community outreach work combined with continuous monitoring by the local ranger team have helped to abate threats posed by incursions, resulting in the GSCP being established as one of the most recognized and functioning PPAs in the country, both in terms of its internal functions and with respect to its unique potential to create a physical conservation corridor along the length of the GSW where it is located, between the CRFR and PHMR. In 1999, the GSCP became officially recognized as the south-eastern component of Belize's MBC national corridor system. The GSCP has also gained recognition as an integral component of the national protected areas system from Belize's Ministry of Natural Resources in the form of a letter of recognition from the Minister, and from the Protected Areas Conservation Trust (PACT), who have included the GSCP on their list of PPAs.[70]

Despite these achievements in addressing local incursions to the GSCP, and securing national recognition for their work, this PPA's integrity is still threatened; primarily by forest fires set by milpa farmers. As shown in the map of 2003 fires in the previous section, fires originating south in Golden Stream and north from Medina Bank both threatened the GSCP's northwestern borders that year. Only a timely but dramatic intervention by the YCT rangers; namely, bulldozing a fire breaker between the GSCP and Golden Stream lands, prevented the fire from consuming the PPA. As such, activities on the borders of the GSCP still threaten its integrity. Moreover, although communities currently respect the PPA boundaries, if the trends of land scarcity and population increase continue, compounded by poverty and underdevelopment, they are likely to covet the large stretches of 'empty' land located on their borders. The same may be true with regards to hunting; YCT's efforts in effectively patrolling the area have led to a marked regeneration of indicator species, particularly the white-lipped peccary which was observed in large numbers in the GSCP in early 2005. With these prize hunting targets regenerating, while communities continue to suffer from lack of means to purchase canned goods from the store, the YCT rangers might well find their positive patrolling experiences become more problematic over successive years to come. By the same token, even if YCT is successful in preserving the GSCP, without concomitant efforts to improve management and conservation of adjacent lands such as community areas or the CRFR, continued trends of unmonitored logging or small-scale agriculture could render the GSCP an island, with greatly diminished ability to realize its potential as a model conservation corridor for Belize.

*C.2.2 Baseline scenario*

In the absence of sufficient means to coordinate conservation between the GSW's protected areas, FFI/YCT's conservation efforts will continue to be focused primarily upon the management of the GSCP. With PACT support, GSCP's management plan would be drafted, the GSCP would be zoned into conservation and sustainable use zones, and FFI would continue to provide technical and capacity-building support to YCT to

[70] www.pactbelize.org

ensure the plan was effectively administered. YCT's biodiversity monitoring programme, funded by the Oak Foundation would continue to expand throughout the GSCP, but would remain focused predominantly upon the GSCP alone rather than incorporating the adjacent PAs to develop a watershed-level system. Adjacent communities would be encouraged to develop agroforestry and ecotourism ventures in collaboration with YCT in the sustainable use zone, in an effort to build financial sustainability of the GSCP, and broader social benefits from conservation throughout the GSW. However, as noted in the previous discussion on the GSCP, despite YCT's efforts in encouraging local farmers to adopt agroforestry methods, milpa-generated forest fires still pose a significant threat to the GSCP. Without a more concerted and integrated attempt to incorporate the communities in a multifaceted watershed-level management and development framework, it is likely that these threats will continue, while direct incursions which are currently being kept at bay, will steadily increase.

FFI and YCT would continue to encourage collaborative activities with and extension of the biodiversity monitoring system to TIDE's private protected areas in the GSW in particular, but also FD's CRFR and BLE's private lands. However, without means to ensure this occurs, collaborative conservation management would remain sporadic, and would fail to consolidate incipient efforts. As such, although the GSCP would continue to develop its conservation management effectiveness, and sustain internal monitoring of the private protected area, the GSCP would function in isolation, with its progress not replicated or coordinated with adjacent PAs. Existing opportunities to consolidate the incipient GSW conservation corridor as an exemplary model of effective, standardized and inter-linked PA management and to create a working model of the MMMT concept would be lost.

## C.3 Block 127 and associated land parcels (TIDE)

### *C.3.1 Site description, threats analysis and baseline activities*

In addition to its management role at PHMR, TIDE was given Block 127 in 2001 by the Government of Belize, as part of a Debt for Nature Swap facilitated by The Nature Conservancy (TNC) between the Governments of Belize and the United States, with an estimated value of $10.7 million.[71] Block 127 is an 11,879 acre parcel of coastal land adjacent and southeast to the GSCP, which was severely logged in the past, and represented a prime coastal land of potential interest to the shrimp farm developers extending their operations steadily south from the adjacent District of Stann Creek. Both because of its strategic location in the GSW, its impacts on the PHMR, and the real threat posed by expanding shrimp farms, securing these lands for conservation represented a key strategy which TIDE was successful in pursuing. However, the lands were secured without concomitant funds to manage them. In contrast to its relatively effective management of the PHMR, TIDE has yet to conduct comprehensive baseline biological research of this area. However, indications from research conducted by FFI/YCT in a limited transect within 127 as part of their 2001 survey suggested that these lands had not recovered from the affects of extensive past logging, and that rehabilitation strategies for the parcel was therefore advised. Once further baseline information has been collected, TIDE intends to also address the need for producing a management plan for this critical property, and establishing a permanent ranger presence in the preserve. In early 2005 TIDE purchased an additional 500 acre parcel of private lands known as St. Martin's, located between Golden Stream and Middle River, to the south. TIDE has not yet established any system of management for this recently acquired parcel.

### *C.3.2 Baseline scenario*

Without the GEF intervention, TIDE would continue to maintain a minimal management presence on its private lands within the GSW, with activities limited largely to weekly monitoring patrols of the area. At present, TIDE has no means of conducting baseline biological assessments of the PPA lands, drafting of a management plan or rehabilitation efforts for them, and remains unsure how it would be able to reverse this situation in the immediate future. As such, effective management of 127, and integrated management between 127 and the other PPAs of the area would remain limited.

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[71] http://nature.org/pressroom/press/press326.html

## C.4 Port Honduras Marine Reserve (Toledo Institute for Development and Environment)

*C.4.1 Site description, threats analysis and baseline activities*

The Port Honduras Marine Reserve (PHMR) is a one hundred sixty square mile marine reserve designated in 2000 into which the Golden Stream watershed and 5 adjacent rivers disburse. It is operated by the Toledo Institute for Development and Environment (TIDE), under a co-management agreement with the Department of Fisheries. The PHMR makes up the coastal and marine segment of the MMMC in southern Belize, and is also an integral part of the MBC. The PHMR is an area rich in biodiversity and as such is an important conservation area both nationally and globally. However, prior to being declared a MPA, the PHMR's critical marine resources was subjected to continuous and unmonitored exploitation, both by local fishermen but particularly by unscrupulous Honduran and Guatemalan fishermen, who actively exploited the virtual absence of marine patrols by Belizean authorities. TIDE was able to successfully fill the management vacuum created by Fisheries Department inability to conduct more than a weekly patrol of the area, and has over the past 5 years, and with its strong marine monitoring presence, and marine ranger station at Abalone Caye in the heart of the PHMR, has achieved dramatic reduction in unsustainable marine resource exploitation over the past five years. TIDE drafted a management plan drafted for the reserve in 2001; a rolling or flexible document, which is due to be revised at the end of 2005.

*C.4.2 Baseline scenario*

Without the GEF intervention, TIDE would continue to manage the marine reserve in an efficient manner, addressing the internal threats to the reserve posed by fishermen from Belize and beyond. However, given TIDE's professed difficulties in raising funds for management of its private terrestrial lands compared to its success in leveraging money for the PHMR, it would continue to lack the ability to effectively integrate marine conservation with the terrestrial areas and watersheds that also impact the reserve.

## C.5 Belize Lodge and Excursions

*C.5.1 Site description, threats analysis and baseline activities*

Belize Lodge & Excursion (BLE) is an ecotourism company with a 13,000 acre property to the southwest of GSCP, which extends from the banks of Golden Stream deep into the Rio Grande terrestrial watershed area. Managers first alerted FFI to the conservation potential and threats in the Golden Stream, and the sale of the original GSCP lands in particular. BLE was subsequently greatly involved in establishing the reserve and collaborative watershed management process. BLE works to integrate conservation and community development priorities within its business and operational programme, and is in the process of seeking recognition for a private protected area within their property on the Golden Stream, which they have called the Boden Creek Ecological Reserve. BLE, YCT and TIDE are in the process of defining a tripartite collaborative Memorandum of Understanding to guide joint monitoring and development activities in the GSW, which includes the establishment of a joint ranger station on BLE's property down stream, and conservation investments from BLE to the local NGOs from visitation income.

*C.5.2 Baseline scenario*

In the baseline scenario, BLE would continue to expand its tourism operations with the support of its independent business partners. A portion of these funds would be directed towards monitoring of the BLE lands, efforts to establish a recognized PPA within them (i.e. the Boden Creek Ecological Reserve) and monitoring of the Golden Stream river. BLE is expected to continue to respond to YCT and TIDE's efforts to coordinate these monitoring activities in the river, and could be persuaded to join its lands within the biodiversity monitoring system established by FFI/YCT in the GSCP. However, BLE is not considered likely to invest its own time and resources into ensuring effective consolidation of these efforts to coordinate management in the GSW, and will rather remain a passive partner where collaborative conservation partnerships are concerned. With the backing of the GEF initiative, the proponents are however confident that they would have more incentives to encourage

BLE's participation. In sum, without the GEF intervention, existing collaboration between these critical private lands and GSW's official PA managers would likely remain loose and undefined, a state not conducive to integrated landscape management.

## C.6 National and private lands owned or occupied by indigenous communities

*C.6.1 Site description, threats analysis and baseline activities*

Below the mountains, on either side of the GSCP, are the principal indigenous communities of the area (Golden Stream, Indian Creek, Tambran and Medina Bank). These communities are located upon a mosaic of private property, leased and national lands, and do not fall under any coordinated management system. Formal community tenure of these areas remains patchy and unclear. Communities are extremely poor while their populations continue to increase. The likelihood is that if these trends continue, while no concrete effort is made to integrate and harmonize protected areas and their management, and provide benefits to the communities that surround them, the communities will come to see the protected areas lying adjacent to them as locking away lands and resources they would otherwise be able to access; creating considerable pressure upon the integrity of the GSW protected area corridor.

As a counterbalance to this potential eventuality, YCT has been working closely with the communities since 1998 to foster increased conservation awareness and tangible modifications in indigenous livelihood systems, such as dissuading villagers from damaging slash and burn agriculture, whose fires often stretch out of control from small agricultural plots to consume thousands of acres of community, private and PA land alike, to canopy-dependent agro-forestry ventures. With community representatives on the YCT board, and staff drawn from these same communities, strong foundations exist for continued and consolidated collaboration with these villages and their land use areas.

The communities of the project demonstration area all have maps of their communal use areas, while Indian Creek and Golden Stream have resolved border overlaps through mediated negotiations between leaders in 2002. When YCT has been confronted by incursions of hunters in the GSCP, or have found villagers fishing in the Golden Stream, they have been able to address the problem very effectively through recourse to village leaders and meetings, where the infracting party is publicly dissuaded from their course of action.

If there is one way communities have most obviously benefited from their exposure to development projects, it is in terms of improved community organizational capacity. Several local community groups (e.g. Indian Creek Corn Mill Group; Golden Stream's Crafts Group) provide evidence of existing organizational capacity. YCT's work in organizing farmers into inter-communal agroforestry associations has also been critical in demonstrating indigenous communities' ability to organize according to new rationales and objectives. The active participation of local villagers in other YCT community-based projects, such as environmental education, sustainable forestry and eco-tourism provide further evidence to substantiate the argument that communities have the capacity and willingness to engage in alternative organizational and developmental initiatives.

*C.6.2 Baseline scenario*

In the baseline scenario, YCT would continue their education outreach and sustainable livelihoods efforts with the buffering communities, supported by the Oak Foundation, Social Investment Fund, PACT and UNDP GEF SGP, in the effort to encourage them to adopt more biodiversity-friendly practices and thereby reduce their impacts on the GSCP and GSW. FFI, YCT and TIDE would also continue to work on shared development activities in the area, for example in the design of ecotourism strategies for PA and non-PA areas alike with the support of the Ecotourism Consulting Group. However, YCT would ultimately lack the means to ensure these efforts become incorporated within an all-encompassing complimentary management framework that comprehensively addresses the capacity-building, livelihood strengthening and economic diversification interests expressed by the communities. YCT would also be unlikely to effectively assist the communities in meeting their community-based management aspirations regarding village lands with insecure land tenure and forest reserve lands without the GEF support. As such, it is expected that a majority of community members

would continue to practice slash and burn agriculture and timber extraction through petty permits on these lands, and in the absence of broader stakeholder support to plan sustainable management of them, would be driven by economic need and tenure security to unsustainably exploit them; and invade adjacent PPAs when available lands are exhausted.

## ANNEX D: REGIONAL CONTEXT FOR DEMONSTRATION SITE

This annex describes the sociopolitical and economic characteristics of the regional project context, namely, the Toledo District within which the Golden Stream watershed is situated. It is important to understand this geographic level, since it provides the immediate political, economic, social and environmental context within which the GSW site is ensconced

### REGIONAL DEVELOPMENT CONTEXT

The development context in Belize's southernmost District of Toledo involves a combination of infrastructural development and 'traditional' development thinking. Over the past decade, the traditionally marginalized Toledo District has become a centerpiece of national development policy; This situation presents both threats and opportunities for the District, its environment – which as indicated by the long list of protected areas in the Toledo District presented in the previous section, has benefited greatly from the area's longstanding underdevelopment - and its people.

The ongoing paving of the Southern Highway to link Toledo District with the rest of Belize, and the planned highway construction project to link southern Belize with Guatemala, each represent infrastructural improvements that local businesses should benefit from. However, without adequate strengthening of planning and collaborative management capacity at the local level, sustainable development aspirations could be steamrolled by opportunistic and unscrupulous developers. The highway has thus far brought with it a suite of mostly minor, direct impacts to the project demonstration site and target replication sites, including: (i) increasing levels of road kill, (ii) increased sediment loads, particularly during the construction phase, and (iii) increasing levels of solid waste, i.e., garbage, some of which is finding its way into PHMR. While traffic levels are expected to remain quite low for the immediate future, a future connection to the Puebla-Panama Central America highway will serve to further open the formerly isolated District to regional development trends and investments – both sustainable and unsustainable. The latter may include unregulated immigration to settle so-called 'vacant' lands of Toledo, with potential to dramatically reverse the low population densities that have facilitated conservation, and increased levels of land clearing as a result of logging or for the purposes of industrial agriculture.

Parallel to the above infrastructural developments is a political and development policy context characterized by an inability to define and implement common objectives and approaches for Toledo. An extensive IDB-funded planning process focused on southern Belize in the late 1990s attempted to provide a comprehensive blueprint for long-term sustainable development in Toledo and adjacent Stann Creek Districts. The Government established the Toledo Development Corporation (TDC) in 2000 as a quasi-governmental body mandated to implement the Toledo components of the resulting Southern Regional Development Plan (SRDP). The TDC's progress has, however, been minimal, partly due to a lack of financial support. Neither has TDC been able to effectively fulfill its role as a facilitating agency, encouraging local NGOs and other agencies to work collectively to meet common goals.

Without applied examples of sustainable development, or a regional entity able to secure effective collaboration to promote these objectives, a business-as-usual approach has prevailed. Local authorities and businessmen continue to pursue short-term economic ventures, such as facilitation / implementation of logging and mining exploration permits, dam and road construction, forest clearing for unplanned housing developments and agriculture. All these occur in spite of the pro-sustainable development planning framework established by the SRDP. In this context, visible, multi-stakeholder sustainable development and conservation models able to encourage the translation of sustainable development theory into practice become critically important.

REGIONAL SOCIO-ECONOMIC CONTEXT

In 2004, the population of Toledo was estimated at 26,800, of which 21,900 were rural inhabitants and 4,900 urban.[72] The Maya indigenous groups of Toledo – both Ke'kchi and Mopan represent an estimated 95% of the 2,000 inhabitants residing within the direct project area i.e., the GSW. [73] As such, the Maya are clearly the key ethnic group to consider with respect to community stakeholder interests in the proposed MSP project.

To summarize the socioeconomic conditions of the Maya communities with which the project proposes to engage, they are without question the most marginalized ethnic group in the country. Indigenous interests and perspectives have historically been neglected by state, private and multi-national initiatives alike. Ineffective social inclusion and support have been cited as primary reasons for the failure of many development projects in Toledo; but despite this broad awareness, politicians and multilateral investors have continued to repeat the same mistakes.[74] The Toledo District and its Mayan inhabitants in particular suffer from disproportionately high poverty levels, compounded by the worst social security services in the country. Compared to a national average of 33.5% classified as very poor, the figure in Toledo is a staggering 79%.[75] Ironically, Toledo was also identified as the most expensive District in the country to live, due to the high transportation costs facing suppliers of basic goods and services, which are subsequently passed on to consumers. A national comparison of poverty indices by ethnic group produced a clear gulf between the Maya (77% poor), and the next poorest group, the Mestizo (only 30.1%). Communities of the project area, much as in the past, continue to rely on a mixture of strategies to survive. Underemployment predominates, with those villagers able to rely on a fixed job and income to meet basic household needs representing a negligible minority group.

With so few socio-economic advantages, the Maya are highly susceptible to becoming complicit partners in the destruction of an environment that has historically sustained them. For a people used to relying on their own resourcefulness to survive, it is perhaps not surprising that when asked to self-assess the reasons for their poverty, their responses focus on their diminishing ability to control how their lands and resources are being utilized. Faced with wanton destruction by larger-scale loggers, communities are driven to pursue similar short-term economic means of income so long as they exist. Since, as research clearly demonstrated, the Maya have strong development aspirations, addressing poverty and livelihood needs through innovative, biodiversity-friendly alternatives will be a key component of any effective landscape-level conservation programme.

Although the land and resource-use practices of Maya villagers are generally exercised on a household basis, traditional, elected community leaders are still highly influential in determining boundaries of community resource use, resolving disputes over these resources between villagers and overseeing their use. Recognizing the central function community leader's play in decision-making within Mayan communal life, and thereby ensuring they feel genuinely consulted and influential in determining the path of project implementation, is clearly vital in ensuring long-term sustainability and local ownership of project processes.

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[72] Belize Central Statistical Office 2004, mid-year report.

[73] And an estimated 80% of the District's rural population (approximately 17,520 inhabitants) DFID, 2004. Toledo: A Study in Elusive Development.

[74] The widely-criticized track record of a 7 year, $7 million CDB/IFAD funded project called CARD "Community-Initiated Agricultural Development" focused on Toledo and southern Stann Creek which began in 2000, underlines this distressing reality. To date, CARD's support has proven piecemeal.

[75] 2002 Poverty Report for Belize. National Human Development Advisory Committee, GOB.

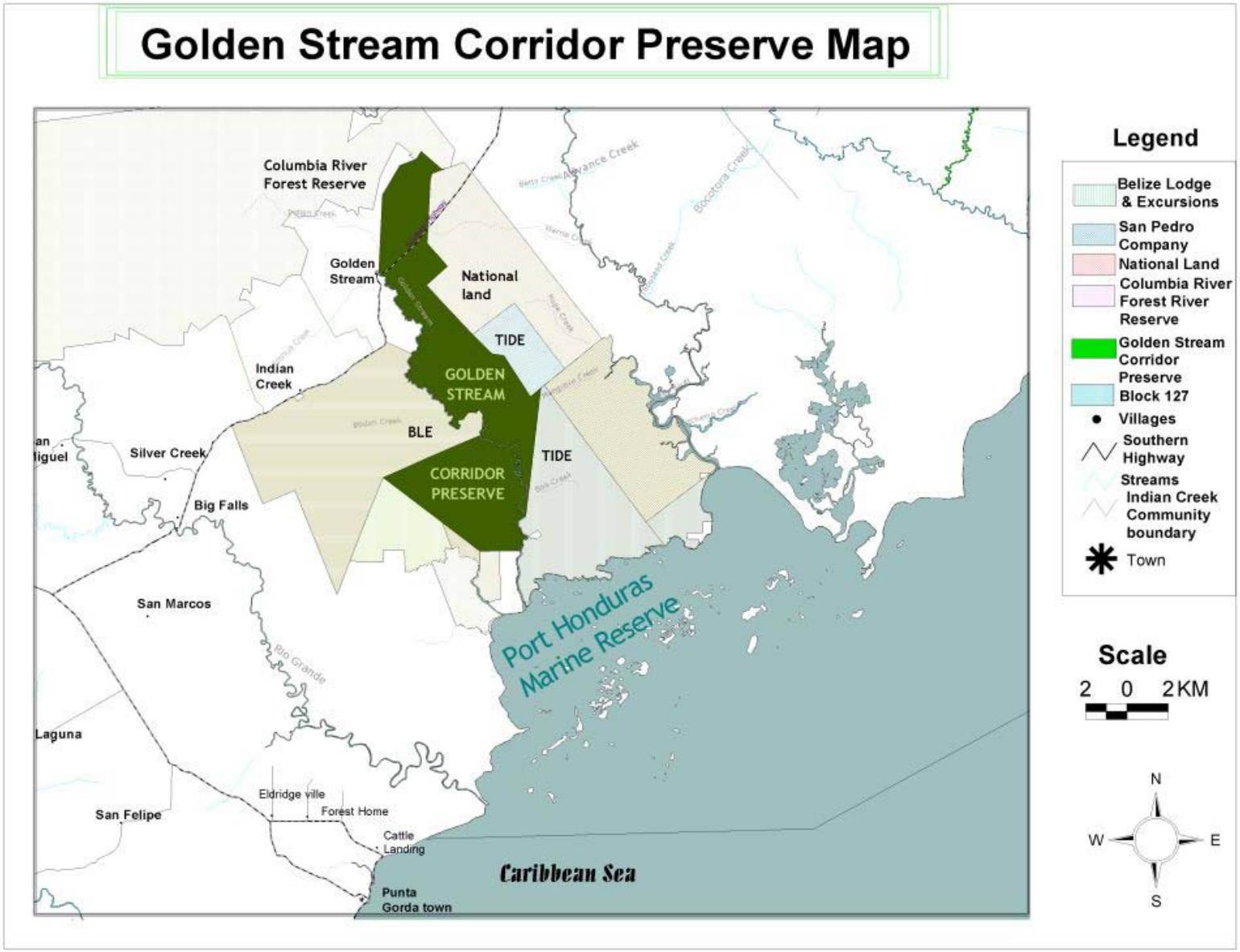
Finally, as research has demonstrated, Maya women play a crucial function in sustaining household economies through a range of activities, including farming, gathering, crafts making and itinerant wage labor. The role of Mayan women in reproducing cultural norms, determining household behavior, and education also plays a critical role in social development. Thus, in planning community-related activities, a gender appropriate, sensitive approach is of critical importance.[76]

[76] For PDF A report on socioeconomic context, please refer to: www.yct.bz/GSW_socioec_report.PDF

## ANNEX E: GEF BELIZE FOCAL POINT ENDORSEMENT LETTER

(separate file)

**ANNEX F: MAP OF PROJECT SITE**



**Annex G: Memorandum of Agreement between FFI and GSCP (now Ya'axche' Conservation Trust [YCT])**

# *Memorandum Of Agreement*

**Golden Stream Corridor Preserve**
**Fauna & Flora International**

*A stewardship partnership*
*dedicated to*
*nature conservation,*
*sustainable enterprises development,*
*and*
*community participation*

December 23, 1998

**THIS AGREEMENT** is made the 22nd day of December, one thousand nine hundred and ninety-eight BETWEEN

*GOLDEN STREAM CORRIDOR PRESERVE (hereinafter called "GSCP/NGO"), a non-profit company, and known as the preserve manager, and

*FAUNA & FLORA INTERNATIONAL (hereinafter called "FFI") an international non-profit organization, and known as the international conservation partner.

GSCP/NGO is duly formed under the Laws of Belize with registered offices at 37 Regent Street, Belize City, Belize, C.A.

FFI is duly formed under the Laws of the United Kingdom, and with registered office at Great Eastern House, Tenison Road, Cambridge, UK.

WHEREAS GSCP/NGO and FFI (hereinafter called "the Stewardship Partners") have expressed their mutual intention to enhance cooperation between them, to stimulate activities leading to the proper management of the lands described in the First Schedule hereto, hereafter known as the Golden Stream Corridor Preserve or GSCP and to promote the conservation and sustainable development the land in a way that will guarantee and promote the lands' biological integrity in perpetuity, and understanding that development activities within the lands will be limited in nature and second in importance to biological conservation and

WHEREAS the Stewardship Partners have expressed their mutual intention to promote participation of the local communities and benefit sharing, while seeking to assist, within and primarily outside of the GSCP, in the development of locally owned eco-enterprises, creation of local employment, training of local communities in systems of sustainable land stewardship and the development of a stronger conservation and sustainable development ethic amongst the people of Belize.

NOW THEREFORE, in consideration of the mutual terms, conditions and covenants hereinafter set forth the Stewardship Partners agree as follows:

**Joint Activities of the Stewardship Partnership:**

1. GSCP/NGO and FFI shall be stewardship partners and will, at least to the extent provided herein, jointly carry out activities pursuant to the Stewardship Partnership, which shall involve a two-prong approach involving the conservation and sustainable management of the land described in the First Schedule hereto, and supporting conservation and sustainable development, through local communities, of the natural resources of areas outside of the GSCP.
2. The Stewardship Partners will work to develop the GSCP conservation corridor in ways that maintain biological, social and economic viability and the ability to preserve and enhance the full range of biodiversity contained within. The primary function of the GSCP is maintain and enhance the range of biodiversity contained within its boundaries, supported by a small range of internal and external sustainable, eco-economic activities. The Stewardship Partners will pursue a much larger range of community-based eco-economic, conservation and social activities outside of the preserve.
3. The Stewardship Partners will work outside the Golden Steam Corridor Preserve proper with local communities, Government, NGOs and private sector in programs and activity areas such as but not limited to Total Ecosystem Management (TEM), Forest Gardens, Non Timber Forest Products, Ecotimber, terrestrial and marine resource management and monitoring, certification and branding, and other human resource, conservation, and sustainable development activities.

4. The Stewardship Partners shall seek to show that wise and sustainable land use can be managed without degrading the environment by supporting and encouraging community self-sufficiency and cultural preservation, and seeking development that is economically viable, ecologically sound and socially just. The Stewardship Partners shall further seek to develop the concept of a GSCP Stewardship Council for the involvement of other potential and supporting partners. GSCP/NGO will look at alternative mechanisms that will allow it to incorporate the concept of a Stewardship Council.

5. The Stewardship Partners shall, to the extent this is not covered in this Agreement, mutually agree on the exact terms and conditions pursuant to which the Joint Activities shall be undertaken following the reasonable and equitable recognition and assessment of their respective investments made or to be made ("the Investments") to the Joint Activities including with respect to, but not limited to: in-kind services rendered, cash or similar investments (if any), buildings and equipment, and payments made by or between Stewardship Partners as part of this Agreement.6.

6. The Stewardship Partners shall pursue the Joint Activities with the mutual goal to foster an exemplary Stewardship Partnership model for nature conservation, sustainable enterprises development, and community participation through (i) collaboration on a Management Plan for the overall corridor preserve (hereinafter called the "Management Plan") an umbrella business development plan (hereinafter called the "Business Development Plan") for sustainable enterprises development and related activities, where both plans shall incorporate the design and implementation of appropriate management and governance structures, (ii) cooperation on joint fund raising activities, and (iii) implementation of other initiatives and actions that seek to establish a practical way to achieve this mutual goal. So as to minimize the possibility of misunderstandings, to the extent possible the Management Plan will provide objective standards for evaluating GSCP/NGO's performance of its obligations thereunder.

7. The Stewardship Partners agree that the activities described in paragraphs 1, 2, 3, and 4 of this Agreement shall hereinafter be referred to as the "Joint Activities". Notwithstanding anything to the contrary in this Agreement, the relationship of the Stewardship Partners shall be limited to the performance of the terms and conditions of this Agreement. Nothing herein shall be construed to create a general partnership between the Stewardship Partners, or to authorize any Stewardship Partner to act as a general agent for another, or to permit any Stewardship Partner to bind another other than as set forth in this Agreement, or to borrow money on behalf of another Stewardship Partner, or to use the credit of any Stewardship Partner for any purpose.

**Activities of GSCP/NGO:**

8. GSCP/NGO supports the development of the Joint Activities and the concept of sustainable development and management of the proposed Golden Stream Corridor Preserve for the protection of the environment and benefit of all the stakeholders involved. GSCP/NGO is committed to protecting the watershed of the Golden Stream in the Toledo District, one of the few remaining tracks of lowland tropical broadleaf forest in Belize, and the habitat of its many rare and endangered plant and animal species. These lands together will create a valuable conservation corridor, linking the extensive protected areas of the Maya Mountains with the Port Honduras Protected Marine Zone. GSCP/NGO will sustainably manage the preserve's resources for the long-term ecological benefit of the area's biodiversity, and economic benefit of the local people. As part of the Joint Activities, GSCP/NGO will assist with the development of a small range of compatible enterprises that sustainably utilize these resources. GSCP/NGO will work with local communities on a much broader scale on a range of conservation and sustainable development activities.

9. Within the spirit of the Joint Activities to be undertaken as part of the Stewardship Partnership, GSCP/NGO shall:

   (a) develop in conjunction with its Stewardship Partner, the Management Plan and Business Development Plan for the Golden Stream Corridor Preserve which will both be presented to the designated representatives of each of the Stewardship Partners for approval. GSCP/NGO will be responsible for the implementation and operation of the Management Plan.

   (b) manage the Golden Stream Corridor Preserve as per the Management Plan and in a manner that will ensure the ecological and biological integrity of the Preserve.

   (c) nominate two representatives proposed by FFI to the Board of Directors for the term of this Agreement and any extension of this Agreement.

   (d) work with FFI to develop programs, raise funds for said programs, and train staff and stewardship partners for identified eco-enterprises, conservation and land use management activities such as but not limited to: Preserve management, biodiversity monitoring and protection, restoration ecology, Total Ecosystem Management (TEM), Forest Gardens, Non Timber Forest Products, Ecotimber, resource management and monitoring, certification and branding, and other human resource, conservation, and sustainable development activities.

   (e) develop a conservation land trust mechanism, in collaboration and acceptable to FFI, for the GSCP lands covered by this agreement. This land trust mechanism to be developed an in place by January 1, 2001.

**Activities of Fauna & Flora International:**

10. FFI supports the development of the Joint Activities and the concept of sustainable development and management of the proposed Golden Stream Corridor Preserve for the protection of the environment and benefit of all the stakeholders involved. FFI, founded in 1903, is the world's longest-established international conservation body committed to protect the entire spectrum of endangered species of animals and plants world-wide through involvement of local communities, NGO's and the private sector. FFI works within globally agreed conservation priorities, based on sound scientific research and finding innovative solutions to conservation problems through a commitment to empowering local people, assisting them in realizing their own potential for effective species conservation and sustainable land use.

11. Within the spirit of the Joint Activities to be undertaken as part of the Stewardship Partnership, FFI shall:

   (a) provide funds to complete the purchase of the CLCC property described in Part 1 of the First Schedule hereto, to be completed pursuant to the current contract with an amendment to the existing terms, both of which are contained in Appendix 2. The funds thus provided shall also pay-off the Warren loan made in connection with securing the CLCC property, including any applicable interest thereon.

   (b) seek to provide management, technical and administrative support in the development of the Management Plan for the Golden Stream Corridor Preserve and the GSCP/NGO, as well as the Business Development Plan.

   (c) seek funding to provide management, technical and administrative assistance for the operation of the Golden Stream Corridor Preserve and other GSCP/NGO activities. FFI will attempt to raise funds for said activities and the acquisition of the additional lands described in Part 2 and 3 of the First Schedule hereto.

(d) appoint two FFI representatives of its choice to the Board of GSCP/NGO.

(e) work with GSCP/NGO to develop the programs, raise funds for said programs, and train staff and stewardship partners for identified eco-enterprises and land use management activities such as: Total Ecosystem Management (TEM), Forest Gardens, Non Timber Forest Products, Ecotimber, resource management and monitoring, certification and branding, and other human resource, conservation, and sustainable development activities.

**Miscellaneous Provisions**

12. FFI shall periodically review the performance of GSCP/NGO in developing and implementing the Management Plan. Should FFI determine at any time within seven years from the signing of this agreement that GSCP/NGO has failed in a material manner to fulfill one or more of its obligations under the Management Plan, it may provide written notice to GSCP/NGO (A Notice of Deficiency @) providing details of such failure(s) and the amount of time GSCP/NGO shall have to correct them (which shall be no less than 30 days). Should FFI provide such a Notice of Deficiency and GSCP/NGO not take the necessary corrective action within the specified time period, FFI may declare GSCP/NGO in default.

13. Should FFI declare GSCP/NGO in default, GSCP/NGO and FFI will seek to agree on naming a third party to act as a mediator to resolve the matter. If no mediator is selected or no resolution of the matter is achieved within sixty (60) days after the declaration of default, then FFI shall have the right to appoint such number of additional members of the GSCP/NGO Board as to constitute two-thirds of the total Board members.

14. FFI is committed to working very closely with and in support of GSCP/NGO in the development the Management Plan for the GSCP. An acceptable, to both Stewardship Partners, Management Plan is to be completed by GSCP by September 15, 1999. A review of the progress of the development of the Management Plan by FFI and GSCP/NGO will take place mid May 1999, and mid August 1999, to ensure that the goals, objectives, and timeframe of the developing Management Plan are being met. If by September 15, 1999, the Management Plan is found to be unacceptable by FFI, FFI reserves the right to declare GSCP/NGO in default and follow the guidelines in Provision 12 above.

15. This Agreement shall have a term of 12 (12) years, which shall renew for an additional term of twelve years, unless and until one of the Stewardship Partners gives the other at least ninety (90) days written notice of the intention to terminate. FFI however, may withdraw from this Agreement after five years and satisfactory completion of the Land Trust referred to in paragraph 9(e).

16. This Agreement may be terminated by a Stewardship Partner in the event of a material breach of this Agreement, which is not remedied within ninety 90 days written notice from one Stewardship Partner to the other.

17. The Stewardship Partners shall attempt in good faith to resolve any dispute arising out of or relating to this Agreement promptly by negotiation between the executives who have authority to settle the controversy. If any such dispute is not resolved within ninety 90 days from written notice of one Stewardship Partner to the other, either Stewardship Partner may initiate arbitration of the controversy in the City of Belize in accordance with the then applicable rules of the International Chamber of Commerce. This Agreement shall be governed and construed in accordance with the internal laws of Belize.

18. All notices under this Agreement shall be in writing, addressed to the parties as set forth below, and sent by telefax followed by express (overnight) delivery service:

| GSCP/NGO: | FFI: |
| --- | --- |
| _____ | _____ |
| _____ | _____ |
| *Attn:*_____ | *Attn:*_____ |

## ANNEX H: CO-FINANCING COMMITMENT LETTERS

(separate file)

**ANNEX I: TRACKING TOOL**

**Section One: Project General Information**

1. Project name: Integrating Protected Area and Landscape Management in the Golden Stream Watershed

2. Country (ies): Belize

National Project:____x___ Regional Project:_____ Global Project:_____

*3. Name of reviewers completing tracking tool and completion dates:*

| | **Name** | **Title** | **Agency** |
|---|---|---|---|
| **Work Program Inclusion** | Emma Caddy | Country Programme Manager | Fauna & Flora International |
| **Project Mid-term** | | | |
| **Final Evaluation/project completion** | | | |

4. Funding information

GEF support:_1,000,000_____
Co-financing:___ 1,120,518____
Total Funding:__ 2,120,518_____

5. Project duration: ***Planned***____4__ years ***Actual*** _____ years

6. a. GEF Agency: X UNDP □ UNEP □ World Bank □ ADB □ AfDB □ IADB □ EBRD □ FAO □ IFAD □ UNIDO

6. b. Lead Project Executing Agency (ies): Fauna & Flora International

7. GEF Operational Program:
□ drylands (OP 1)
□ coastal, marine, freshwater (OP 2)
x forests (OP 3)
□ mountains (OP 4)
□ agro-biodiversity (OP 13)
x integrated ecosystem management (OP 12)
□ sustainable land management (OP 15)

Other Operational Program not listed above:_____

8. Project Summary (one paragraph):

The project intends to yield an effective, integrated watershed management and conservation corridor system in for the Golden Stream Watershed (GSW), the focal area of the GEF intervention. This will be achieved by formalizing and synthesizing management within and between a set of adjacent, and interrelated protected areas – terrestrial and marine, national and private – interlinked with a multifaceted landscape including private, indigenous community and state interests and landholding. By so doing, the GSW will provide a replicable model of how multiple protected areas working within an ecologically interconnected and interdependent biodiversity corridor area can jointly achieve conservation and sustainable development objectives, thereby catalyzing the sustainability of Belize's national protected area system. In addition to ensuring coordinated, systematic management of the GSW's 4 protected areas, and strengthening Belize's NPAS, the project will also stimulate collaborative, biodiversity-friendly development strategies in the GSW through both direct investment and capacity-building, benefiting government, private, community and PAMO agencies alike, and harmonizing conservation priorities with sustainable livelihood and development goals.

9. Project Development Objective:

The project will facilitate the sustainable development of the Golden Stream watershed, through a multi-faceted process that includes: stakeholder consultation, needs assessment and capacity building in the fields of business management and techniques in selected biodiversity-friendly enterprise initiatives; though the design of a comprehensive business plan for the watershed; through strategic investments and technical support to key potential industries; by garnering investor interest in the area through strategies including an investor conference, publicity materials and other incentives.

10. Project Purpose/Immediate Objective:

The project intends to make a significant contribution towards enabling Belize's protected area management system to function as an integrated, coordinated and cost-effective tool for biodiversity conservation and sustainable development. In order to achieve this goal, it is imperative that the potential of private protected areas to consolidate corridor linkages, and enable landscape conservation and development efforts, is both recognized and integrated within Belize's national protected area system. The project aims to produce a replicable model of both consolidated protected areas management – encompassing a complex of national and private protected areas - and of integrated landscape management within the Golden Stream Watershed.

11. Expected Outcomes (GEF-related):

The project will deliver the following four Outcomes:

Outcome 1: Protected area management authorities, with the support and participation of the buffer area stakeholders, have jointly developed and are implementing a standardized and complementary set of management plans for the Golden Stream Watershed (GSW)'s four protected areas.

Outcome 2: Protected area management authorities, local government bodies, private sector landholders and local communities have jointly developed a strategy for sustainable development of the GSW landscape and are co-operating to sustain its implementation over the long-term.

Outcome 3: Fiscal and legislative environments affecting private protected areas have been clarified and improved at a national level.

Outcome 4: Protected area management authorities and other stakeholders throughout Belize have benefited from, and are beginning to apply, lessons learned from the GSW

12. Types of Protected Area Activities Supported:

12. a. Please select all activities that are being supported through the project.

_x_ Enabling Environment (please check each activity below)

**_x_** Policy, legislation, regulation

**_x__** Capacity building

Capacity building budget: $308,970 specifically on capacity-building alone; this figure is however conservative since many project activities contain capacity-building

**(Please record budgets for capacity building if they are clearly identified as a discrete budget line.)**

Comments on Capacity Building: Please note if capacity building is geared towards indigenous and local communities:

Yes; the target communities of the project area are all indigenous (Mayan). Community members and local staff from the same villages, as well as other staff from the region who are not indigenous and work for local project partners (TIDE and FD) will be the primary beneficiaries of such training.

_x__ Education and awareness raising

_x__ Institutional arrangements (institutional strengthening and consolidation of inter-institutional linkages are main objectives of the project).

_x__ Finance and incentives

_x__ Replication and scaling up

__x_ Management practices related to status of biodiversity

12. b. Is carbon sequestration an objective of the project (This question is included for purposes related to the GEF-3 targets for the Climate Change focal area)

____Yes __x__No

The estimated amount of carbon sequestered is:___n/a_____

13. Project Replication Strategy

*13. a . Does the project specify budget, activities, and outputs for implementing the replication strategy?*
*Yes_x__ No___*

13. b. For all projects, please complete box below. An example is provided.

| **Replication Quantification Measure** | **Replication Target Foreseen at project start** | **Achievement at Mid-term Evaluation of Project** | **Achievement at Final Evaluation of Project** |
|---|---|---|---|
| Extent in hectares of protected areas targeted by the project | 202,246 | | |
| Extent in hectares of broader landscape targeted by the project | Approx. 750,000 | | |
| | | | |

14. Scope and Scale of Project:
Please complete the following statements.

14.a. The project is working in:

____a single protected area
__x__multiple protected areas
____national protected area system

14.b. The level of the intervention is:
____ global
____regional
_x___national
__x__subnational

**14. c. Please complete the table below.**

| **Targets and Timeframe**<br><br>**Project Coverage** | **Foreseen at project start** | **Achievement at Mid-term Evaluation of Project** | **Achievement at Final Evaluation of Project** |
|---|---|---|---|
| Extent in hectares of forested areas actively managed and rehabilitated by project | 5,000 ha | 15,000 ha | 40,000 ha |
| Extent in hectares of area incorporated in the GSW biodiversity monitoring system | 5,000 ha | 15,000 ha | 40,000 ha |
| Extent in hectares of areas directly exposed to, learning from and applying the GSW management experience | 5,000 ha | 40,000 ha | 120,000 ha |

**14. d. Please complete the table below for the protected areas that are the target of the GEF intervention. Use** NA **for not applicable.**

| **Name of Protected Area** | **Is this a new protected area? Please answer yes or no.** | **Area in Hectares** | **Global designation or priority lists (E.g., Biosphere Reserve, World Heritage site, Ramsar site, WWF Global 200, etc.)** | **Local Designation of Protected Area (E.g, indigenous reserve, private reserve, etc.)** | **IUCN Category for each Protected Area[77]** | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | **I** | **II** | **III** | **IV** | **V** | **VI** |
| **1.** Columbia River Forest Reserve | No | 21,052 | NA (Not applicable) | National Forest Reserve | | | | X | | |
| **2.** Block 127 | No | 4808 | NA (Not applicable) | Private Reserve | | | | | | X |
| **3.** Golden Stream Corridor Preserve | No | 6058 | NA (Not applicable) | Private Reserve | | | | | | X |
| **4.** Port Honduras Marine Reserve | No | 35,000 | On edge of World Heritage site (Belize Barrier Reef) | Marine reserve | | | | | X | |

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I. Strict Nature Reserve/Wilderness Area: managed mainly for science or wilderness protection
II. National Park: managed mainly for ecosystem protection and recreation
III. Natural Monument: managed mainly for conservation of specific natural features
IV. Habitat/Species Management Area: managed mainly for conservation through management intervention
V. Protected Landscape/Seascape: managed mainly for landscape/seascape protection and recreation
VI. Managed Resource Protected Area: managed mainly for the sustainable use of natural ecosystems

## Section Two: World Bank/WWF Site-Level Management Effectiveness Tracking Tool for Protected Areas

*Reporting Progress at Protected Area Sites: Data Sheet #1*

| | | |
|---|---|---|
| Name of protected area | **Columbia River Forest Reserve (ex Maya Mountain Reserve South portion).** | |
| Location of protected area (country and if possible map reference) | CRFR is situated between 89°13'14"N & 88°45'47"N latitude and 16°28'28"E & 16°15'15"E Longitude | |
| Date of establishment (distinguish between agreed and gazetted*) or formally established in the case of private protected areas | Agreed<br>1997 | Gazetted<br>1997 |
| Ownership details (i.e. owner, tenure rights etc) | National property | |
| Management Authority | The Forest Department manages the CRFR on behalf of the Government of Belize | |
| Size of protected area (ha) | Total area of CRFR approx 60,065ha. Sub-portion of CRFR without management plan which is focus of this project is however approx 21,052 ha | |
| Number of staff | Permanent<br>Four | Temporary<br>None |
| Budget | $20,000 US / year | |
| Designations (IUCN category, World Heritage, Ramsar etc) | Category VI - Managed Resource Protected Areas: Protected Area managed mainly for the sustainable use of natural ecosystems. | |
| Reasons for designation | Since the Columbia River Forest Reserve functions as a reserve for national forest species and ecosystems, from which resources can however also be extracted, it most appropriately falls within Category VI of IUCN's designations | |
| Brief details of World Bank funded project or projects in PA | **Not applicable when completing for GEF projects** | |
| Brief details of WWF funded project or projects in PA | **Not applicable when completing for GEF projects** | |
| Brief details of **all relevant projects** in PA | No specific projects – some monitoring of existing logging concessions | |
| List the two primary protected area objectives | | |
| Objective 1 | Sustainable forest management and harvesting | |
| Objective 2 | Protect Belize's national natural heritage (e.g. Maya Mountain range) | |
| List the top two most important threats to the PA (and indicate reasons why these were chosen) | | |
| Threat 1 | Illegal logging | |
| Threat 2 | Encroachment into PA by illegal settlers | |
| List top two critical management activities | | |

| | |
|---|---|
| Activity 1 | Patrolling / monitoring activities in the Reserve |
| Activity 2 | Monitoring biodiversity in the Reserve |

Date assessment carried out: 7/7/05. Name/s of assessor: G.Baeza, Forest Officer for Forest Reserves

| Issue | Criteria | Score | Comments | Next steps |
|---|---|---|---|---|
| 1. Legal status<br>Does the protected area have legal status?<br><br>*Context* | The protected area has been legally gazetted (or in the case of private reserves is owned by a trust or similar) | 3 | *Note*: see fourth option for private reserves | |
| 2. Protected area regulations<br>Are inappropriate land uses and activities (e.g. poaching) controlled?<br><br>*Context* | Mechanisms for controlling inappropriate land use and activities in the protected area exist but there are major problems in implementing them effectively | 1 | Management effectiveness is limited due to deficiencies in the system which prevent FD personnel from controlling access | Strengthening the management system |
| 3. Law enforcement<br>Can staff enforce protected area rules well enough?<br><br>*Context* | There are major deficiencies in staff capacity/resources to enforce protected area legislation and regulations (e.g. lack of skills, no patrol budget) | 1 | *Possible issue for comment*: What happens if people are arrested?<br><br>If they are arrested, they are reported to police and go to trial in local district | Develop relationships with local communities so that civil society can play a role and assume responsibilities for monitoring of the national reserve, to relieve the burden on the GOB. |
| 4. Protected area objectives<br>Have objectives been agreed?<br><br>*Planning* | The protected area has agreed objectives, but these are only partially implemented | 2 | The pre-1997 portion of the CRFR has a management plan, but the focus area for the GEF project does not. | Develop a management plan for the area with clearly defined objectives specific to this particular area. |
| 5. Protected area design<br>Does the protected area need enlarging, corridors etc to meet its objectives?<br><br>*Planning* | Design is not significantly constraining achievement of major objectives, but could be improved | 2 | *Possible issue for comment*: does the protected area contain different management zones and are these well maintained?<br><br>No zones | Create zones – e.g. for tourism, recreation, sustainable forestry etc. |

| Issue | Criteria | Score | Comments | Next steps |
|---|---|---|---|---|
| 6. Protected area boundary demarcation<br>Is the boundary known and demarcated?<br><br>*Context* | The boundary of the protected area is not known by the management authority or local residents/neighbouring land users | 0 | *Possible issue for comment*: are there tenure disagreements affecting the protected area?<br><br>None. | To demarcate and signpost the area with the support of the GEF project. |
| 7. Management plan<br>Is there a management plan and is it being implemented?<br><br>*Planning* | There is no management plan for the protected area | 0 | | To develop a management plan as an output of the GEF project, while strengthening FD's capacity to implement it. |
| Additional points<br><br>*Planning* | The planning process allows adequate opportunity for key stakeholders to influence the management plan | | None of these points are applicable, since no management planning process exists | To include stakeholders in the management planning process of the CRFR through the GEF mechanism, and conduct regular research that can inform / amend the plan and management system through the course of its implementation. |
| | There is an established schedule and process for periodic review and updating of the management plan | | | |
| | The results of monitoring, research and evaluation are routinely incorporated into planning | | | |
| 8. Regular work plan<br>Is there an annual work plan?<br><br>*Planning/Outputs* | No regular work plan exists | 0 | FD has a regular work plan for the entire department / country, but no specific work plan for the CRFR exists | Develop more comprehensive management in the CRFR. |
| | | | | |
| 9. Resource inventory<br>Do you have enough information to manage the area?<br><br>*Context* | Information on the critical habitats, species and cultural values of the protected area is not sufficient to support planning and decision making | 1 | FD has simply not had the resources or time to dedicate in collecting regular information in the CRFR; its management has rather being reactive, than proactive. | Conduct more systematic and regular research in the CRFR |

| Issue | Criteria | Score | Comments | Next steps |
|---|---|---|---|---|
| 10. Research<br>Is there a programme of management-orientated survey and research work?<br><br>*Inputs* | There is some *ad hoc* survey and research work | 1 | FFI/YCT/TIDE commissioned the most recent study in this portion of the CRFR, to evaluate the effects of hurricane and post-hurricane logging practices on its continued viability. The results suggested an urgent need for strengthening of the CRFR management system. | As above. |
| 11. Resource management<br>Is the protected area adequately managed (e.g. for fire, invasive species, poaching)?<br><br>*Process* | Requirements for active management of critical ecosystems, species and cultural values are known but are not being addressed | 1 | FD recognizes that its management system and indeed knowledge base of the CRFR are both inadequate. For these reasons, they are actively willing to collaborate with local PAMOs in improving management / research in the CRFR, and are strongly considering allowing only long-term logging licenses rather than multiple short-term ones, so as to improve management practices and sustainability. | To develop a systematic and sustained management system for the CRFR, enhanced by a complimentary research programme to inform management decision-making. |
| 12. Staff numbers<br>Are there enough people employed to manage the protected area?<br><br>*Inputs* | Staff numbers are inadequate for critical management activities | 1 | | Increase numbers or include local organizations / communities in the management process, so as to build cost effectiveness of the PA and its management system. |
| | | | | |
| 13. Personnel management<br>Is the staff managed well enough?<br><br>*Process* | Problems with personnel management partially constrain the achievement of major management objectives | 1 | Communication and coordination of personnel is difficult in Toledo, because of the great distances that need to be covered, and the limited resources at FD's disposition | Consolidate collaborative management opportunities. |

| Issue | Criteria | Score | Comments | Next steps |
|---|---|---|---|---|
| 14. Staff training<br>Is there enough training for staff?<br><br>*Inputs/Process* | Staff training and skills are adequate, but could be further improved to fully achieve the objectives of management | 2 | Staff receives regular training, but they could always benefit from more – particularly when conducted in a collective fashion with adjacent PAMO field staff. | Train staff in standardized monitoring and management systems which can be readily understood and sustained at the field ranger level. |
| 15. Current budget<br>Is the current budget sufficient?<br><br>*Inputs* | The available budget is inadequate for basic management needs and presents a serious constraint to the capacity to manage | 1 | | Identify and implement more diversified, lucrative and sustainable options for sustainable, long-term management of the CRFR |
| 16. Security of budget<br>Is the budget secure?<br><br>*Inputs* | There is very little secure budget and the protected area could not function adequately without outside funding | 1 | | Design strategies for forest management that build financial sustainability of the system, rather than perpetually erode it. |
| 17. Management of budget<br>Is the budget managed to meet critical management needs?<br><br>*Process* | Budget management is poor and constrains effectiveness | 1 | Budget management is difficult due to the country's economic crisis, which means that FD personnel's budgets are continuously being restricted. | Diversify financial sources. |
| 18. Equipment<br>Is equipment adequately maintained?<br><br>*Process* | There are equipment and facilities, but still some major gaps that constrain management | 2 | Communication and transportation equipment are FD's greatest needs. | Secure improved equipment, and share such resources with area PAMOs to improve cost effectiveness. |
| 19. Maintenance of equipment<br>Is equipment adequately maintained?<br><br>*Process* | There is maintenance of equipment and facilities, but there are some important gaps in maintenance | 2 | FD has no facilities in the CRFR where equipment could be safely housed. | By rehabilitating the field station facilities at La Sierra, the project will provide a safe and accessible access point to the CRFR, where field equipment can moreover be safely stored |

| Issue | Criteria | Score | Comments | Next steps |
|---|---|---|---|---|
| 20. Education and awareness programme<br>Is there a planned education programme?<br><br>*Process* | There is a limited and *ad hoc* education and awareness programme, but no overall planning for this | 1 | Need to develop an outreach and education programme – preferably in conjunction with existing NGOs / GOB department's efforts, so as to save costs and increase effectiveness | Develop a collaborative programme. |
| 21. State and commercial neighbours<br>Is there co-operation with adjacent land users?<br><br>*Process* | There is regular contact between managers and neighbouring official or corporate land users, but only limited co-operation | 2 | FD does maintain regular and open channels of communication with neighbors, but this information flow has not translated into specific collaborative management initiatives between GOB and local partners. | Define and consolidate informal cooperation channels with adjacent landowners through the GSWAC mechanism, so as to enhance effectiveness of CRFR management. |
| 22. Indigenous people<br>Do indigenous and traditional peoples resident or regularly using the PA have input to management decisions?<br>*Process* | Indigenous and traditional peoples have no input into decisions relating to the management of the protected area | 0 | GOB has traditionally taken decisions with regards to the management of forest reserve without any particular consultation with local communities – which in this case, are largely Mayan, and indigenous | Develop mechanisms whereby indigenous communities can become more involved in the management process, and thereby become less of a threat to the integrity of the reserve. |
| 23. Local communities<br>Do local communities resident or near the protected area have input to management decisions?<br>*Process* | Local communities have no input into decisions relating to the management of the protected area | 0 | As above | As above. |
| Additional points<br>Additional points<br><br>*Outputs* | There is open communication and trust between local stakeholders and protected area managers | +1 | As discussed above in point 21. | |

| Issue | Criteria | Score | Comments | Next steps |
|---|---|---|---|---|
| 24. Visitor facilities<br><br>Are visitor facilities (for tourists, pilgrims etc) good enough?<br><br>*Outputs* | There are no visitor facilities and services | 0 | *Possible issue for comment*: Do visitors damage the protected area? Xateros do damage the area, as do illegal loggers. Otherwise, no recreational visitors use the area. | To determine whether the CRFR is a viable location for tourism and visitation, both in terms of revenue that could be generated and ecological impacts that would be created as a result. |
| 25. Commercial tourism<br>Do commercial tour operators contribute to protected area management?<br><br>*Process* | There is little or no contact between managers and tourism operators using the protected area | 0 | *Possible issue for comment*: examples of contributions<br><br>None exist | As above |
| 26. Fees<br>If fees (tourism, fines) are applied, do they help protected area management?<br><br>*Outputs* | Although fees are theoretically applied, they are not collected | 0 | There is no mechanism in Belize to levy fees for entry into a forest reserve, only for a national park. | Consider whether entry fees could / should be applied, as a result of assessment above. |
| 27. Condition assessment<br>Is the protected area being managed consistent to its objectives?<br>*Outcomes* | Some biodiversity, ecological and cultural values are being severely degraded | 1 | *Possible issue for comment:* It is important to provide details of the biodiversity, ecological or cultural values being affected<br>Depletion of tropical hardwood species such as mahogany, cedar and xate. Pillaging of cultural mounds (Mayan ruins). | Improve management and monitoring systems so that these values are not continuously threatened and degraded. |
| 28. Access assessment | Protection systems are only partially effective in controlling access or use of the reserve in accordance with designated objectives | 1 | As mentioned previously, it is extremely difficult for FD to | Consolidate management systems through collaborative |

| Issue | Criteria | Score | Comments | Next steps |
|---|---|---|---|---|
| Are the available management mechanisms working to control access or use?<br><br>*Outcomes* | | | control access, given the size of the area, the limited number of personnel working in Toledo, limited resources etc. | initiatives with area stakeholders where possible. |
| 29. Economic benefit assessment<br>Is the protected area providing economic benefits to local communities?<br><br>*Outcomes* | There is some flow of economic benefits to local communities from the existence of the protected area but this is of minor significance to the regional economy | 2 | *Possible issue for comment*: how does national or regional development impact on the protected area?<br><br>Generally, developments like the paving of the southern highway have improved access to area, and therefore placed greater pressure on its integrity | Need to expand on the limited revenue which currently flows from CRFR's management (mostly in terms of employment in logging operations) to include more diversified and sustainable alternatives. |
| 30. Monitoring and evaluation<br><br>*Planning/Process* | There is some *ad hoc* monitoring and evaluation, but no overall strategy and/or no regular collection of results | 1 | | Develop an sustain a comprehensive monitoring and evaluation system for the CRFR |
| **TOTAL SCORE** | | **(32/93 = 29.76%)** | | |

*Reporting Progress at Protected Area Sites: Data Sheet #2*

| | | |
|---|---|---|
| Name of protected area | Block 127 | |
| Location of protected area (country and if possible map reference) | 127 is situated between 88°44'45"N & 88°40'41"N Latitude and 16°19'19"E & 16°13'13"E Longitude | |
| Date of establishment (distinguish between agreed and gazetted*) or formally established in the case of private protected areas | Agreed<br>2001 | Gazetted<br>2001 |
| Ownership details (i.e. owner, tenure rights etc) | Block 127 is a private protected area, owned by the Toledo Institute of Development and Environment (TIDE) | |
| Management Authority | TIDE | |
| Size of protected area (ha) | 4808 ha. | |
| Number of staff | Permanent<br>All of TIDE (38) 127 alone (4) | Temporary<br>All of TIDE (3) |
| Budget | $25,000 US p/a (Block 127 only) | |
| Designations (IUCN category, World Heritage, Ramsar etc) | Category VI Managed Resource Protected Areas: Protected Area managed mainly for the sustainable use of natural ecosystems | |
| Reasons for designation | Block 127 is managed with the objective of preserving the critical biodiversity it contains, and the interdependent ecosystems with which it is connected. | |
| Brief details of World Bank funded project or projects in PA | **Not applicable when completing for GEF projects** | |
| Brief details of WWF funded project or projects in PA | **Not applicable when completing for GEF projects** | |
| Brief details of **all relevant projects** in PA | Biodiversity monitoring and protection / patrols. | |
| List the two primary protected area objectives | | |
| Objective 1 | To maintain connectivity of the watershed, from the ridge to reef, within the Maya Mountain transect. | |
| Objective 2 | To protect coastal landscape and species from negative alternative developments (such as shrimp farms) | |
| List the top two most important threats to the PA (and indicate reasons why these were chosen) | | |
| Threat 1 | Fire (created by loggers and farmers) | |
| Threat 2 | Illegal logging because of its accessibility and lack of permanent monitoring. | |
| List top two critical management activities | | |

| | |
|---|---|
| Activity 1 | Monitoring / boundary demarcation |
| Activity 2 | Reforestation / sustainable forest management |

Date assessment carried out: __5th July 2005 Name/s of assessor: Eugenio Ah, Manager, TIDE's Private Lands.

| Issue | Criteria | Score | Comments | Next steps |
|---|---|---|---|---|
| 1. Legal status<br>Does the protected area have legal status?<br><br>*Context* | The protected area has been legally gazetted (or in the case of private reserves is owned by a trust or similar) | 3 | *Note*: see fourth option for private reserves | |
| 2. Protected area regulations<br>Are inappropriate land uses and activities (e.g. poaching) controlled?<br><br>*Context* | There are no mechanisms for controlling inappropriate land use and activities in the protected area | 0 | TIDE lacks sufficient resources to implement management in this particular protected area. | Strengthen TIDE's capacity to manage 127 |
| 3. Law enforcement<br>Can staff enforce protected area rules well enough?<br><br>*Context* | There are major deficiencies in staff capacity/resources to enforce protected area legislation and regulations (e.g. lack of skills, no patrol budget) | 1 | *Possible issue for comment*: What happens if people are arrested?<br>This has not occurred yet within 127. | Develop field ranger manuals to provide staff with directions should trespassers be encountered. Send staff on special constable training with the Belize Police force, to give them powers of arrest. |
| 4. Protected area objectives<br>Have objectives been agreed?<br><br>*Planning* | No firm objectives have been agreed for the protected area | 0 | TIDE has never developed a management system for 127, just attempted to maintain a presence in the area. | Management planning process for 127 is urgently needed |
| 5. Protected area design<br>Does the protected area need enlarging, corridors etc to meet its objectives?<br><br>*Planning* | Inadequacies in design mean that achievement of major objectives are constrained to some extent | 1 | *Possible issue for comment*: does the protected area contain different management zones and are these well maintained?<br><br>No zones currently exist in 127 | Create zones with a management plan |

| Issue | Criteria | Score | Comments | Next steps |
|---|---|---|---|---|
| 6. Protected area boundary demarcation<br>Is the boundary known and demarcated?<br><br>*Context* | The boundary of the protected area is known by both the management authority and local residents but is not appropriately demarcated | 2 | *Possible issue for comment*: are there tenure disagreements affecting the protected area?<br>None. | Demarcate and signpost the boundary as part of the management planning process for 127. |
| 7. Management plan<br>Is there a management plan and is it being implemented?<br><br>*Planning* | There is no management plan for the protected area | 0 | Developing a management plan for 127 is one of TIDE's major priorities | Develop a management plan |
| Additional points<br><br>*Planning* | The planning process allows adequate opportunity for key stakeholders to influence the management plan | | None of these points are applicable, since no management planning process exists | Design an inclusive management planning process, which ensures key local stakeholders' input is secured, and is guided by a M&E process. |
| | There is an established schedule and process for periodic review and updating of the management plan | | | |
| | The results of monitoring, research and evaluation are routinely incorporated into planning | | | |
| 8. Regular work plan<br>Is there an annual work plan?<br><br>*Planning/Outputs* | No regular work plan exists | 0 | TIDE has a work plan for the organization as a whole, but not a specific work plan for 127. | Develop regular work plans / ranger patrol schedules etc. |
| | | | | |
| 9. Resource inventory<br>Do you have enough information to manage the area?<br><br>*Context* | There is little or no information available on the critical habitats, species and cultural values of the protected area | 0 | Budgetary limitations have meant comprehensive field research has yet to be conducted | Resource inventory in 127 is urgently needed. |

| Issue | Criteria | Score | Comments | Next steps |
|---|---|---|---|---|
| 10. Research<br>Is there a programme of management-orientated survey and research work?<br><br>*Inputs* | There is some *ad hoc* survey and research work | 1 | TIDE has been working with YCT to extend their biological monitoring system into 127. | To consolidate the expansion of the GSW monitoring programme through the GEF, to become a model example of integrated PA management across a conservation corridor |
| 11. Resource management<br>Is the protected area adequately managed (e.g. for fire, invasive species, poaching)?<br><br>*Process* | Requirements for active management of critical ecosystems, species and cultural values are known but are not being addressed | 1 | TIDE has been overstretched in managing its national protected area (Paynes Creek) and marine reserve (Port Honduras), and has been unable to dedicate sufficient funds to its private lands – of which 127 constitutes 33% of areas held. | To strengthen administration of Block 127 by developing common management systems with partner GSW PAMOs, and by pooling field management resources (human, technical, equipment, communications etc). |
| 12. Staff numbers<br>Are there enough people employed to manage the protected area?<br><br>*Inputs* | Staff numbers are inadequate for critical management activities | 1 | TIDE has a relatively large staff team, but also manages several protected areas, so its capacity to be effective in each is limited – with 127 probably the least managed of its areas. | Build cost-effectiveness of field monitoring, by developing coordinated management systems with PAMO / private stakeholders in the GSW. |
| 13. Personnel management<br>Is the staff managed well enough?<br><br>*Process* | Problems with personnel management partially constrain the achievement of major management objectives | 1 | Personnel management is less of a problem than resources to build up a management system for 127; which could then be maintained by TIDE staff. | Increase resources, but also coordination to ensure resources are used in a cost-effective manner. |
| 14. Staff training<br>Is there enough training for staff?<br><br>*Inputs/Process* | Staff training and skills are adequate, but could be further improved to fully achieve the objectives of management | 2 | Some training has been provided to staff, both by TIDE and by YCT in terms of the nascent biodiversity monitoring system for the GSW. | Develop capacity of TIDE's field staff, in conjunction with area partners. |

| Issue | Criteria | Score | Comments | Next steps |
|---|---|---|---|---|
| 15. Current budget<br>Is the current budget sufficient?<br>*Inputs* | The available budget is inadequate for basic management needs and presents a serious constraint to the capacity to manage | 1 | | To develop innovative strategies to enhance the PA's financial effectiveness |
| 16. Security of budget<br>Is the budget secure?<br>*Inputs* | There is very little secure budget and the protected area could not function adequately without outside funding | 1 | TIDE secured some funds to manage 127 through a Debt-for-Nature Swap facilitated by TNC in 2001. | Diversify sources of funding to sustain the PA. |
| 17. Management of budget<br>Is the budget managed to meet critical management needs?<br>*Process* | Budget management is adequate but could be improved | 2 | TIDE's financial management system is quite robust. | The financial management system is more than adequate – what is needed in terms of budget is greater funds, not a different form for administering them. |
| 18. Equipment<br>Is equipment adequately maintained?<br>*Process* | There is equipment and facilities, but still some major gaps that constrain management | 2 | Communication and ranger facilities are perhaps the greatest equipment needs for Block 127 | Address these equipment gaps. |
| 19. Maintenance of equipment<br>Is equipment adequately maintained?<br>*Process* | There is maintenance of equipment and facilities, but there are some important gaps in maintenance | 2 | TIDE has no on-site facilities in 127 where its field equipment can be stored. Equipment has had to be carried out to the field by boat from Punta Gorda, every time a field excursion has taken place. | The construction of a shared, all-weather ranger camp downstream between GSCP and 127, which will be permanently manned by YCT /TIDE rangers will enable equipment to be maintained securely on site, thereby exponentially enhancing TIDE's field management capacity. |
| 20. Education and awareness programme<br>Is there a planned education programme?<br>*Process* | There is no education and awareness programme | 0 | TIDE has an education and awareness programme, and holds community outreach meetings and activities, but these it not focused upon this particular PA. | Extend an education and awareness programme to include focus on 127 |

| Issue | Criteria | Score | Comments | Next steps |
|---|---|---|---|---|
| 21. State and commercial neighbours<br>Is there co-operation with adjacent land users?<br><br>*Process* | There is limited contact between managers and neighbouring official or corporate land users | 1 | Some efforts to develop concerted coordination with BLE have been attempted, but never consolidated | To define criteria and processes for cooperation with relevant area stakeholders. |
| 22. Indigenous people<br>Do indigenous and traditional peoples resident or regularly using the PA have input to management decisions?<br>*Process* | Indigenous and traditional peoples have no input into decisions relating to the management of the protected area | 0 | They (Medina Bank –Kekchi / Mopan Maya) have no input as yet because no management plan exists. | When the management planning process begins, TIDE would intend to consult with implicated communities during formulation of the plan |
| 23. Local communities<br>Do local communities resident or near the protected area have input to management decisions?<br>*Process* | Local communities have no input into decisions relating to the management of the protected area | 0 | As above. | As above. |
| Additional points<br>Additional points<br><br>*Outputs* | There is open communication and trust between local stakeholders and protected area managers<br>Programmes to enhance local community welfare, while conserving protected area resources, are being implemented | +1<br><br>+1 | This exists, though not focused on 127 specifically as yet. | |
| 24. Visitor facilities<br>Are visitor facilities (for tourists, pilgrims etc) good enough?<br><br>*Outputs* | There are no visitor facilities and services | 0 | *Possible issue for comment*: Do visitors damage the protected area?<br>Since there are no visitors, this is a mute point. | To develop visitation facilities in 127, linked into a coordinated GSW effort to strengthen the area's competitiveness as an ecotourism destination, with the support of TIDE Tours. |

| Issue | Criteria | Score | Comments | Next steps |
|---|---|---|---|---|
| 25. Commercial tourism<br>Do commercial tour operators contribute to protected area management?<br><br>*Process* | There is contact between managers and tourism operators but this is largely confined to administrative or regulatory matters | 1 | *Possible issue for comment*: examples of contributions | As above, and in collaboration with BLE. |
| 26. Fees<br>If fees (tourism, fines) are applied, do they help protected area management?<br><br>*Outputs* | Although fees are theoretically applied, they are not collected | 0 | No fee system exists for private protected areas. | To consider if a fee system for 127 would be feasible or not. |
| 27. Condition assessment<br>Is the protected area being managed consistent to its objectives?<br><br>*Outcomes* | | | *Possible issue for comment:* It is important to provide details of the biodiversity, ecological or cultural values being affected<br>Not enough research has been conducted in 127 for the managers to be sufficiently aware of the values it contains | To conduct a biodiversity inventory / assessment in 127 |
| | | | | |
| | Some biodiversity, ecological and cultural values are being partially degraded but the most important values have not been significantly impacted | 2 | | |
| | | | | |
| Additional points<br><br>*Outputs* | | | | |
| 28. Access assessment<br>Are the available management mechanisms working to control access or use?<br><br>*Outcomes* | | | Need a more systematic management system for 127 | To develop a comprehensive management plan |
| | Protection systems are only partially effective in controlling access or use of the reserve in accordance with designated objectives | 1 | | |
| | | | | |
| | | | | |

| Issue | Criteria | Score | Comments | Next steps |
|---|---|---|---|---|
| 29. Economic benefit assessment<br>Is the protected area providing economic benefits to local communities?<br><br>*Outcomes* | The existence of the protected area has neither damaged nor benefited the local economy | 1 | *Possible issue for comment*: how does national or regional development impact on the protected area? Logging and agriculture threaten its buffer zones, and there is no means for the PA manager to prevent this from happening.<br>Management of 127 is not benefiting local communities, but TIDE's work elsewhere is. | To develop 127's ability to provide economic benefits to TIDE and local communities alike. |
| 30. Monitoring and evaluation<br><br>*Planning/Process* | There is an agreed and implemented monitoring and evaluation system but results are not systematically used for management | 2 | YCT has assisted TIDE in developing a basic biodiversity monitoring system for 127. | To strengthen the M&E system and ensure that results are analyzed and serve to inform the management system. |
| **TOTAL SCORE** | | **31 / 93 = 33.3%** | | |

*Reporting Progress at Protected Area Sites: Data Sheet #3*

| | | | |
|---|---|---|---|
| Name of protected area | **Golden Stream Corridor Preserve** | | |
| Location of protected area (country and if possible map reference) | GSCP: 88°47'48" N & 88°43'44"N Latitude and 16°25'25"E&16°14'14"E Longitude<br>Belize | | |
| Date of establishment (distinguish between agreed and gazetted*) or formally established in the case of private protected areas | Agreed<br>1999 | Gazetted<br>2002 | |
| Ownership details (i.e. owner, tenure rights etc) | The GSCP is a private protected area that is owned by the Ya'axche' Conservation Trust, a registered NGO in Belize | | |
| Management Authority | The GSCP is managed by the Ya'axche' Conservation Trust, with institutional support from Fauna & Flora International through an inter-institutional management agreement between the two organizations. | | |
| Size of protected area (ha) | 6058 | | |
| Number of staff | Permanent<br>Twelve (12) | Temporary<br>Four | |
| Budget | $120,000 US / year | | |
| Designations (IUCN category, World Heritage, Ramsar etc) | **<u>Category VI</u>**<br>Managed Resource Protected Areas: Protected Area managed mainly for the sustainable use of natural ecosystems. | | |
| Reasons for designation | The GSCP is managed with the objective of preserving both the critical biodiversity it contains, and the interdependent ecosystems. GSCP was moreover recognized because of the critical role it plays in the country's biological corridor system | | |
| Brief details of World Bank funded project or projects in PA | **Not applicable when completing for GEF projects** | | |
| Brief details of WWF funded project or projects in PA | **Not applicable when completing for GEF projects** | | |
| Brief details of **<u>all relevant projects</u>** in PA | 1. UNDP GEF SGP, running from November 2004-October 2005, whose objective is to promote alternative biodiversity-friendly enterprise amongst the communities of the PA buffer zone, primarily in the field of agroforestry (cacao and xate).<br>2. USFWS Grant, due to begin September 2005-August 2007, whose objectives are<br>3. Oak Foundation for general operation expenses, watershed management and monitoring, ecotourism capacity development, and community outreach and education<br>4. SIF / Basic Needs Trust Fund – to develop community capacity for sustainable forest management.<br>5. Peretti Foundation – for community and institutional capacity building, for biodiversity and PA management and monitoring, for sustainable tourism and enterprise development.<br>6. Sea World / Busch Gardens – for environmental education.<br>7. Wildlife Land Trust – for field protection and monitoring. | | |
| List the two primary protected area objectives | | | |

| | |
|---|---|
| Objective 1 | Protect biodiversity within the PA and across its interrelated ecosystems, spanning the Golden Stream watershed, to thereby sustain a ridge-reef biological corridor. |
| Objective 2 | Promote integrated landscape management between the PA and its adjacent PAs and community / national lands, through collaborative stakeholder planning, and development of sustainable business alternatives to strengthen local livelihoods and support for YCT's conservation objectives. |
| List the top two most important threats to the PA (and indicate reasons why these were chosen) | |
| Threat 1 | Logging – industrial and small-scale. Although logging is not practiced within the GSCP, licensed and unlicensed logging, both types of which are poorly regulated, in areas adjacent to the GSCP are threatening to fragment the unbroken broadleaf forest ecosystem which stretches from the Maya Mountains to the coast. Fragmentation of adjacent forests has a direct relationship on the overall integrity and health of the forest ecosystem within GSCP, since all are interconnected – thereby constituting a direct threat to the GSCP. |
| Threat 2 | Agriculture – also industrial and small-scale varieties. The most immediate threat comes from subsistence agriculture or Mayan milpa farming; a slash and burn system which often inadvertently unleashes destructive forest fires that in years past have directly threatened the GSCP, while burning its adjacent forests. The gradual extension of industrial plantations such as citrus and banana, as well as shrimp farms, from their area of concentration in the adjacent district of Stann Creek south to the Toledo District over time however represents a more serious, if medium-term threat, which only the enhancement of alternative biodiversity-friendly industries is likely to counteract. |
| List top two critical management activities | |
| Activity 1 | To strengthen and extend YCT's biodiversity monitoring system, manned by local community field rangers, to encompass the length of the GSW. |
| Activity 2 | To reduce local poverty and pressure upon the GSCP through the promotion of biodiversity-friendly alternative options and management capacity amongst the communities of the PA's buffer zone |

Date assessment carried out: _____1st July 2005_____

Name/s of assessor: Emma Caddy_____

| Issue | Criteria | Score | Comments | Next steps |
|---|---|---|---|---|
| 1. Legal status<br>Does the protected area have legal status?<br><br>*Context* | The protected area has been legally gazetted (or in the case of private reserves is owned by a trust or similar) | 3 | *Note*: see fourth option for private reserves | To ensure formal integration of PPAs within Belize's NPAS and related legislation. |
| 2. Protected area regulations<br>Are inappropriate land uses and activities (e.g. poaching) controlled?<br><br>*Context* | Mechanisms for controlling inappropriate land use and activities in the protected area exist and are being effectively implemented | 3 | The bordering communities might respect the GSCP management regime at present. Nevertheless, they are suffering increasing problems of land scarcity, so without binding them into management, controlling of illegal activities is likely to become increasingly difficult. | Develop innovative strategies for improving and ensuring the continued flexibility / effectiveness of GSCP's PA system. |
| 3. Law enforcement<br>Can staff enforce protected area rules well enough?<br><br>*Context* | The staff have acceptable capacity/resources to enforce protected area legislation and regulations but some deficiencies remain | 2 | *Possible issue for comment*: What happens if people are arrested?<br><br>The GSCP field staff will shortly be undergoing a training programme to secure special constable status, which will give them the power of arrest if needs be. With local persons, the rangers are more likely to refer the matter to the local village authorities. | To build local capacity for managing the PA through training and development of a management plan. |
| 4. Protected area objectives<br>Have objectives been agreed?<br><br>*Planning* | The protected area has agreed objectives, but these are only partially implemented | 2 | YCT staff began the GSCP management planning process in mid-2005, with objectives agreed – but the process for implementing them still pending. | To produce a management plan for the GSCP. |

| Issue | Criteria | Score | Comments | Next steps |
|---|---|---|---|---|
| 5. Protected area design<br>Does the protected area need enlarging, corridors etc to meet its objectives?<br><br>*Planning* | Inadequacies in design mean that achievement of major objectives are constrained to some extent | 1 | *Possible issue for comment*: does the protected area contain different management zones and are these well maintained?<br>The PA does not contain different management zones only because the management planning process has not yet been conducted. | It is necessary not to extend the GSCP's boundaries, but rather integrate its management with that of the adjacent protected areas within the GSW, to ensure the watershed and biodiversity corridor's integrity is maintained. |
| 6. Protected area boundary demarcation<br>Is the boundary known and demarcated?<br><br>*Context* | The boundary of the protected area is known by both the management authority and local residents but is not appropriately demarcated | 2 | *Possible issue for comment*: are there tenure disagreements affecting the protected area?<br>No. | To properly demarcate the boundary, maintain the boundary cleared, and signpost it at regular intervals. |
| 7. Management plan<br>Is there a management plan and is it being implemented?<br><br>*Planning* | A management plan is being prepared or has been prepared but is not being implemented | 1 | No management plan exists yet for GSCP. | To complete the GSCP management plan – a process which was initiated in May 2005 as a result of a modest grant from the Protected Areas Conservation Trust. |
| Additional points<br><br>*Planning* | The planning process allows adequate opportunity for key stakeholders to influence the management plan | +1 | | Sustain consultation after the management plan has been drafted. |
| | There is an established schedule and process for periodic review and updating of the management plan | | | |
| | The results of monitoring, research and evaluation are routinely incorporated into planning | | | |
| 8. Regular work plan<br>Is there an annual work plan?<br><br>*Planning/Outputs* | A regular work plan exists but activities are not monitored against the plan's targets | 1 | YCT has been working since late 2004 to instill a planning culture amongst its staff, but wholesale adoption of this mode of operation will still take time to be secured. | To build YCT's staff's capacity to continuously monitor their activities with reference to the annual and management plans. |

| Issue | Criteria | Score | Comments | Next steps |
|---|---|---|---|---|
| 9. Resource inventory<br>Do you have enough information to manage the area?<br><br>*Context* | Information on the critical habitats, species and cultural values of the protected area is not sufficient to support planning and decision making | 1 | This situation will however rapidly improve, as YCT staff has embarked on an extensive research process – both social and biological – to ensure that sufficient data exists to support the management planning process. | To develop research strategies and programmes which will ensure that information is continuously and systematically collected through a coordinated effort involving both local rangers and external researchers. |
| 10. Research<br>Is there a programme of management-orientated survey and research work?<br><br>*Inputs* | There is a comprehensive, integrated programme of survey and research work, which is relevant to management needs | 3 | A biodiversity monitoring system was established for GSCP in 2004, which is gradually being improved and consolidated. | This survey and research work can nevertheless be improved upon, which will occur through the biodiversity monitoring programme and staff training activities envisaged. |
| 11. Resource management<br>Is the protected area adequately managed (e.g. for fire, invasive species, poaching)?<br><br>*Process* | Requirements for active management of critical ecosystems, species and cultural values are only being partially addressed | 2 | At present, the GSCP is well managed, and poaching / invasive species are controlled. However forest fires remains a critical problem for the GSCP, since fires originating from outside the GSCP boundaries continue to pose a threat to the reserve. | To consolidate management and community outreach, livelihood and education programmes to reduce threats. |
| 12. Staff numbers<br>Are there enough people employed to manage the protected area?<br><br>*Inputs* | Staff numbers are adequate for the management needs of the site | 3 | YCT has an above average number of field rangers per hectare of PA compared to most PAs in the country. | Utilize the YCT rangers in a more strategic fashion to improve their effectiveness. |

| Issue | Criteria | Score | Comments | Next steps |
|---|---|---|---|---|
| 13. Personnel management<br>Is the staff managed well enough?<br><br>*Process* | Problems with personnel management partially constrain the achievement of major management objectives | 1 | Field personnel are by and large, well managed and committed to the work. | Capacity building in the area of management is critical, and has been integrated into the GEF project as a result |
| 14. Staff training<br>Is there enough training for staff?<br><br>*Inputs/Process* | Staff training and skills are adequate, but could be further improved to fully achieve the objectives of management | 2 | Training is organized for the rangers on a periodic basis, depending on funds and visits from experts to the country. | To make capacity-building a major feature of the GEF project |
| 15. Current budget<br>Is the current budget sufficient?<br><br>*Inputs* | The available budget is acceptable, but could be further improved to fully achieve effective management | 2 | Although the present budget is adequate and will sustain management practices until end of 2006 at present, more concerted and imaginative strategies are needed to secure long-term financial sustainability of the PA and its managing entity | To make financial sustainability a major feature of the GEF project |
| 16. Security of budget<br>Is the budget secure?<br><br>*Inputs* | There is very little secure budget and the protected area could not function adequately without outside funding | 1 | As above | As above |
| 17. Management of budget<br>Is the budget managed to meet critical management needs?<br><br>*Process* | Budget management is adequate but could be improved | 2 | The YCT Office Manager is trained in Quick Books, and receives continuous support from the FFI Financial Management team. He is also currently studying for a BA in Business Administration. | Again, further staff training is necessary |
| 18. Equipment<br>Is equipment adequately maintained?<br><br>*Process* | There is equipment and facilities, but still some major gaps that constrain management | 2 | Need camera traps and reliable source of electricity at the main field centre, and a secure facility downstream in the GS where equipment can be stored. | To address these gaps. |

| Issue | Criteria | Score | Comments | Next steps |
|---|---|---|---|---|
| 19. Maintenance of equipment<br>Is equipment adequately maintained?<br><br>*Process* | There is maintenance of equipment and facilities, but there are some important gaps in maintenance | 2 | Establishing a field centre downstream at La Sierra will exponentially improve field rangers' capacity to maintain equipment. | Again, capacity building combined with infrastructure improvement should address existing gaps |
| 20. Education and awareness programme<br>Is there a planned education programme?<br><br>*Process* | There is a planned and effective education and awareness programme fully linked to the objectives and needs of the protected area | 3 | An effective community education programme is one of YCT's strengths, but funding sources can always be improved to further strengthen the programme's remit. | To disseminate YCT's successes in community outreach wider afield, through the GEF-GSW mechanism. |
| 21. State and commercial neighbours<br>Is there co-operation with adjacent land users?<br><br>*Process* | There is limited contact between managers and neighbouring official or corporate land users | 1 | Some ad hoc collaboration exists with BLE and an adjacent, family-owned logging operation in the Deep River Forest Reserve, but nothing formalized. | Consolidate and improve existing level of contacts / collaboration (e.g. with Belize Lodge & Excursions) through the project. |
| 22. Indigenous people<br>Do indigenous and traditional peoples resident or regularly using the PA have input to management decisions?<br>*Process* | Indigenous and traditional peoples directly contribute to some decisions relating to management | 2 | The YCT board contains 3 local indigenous representatives out of its total 7 – whilst all but one of the permanent staff comes from the local communities. | To build community capacity to input management decisions, by enhancing their ability to organize and advocate for their interests and agendas. |
| 23. Local communities<br>Do local communities resident or near the protected area have input to management decisions?<br>*Process* | Local communities directly contribute to some decisions relating to management | 2 | Local communities contribute through having their representatives on the board, and through the regular community meetings YCT hold | To further consolidate community input in management decision-making through formation of the GSWAC |
| Additional points | There is open communication and trust between local stakeholders and protected area managers | +1 | YCT has been able to build trust with local communities, as a | Consolidate existing support by consolidating capacity-building, |

| Issue | Criteria | Score | Comments | Next steps |
|---|---|---|---|---|
| Additional points<br><br>*Outputs* | Programmes to enhance local community welfare, while conserving protected area resources, are being implemented | +1 | result of complimentary awareness and livelihood strengthening strategies | awareness and livelihood efforts. |
| 24. Visitor facilities<br>Are visitor facilities (for tourists, pilgrims etc) good enough?<br><br>*Outputs* | There are no visitor facilities and services | 0 | *Possible issue for comment*: Do visitors damage the protected area?<br>No visitors to speak of, so no damage being inflicted | To develop GSCP's capacity to function as a visitation site for tourists, from which revenue to support YCT and communities' needs can be generated. |
| 25. Commercial tourism<br>Do commercial tour operators contribute to protected area management?<br><br>*Process* | There is contact between managers and tourism operators but this is largely confined to administrative or regulatory matters | 1 | *Possible issue for comment*: examples of contributions<br>The Belize Lodge & Excursions staff and YCT are collaborating in river patrolling exercises, but not in the effort to enhance visitor experiences and maintain protected area values | Develop closer ties and clear lines of collaboration / mutual benefit between the GSW's PAMOs and private tourism operators |
| 26. Fees<br>If fees (tourism, fines) are applied, do they help protected area management?<br><br>*Outputs* | Although fees are theoretically applied, they are not collected | 0 | There is no fee structure in place for visiting the GSCP | YCT needs to consider whether one should be applied, and in which context. |

| Issue | Criteria | Score | Comments | Next steps |
|---|---|---|---|---|
| 27. Condition assessment<br>Is the protected area being managed consistent to its objectives?<br>*Outcomes* | Biodiversity, ecological and cultural values are predominantly intact | 3 | *Possible issue for comment:* It is important to provide details of the biodiversity, ecological or cultural values being affected<br><br>GSCP is being managed quite effectively – but objective is not to allow the PA to become an island of biodiversity, but rather develop its potential to function as a critical lynchpin in an interconnected corridor of conservation. | To consolidate GSCP's ability to function as a conservation corridor and protected the Golden Stream watershed through the GEF intervention. |
| Additional points<br><br>*Outputs* | There are active programmes for restoration of degraded areas within the protected area and/or the protected area buffer zone | +1 | YCT runs a reforestation programme from its tree nursery in the GSCP, targeting both the GSCP and buffer zones. In addition, YCT's agroforestry programme with buffer communities is enhancing degraded forested areas | To expand this reforestation programme under the auspices of the GEF process, with the support of secured co-finance. |
| 28. Access assessment<br>Are the available management mechanisms working to control access or use?<br><br>*Outcomes* | Protection systems are largely or wholly effective in controlling access or use of the reserve in accordance with designated objectives | 3 | YCT's protection system is extremely effective in controlling access / use within the GSCP itself. | To ensure that YCT's protection system remains flexible, and is able to respond to new threats / situations and sustain its effectiveness over the long-term. |

| Issue | Criteria | Score | Comments | Next steps |
|---|---|---|---|---|
| 29. Economic benefit assessment<br>Is the protected area providing economic benefits to local communities?<br><br>*Outcomes* | There is some flow of economic benefits to local communities from the existence of the protected area but this is of minor significance to the regional economy | 2 | *Possible issue for comment*: how does national or regional development impact on the protected area?<br>National / regional development does impact the area, in terms of the extension of the southern Highway through the GSCP, and in terms of policy decisions affecting environmental integrity which civil society are not always thoroughly consulted on. | To encourage greater integration between government and other stakeholders in the design of a collective vision for development of the GSW and surrounding area. |
| 30. Monitoring and evaluation<br><br>*Planning/Process* | There is some *ad hoc* monitoring and evaluation, but no overall strategy and/or no regular collection of results | 1 | Monitoring and evaluation mechanisms are being developed to evaluate YCT's work / as part of YCT's ongoing planning efforts, but have yet to be consolidated and formalized. | To improve and consolidate monitoring and evaluation of YCT's management programme through the GEF project, and ensure that local staff develop the capacity to maintain it. |
| **TOTAL SCORE** | | **58 / 93 (53.94%)** | | |

*Reporting Progress at Protected Area Sites: Data Sheet #4*

| | | | |
|---|---|---|---|
| Name of protected area | **PHMR** | | |
| Location of protected area (country and if possible map reference) | PHMR is situated 88°46'47"N & 88°28'29"N Latitude and 16°22'22"E & 16°7'7"E Longitude in southern Belize. | | |
| Date of establishment (distinguish between agreed and gazetted*) or formally established in the case of private protected areas | Agreed<br>2000 | Gazetted<br>2000 | |
| Ownership details (i.e. owner, tenure rights etc) | Government of Belize | | |
| Management Authority | TIDE | | |
| Size of protected area (ha) | 35,000 ha | | |
| Number of staff | Permanent<br>All of TIDE (38) PHMR (6) | Temporary<br>All of TIDE (3) | |
| Budget | $200,000 US / year (PHMR only) | | |
| Designations (IUCN category, World Heritage, Ramsar etc) | Category V | | |
| Reasons for designation | PHMR is managed for both scientific / education purposes, and to bring benefit to the local communities through sustainable, managed extraction | | |
| Brief details of World Bank funded project or projects in PA | **Not applicable when completing for GEF projects** | | |
| Brief details of WWF funded project or projects in PA | **Not applicable when completing for GEF projects** | | |
| Brief details of **all relevant projects** in PA | CREP project for PHMR, species monitoring programme, livelihood projects / training, water monitoring, patrolling | | |
| List the two primary protected area objectives | | | |
| Objective 1 | To protect the marine ecosystem and species of the PHMR, adjacent coastal and barrier reef systems and the Gulf of Honduras in general. | | |
| Objective 2 | Develop sustainable businesses and livelihoods through wise and long-term management of PHMR | | |
| List the top two most important threats to the PA (and indicate reasons why these were chosen) | | | |
| Threat 1 | Illegal fishing | | |
| Threat 2 | Pollution / impacts from unsustainable land practices | | |
| List top two critical management activities | | | |
| Activity 1 | Monitoring | | |
| Activity 2 | Research | | |

Date assessment carried out: 5th July 2005. Name/s of assessor: Eugenio Ah, Manager, TIDE's Private Lands.

| Issue | Criteria | Score | Comments | Next steps |
|---|---|---|---|---|
| 1. Legal status<br>Does the protected area have legal status?<br><br>*Context* | The protected area has been legally gazetted (or in the case of private reserves is owned by a trust or similar) | 3 | *Note*: see fourth option for private reserves<br>The PHMR was formally gazzetted in 2000. | N/A |
| 2. Protected area regulations<br>Are inappropriate land uses and activities (e.g. poaching) controlled?<br><br>*Context* | Mechanisms for controlling inappropriate land use and activities in the protected area exist but there are some problems in effectively implementing them | 2 | Limitations exist because of invasions by fisherman from Guatemala and Honduras | For TIDE to consolidate its work with TRIGOH – tri-national body – to improve management of the different nationals utilizing the area. |
| 3. Law enforcement<br>Can staff enforce protected area rules well enough?<br><br>*Context* | The staff have excellent capacity/resources to enforce protected area legislation and regulations | 3 | *Possible issue for comment*: What happens if people are arrested?<br><br>They are reported to local government authorities. | To ensure all TIDE rangers go through Special Constable training, and are thereby acquire the powers of citizen arrest. |
| 4. Protected area objectives<br>Have objectives been agreed?<br><br>*Planning* | The protected area has agreed objectives and is managed to meet these objectives | 3 | As encapsulated in the PHMR management plan. | To update these objectives over time, as processes such as the projected GEF GSW project come on stream. |
| 5. Protected area design<br>Does the protected area need enlarging, corridors etc to meet its objectives?<br><br>*Planning* | Design is not significantly constraining achievement of major objectives, but could be improved | 2 | *Possible issue for comment*: does the protected area contain different management zones and are these well maintained?<br><br>Yes. | Increase coordination between the marine reserve and terrestrial protected area managers from where many of the impacts are originating, and need to be addressed. |

| Issue | Criteria | Score | Comments | Next steps |
|---|---|---|---|---|
| 6. Protected area boundary demarcation<br>Is the boundary known and demarcated?<br><br>*Context* | The boundary of the protected area is known by the management authority and local residents and is appropriately demarcated | 3 | *Possible issue for comment*: are there tenure disagreements affecting the protected area?<br>No. | N/A. |
| 7. Management plan<br>Is there a management plan and is it being implemented?<br><br>*Planning* | An approved management plan exists and is being implemented | 3 | PHMR is managed according to a comprehensive plan, which the staff constantly refers to in their daily operations. | To update the management plan every 5 years, to reflect changed circumstances |
| Additional points<br><br>*Planning* | The planning process allows adequate opportunity for key stakeholders to influence the management plan | +1 | TIDE works closely with the key coastal communities which utilize the PHMR, and has largely secured their support in sustaining the marine reserve. | To ensure that local stakeholders remain involved and abreast of developments in strengthening coordination between PHMR and the GSW. |
| | There is an established schedule and process for periodic review and updating of the management plan | +1 | | |
| | The results of monitoring, research and evaluation are routinely incorporated into planning | +1 | | |
| 8. Regular work plan<br>Is there an annual work plan?<br><br>*Planning/Outputs* | A regular work plan exists, actions are monitored against the plan's targets and most or all prescribed activities are completed | 3 | TIDE's marine rangers are well coordinated, and have a regular work plan. | To ensure that these practices are transferred to TIDE's terrestrial rangers, whose programmes are newer and receive less institutional attention and support. |
| 9. Resource inventory<br>Do you have enough information to manage the area?<br><br>*Context* | Information on the critical habitats, species and cultural values of the protected area is sufficient for key areas of planning/decision making but the necessary survey work is not being maintained | 2 | TIDE's marine species have been well studied by marine biologists | To direct researchers / research programmes to study the issue of interconnectivity / impacts between marine and terrestrial areas. |

| Issue | Criteria | Score | Comments | Next steps |
|---|---|---|---|---|
| 10. Research<br>Is there a programme of management-orientated survey and research work?<br><br>*Inputs* | There is a comprehensive, integrated programme of survey and research work, which is relevant to management needs | 3 | This system could however be integrated more directly with inland monitoring systems, so that findings from both sea and landscapes can be compared and integrated with one another. | To integrate these systems through the GSW. |
| 11. Resource management<br>Is the protected area adequately managed (e.g. for fire, invasive species, poaching)?<br><br>*Process* | Requirements for active management of critical ecosystems, species and cultural values are being substantially or fully addressed | 3 | The PA is well managed, though is always vulnerable to incursions by fishermen from Guatemala and Honduras. | To consolidate tri-national linkages. |
| 12. Staff numbers<br>Are there enough people employed to manage the protected area?<br><br>*Inputs* | Staff numbers are below optimum level for critical management activities | 2 | At 102,400 acres, the PHMR is a large area which could always do with more staff to ensure improved management presence. | Increase staff / boats. |
| 13. Personnel management<br>Is the staff managed well enough?<br><br>*Process* | Personnel management is adequate to the achievement of major management objectives but could be improved | 2 | Staff operating in the reserve is coordinated at two levels – from TIDE's main office in Punta Gorda, and from a central caye in the PHMR – Abalone – where TIDE's field station was established. | Staff management training can be provided to improve management effectiveness. |
| 14. Staff training<br>Is there enough training for staff?<br><br>*Inputs/Process* | Staff training and skills are adequate, but could be further improved to fully achieve the objectives of management | 2 | | As above. |

| Issue | Criteria | Score | Comments | Next steps |
|---|---|---|---|---|
| 15. Current budget<br>Is the current budget sufficient?<br><br>*Inputs* | The available budget is acceptable, but could be further improved to fully achieve effective management | 2 | Reliance on external funding is something TIDE would like to move away from; towards expansion of sustainable businesses, in particular, tourism. | To strengthen PHMR's ability to provide revenue to TIDE – indirectly through TIDE Tours, and directly through entrance fees – as its attraction as an ecotourism destination increases. |
| 16. Security of budget<br>Is the budget secure?<br><br>*Inputs* | There is a reasonably secure core budget for the protected area but many innovations and initiatives are reliant on outside funding | 2 | As above. | As above, to increase financial sustainability of monitoring systems. |
| 17. Management of budget<br>Is the budget managed to meet critical management needs?<br><br>*Process* | Budget management is adequate but could be improved | 2 | Budget management at TIDE is good, since it is overseen by a chartered accountant who works part time for the organization. | Secure a permanent staff to do this work, and perhaps save money in the process. |
| 18. Equipment<br>Is equipment adequately maintained?<br><br>*Process* | There is adequate equipment and facilities | 3 | TIDE has very modern equipment, and plenty of it, with which it manages the PHMR. | Equipment can always be improved. |
| 19. Maintenance of equipment<br>Is equipment adequately maintained?<br><br>*Process* | Equipment and facilities are well maintained | 3 | | |
| 20. Education and awareness programme<br>Is there a planned education programme?<br><br>*Process* | There is a planned education and awareness programme but there are still serious gaps | 2 | TIDE works with PHMR's coastal communities, but is limited in its ability to maintain a continuous programme because of the costs involved in reaching these outlying areas. | To coordinate its outreach programme with other PAMO agencies, and learn from other PAMO successes (e.g. Belize Audubon's, YCT's). |

| Issue | Criteria | Score | Comments | Next steps |
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| 21. State and commercial neighbours<br>Is there co-operation with adjacent land users?<br><br>*Process* | There is regular contact between managers and neighbouring official or corporate land users, but only limited co-operation | 2 | TIDE manages the PHMR in conjunction with GoB, but in effect, Fisheries Department plays a minor role in its management given its extremely limited financial resources. TIDE also collaborates with local operators to ensure tourism strategies in the PHMR are coordinated, and fees collected. | To further consolidate these disparate collaborative networks to enhance management effectiveness. |
| 22. Indigenous people<br>Do indigenous and traditional peoples resident or regularly using the PA have input to management decisions?<br>*Process* | Indigenous and traditional peoples directly contribute to some decisions relating to management | 2 | Local people from the PHMR's coastal communities sit on TIDE's board, and play a role in management decision-making. Their technical limitations however often mean that their inputs are less than they might be. | To enhance local communities' ability to meaningfully participate in management decision-making. |
| 23. Local communities<br>Do local communities resident or near the protected area have input to management decisions?<br>*Process* | Local communities directly contribute to some decisions relating to management | 2 | As above. | As above. |
| Additional points<br>Additional points<br><br>*Outputs* | There is open communication and trust between local stakeholders and protected area managers | +1 | Stakeholders have seen benefits accrued to them as a result of PHMR's declaration and management (in terms of improved fishing sites and ecotourism) and therefore trust TIDE. | To consolidate these efforts so that a greater level of stakeholders can derive benefit from the PHMR. |
| | Programmes to enhance local community welfare, while conserving protected area resources, are being implemented | +1 | | |

| Issue | Criteria | Score | Comments | Next steps |
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| 24. Visitor facilities<br>Are visitor facilities (for tourists, pilgrims etc) good enough?<br><br>*Outputs* | Visitor facilities and services are adequate for current levels of visitation but could be improved | 2 | *Possible issue for comment*: Do visitors damage the protected area?<br><br>Yes to an extent; but TIDE is training guides to minimize such impact | To improve facilities so that PHMR's ability to receive and manage visitors – and derive income from them – is enhanced. |
| 25. Commercial tourism<br>Do commercial tour operators contribute to protected area management?<br><br>*Process* | There is limited co-operation between managers and tourism operators to enhance visitor experiences and maintain protected area values | 2 | *Possible issue for comment*: examples of contributions<br><br>TIDE provides training to local people in tour guide activities, scuba, fly fishing etc. so many operators owe their beginning to TIDE, which enhances collaboration. Not all operators however see TIDE as having helped them, and try to avoid paying dues / respecting regulations. | To ensure that managers and tourism operators fully appreciate the work TIDE is doing to maintain the PHMR, and thereby pay their entrance fees / respect the reserve's regulations at all times. |
| 26. Fees<br>If fees (tourism, fines) are applied, do they help protected area management?<br><br>*Outputs* | There is a fee for visiting the protected area that helps to support this and/or other protected areas | 3 | Process of fee collection could be improved through enhanced control of the guides and fishermen entering and exiting the area. | Strengthen the fee collection system. |

| Issue | Criteria | Score | Comments | Next steps |
|---|---|---|---|---|
| 27. Condition assessment<br>Is the protected area being managed consistent to its objectives?<br><br>*Outcomes*<br><br>Additional points<br><br>*Outputs* | Some biodiversity, ecological and cultural values are being partially degraded but the most important values have not been significantly impacted | 2 | *Possible issue for comment:* It is important to provide details of the biodiversity, ecological or cultural values being affected<br>Lobster and conch fisheries / species are being impacted by indiscriminate practices of foreign fishermen, but these are largely contained by TIDE. | To ensure PHMR's management objectives are constantly revisited and revised where necessary, to remain relevant and able to protect the reserve's critical biodiversity values. |
| 28. Access assessment<br>Are the available management mechanisms working to control access or use?<br><br>*Outcomes* | Protection systems are moderately effective in controlling access or use of the reserve in accordance with designated objectives | 2 | As mentioned before, protection systems are moderately effective, but given PHMR's size, it will be impossible to ever control all incursions / illegal activities in the Reserve. | |
| 29. Economic benefit assessment<br>Is the protected area providing economic benefits to local communities?<br><br>*Outcomes* | There is some flow of economic benefits to local communities from the existence of the protected area but this is of minor significance to the regional economy | 2 | *Possible issue for comment*: how does national or regional development impact on the protected area?<br>Increased level of shrimp farms and clearing of land for agriculture or through logging appears to be undermining the ecological integrity of the PHMR. That said, development of ecotourism industry in Belize is also helping TIDE develop its potential for sustainable management. | Consolidate PHMR's ability to provide sustainable, alternative economic benefits to the local communities. |
| 30. Monitoring and evaluation<br><br>*Planning/Process* | There is an agreed and implemented monitoring and evaluation system but results are not systematically used for management | 2 | TIDE can improve their M&E systems, which are not always effective at feeding into and improving management | Enhance management of M&E systems, and develop synergies between marine and terrestrial PA M&E systems. |

| Issue | Criteria | Score | Comments | Next steps |
|---|---|---|---|---|
| **TOTAL SCORE** | | 76/93 = 81.72% | | |

**Annex J: Total budget and work plan**

**Award: tbd**
**Award Title:**

**Project ID: 1740**
**Project Title: Integrating Protected Area and Landscape Management in the Golden Stream Watershed**

| GEF Outcome/Atlas Activity | Responsible Party | Source of Funds | Amount 2005-2006 (USD) | Amount 2006-2007 (USD) | Amount 2007-2008 (USD) | Amount 2008-2009 (USD) | Total (USD) |
|---|---|---|---|---|---|---|---|
| | | | | | | | |
| **OUTCOME 1: Protected area management authorities, with the support and participation of the buffer area stakeholders, have jointly developed and are implementing a standardized and complementary set of management plans for the GSW's four protected areas.** | **FFI** | **GEF** | **168,138** | **90,639** | **59,234** | **45,189** | **363,200** |
| | | **FFI** | 28,325 | 28,325 | 28,325 | 28,325 | 113,300 |
| | | **PACT** | 17,350 | - | - | - | 17,350 |
| | | **Oak** | 44,890 | 45,000 | - | - | 89,890 |
| | | **Seaworld** | 5,000 | - | - | - | 5,000 |
| | | **Peace Corps** | - | 21,000 | 10,500 | 10,500 | 42,000 |
| | | **Darwin/NHM** | 15,000 | - | - | - | 15,000 |
| | | **Ecologic** | - | 16,000 | 7,000 | 7,000 | 30,000 |
| | | **NPF** | 2,110 | - | - | - | 2,110 |
| | | **TIDE** | 35,000 | 35,000 | 35,000 | 35,000 | 140,000 |
| | | **FD** | 20,000 | 20,000 | 20,000 | 20,000 | 80,000 |
| | | **USFWS** | 51,178 | 51,178 | - | - | 102,356 |
| | | **BFREE** | 10,000 | 10,000 | 10,000 | 10,000 | 40,000 |
| | | **Co-finance** | *228,853* | *226,503* | *110,825* | *110,825* | **677,006** |
| | | **Subtotal** | **396,991** | **317,142** | **170,059** | **156,014** | **1,040,206** |
| | | | | | | | |
| **OUTCOME 2: Protected area management authorities, local government bodies, private sector landholders and local communities have jointly developed a strategy for sustainable development of the GSW landscape and are co-operating to sustain its implementation over the long-term.** | **FFI** | **GEF** | 70,935 | 106,398 | 54,498 | 36,299 | **268,130** |
| | | **FFI** | 3,325 | 3,325 | 3,325 | 3,325 | 13,300 |
| | | **Oak** | - | - | - | - | 0 |
| | | **Seaworld** | 10,000 | - | - | - | 10,000 |
| | | **Peace Corps** | 8,000 | 7,000 | 8,000 | 7,000 | 30,000 |
| | | **Darwin/NHM** | 13,500 | - | - | - | 13,500 |
| | | **Ecologic** | - | 10,000 | 5,000 | 5,000 | 20,000 |
| | | **NPF** | 101,500 | - | - | - | 101,500 |
| | | **TIDE** | - | - | - | - | 0 |
| | | **FD** | - | - | - | - | 0 |
| | | **USFWS** | 25,000 | 25,000 | - | - | 50,000 |
| | | **BFREE** | - | - | - | - | 0 |
| | | **Co-finance** | *161,325* | *45,325* | *16,325* | *15,325* | **238,300** |
| | | **Subtotal** | **232,260** | **151,723** | **70,823** | **51,624** | **506,430** |
| | | | | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **OUTCOME 3: Fiscal and legislative environments affecting private protected areas have been clarified and improved as a result of collaborative NPAPSP / BAPPA / GSW efforts.** | **FFI** | **GEF** | 13,000 | 11,400 | 11,000 | 10,600 | **46,000** |
| | | **Peace Corps** | 1,500 | 1,500 | 1,500 | 1,500 | 6,000 |
| | | **NPF** | 38,500 | - | - | - | 38,500 |
| | | **TIDE** | 7,500 | 7,500 | 7,500 | 7,500 | 30,000 |
| | | **Co-finance** | *47,500* | *9,000* | *9,000* | *9,000* | **74,500** |
| | | **Subtotal** | **60,500** | **20,400** | **20,000** | **19,600** | **120,500** |
| | | | | | | | |
| **OUTCOME 4: Protected area management authorities and other stakeholders throughout Belize have benefited from, and are beginning to apply, lessons learned from the GSW experience** | **FFI** | **GEF** | 100,960 | 64,294 | 63,948 | 68,468 | **297,670** |
| | | **Peace Corps** | 4,500 | 4,500 | 4,500 | 4,500 | 18,000 |
| | | **Ecologic** | - | 14,000 | 8,000 | 8,000 | 30,000 |
| | | **NPF** | 52,712 | - | - | - | 52,712 |
| | | **USFWS** | 15,000 | 15,000 | - | - | 30,000 |
| | | **Co-finance** | *72,212* | *33,500* | *12,500* | *12,500* | **130,712** |
| | | **Subtotal** | **173,172** | **97,794** | **76,448** | **80,968** | **428,382** |
| | | | | | | | |
| | | | | | | | |
| **Subtotal per Financier:** | | ***GEF*** | | | | | ***$975,000*** |
| | | ***FFI*** | | | | | ***$126,600*** |
| | | ***PACT*** | | | | | ***$17,350*** |
| | | ***Oak Foundation*** | | | | | ***$89,890*** |
| | | ***Sea World / Busch Gardens*** | | | | | ***$15,000*** |
| | | ***Peace Corps*** | | | | | ***$96,000*** |
| | | ***Darwin / NHM*** | | | | | ***$28,500*** |
| | | ***Ecologic*** | | | | | ***$80,000*** |
| | | ***Nando Peretti Foundation*** | | | | | ***$194,822*** |
| | | ***TIDE*** | | | | | ***$170,000*** |
| | | ***FD*** | | | | | ***$80,000*** |
| | | ***USFWS*** | | | | | ***$182,356*** |
| | | ***BFREE*** | | | | | ***$40,000*** |
| | | | | | | | |
| **SUBTOTAL PER YEAR** | | | **862,923** | **587,059** | **337,330** | **308,206** | **2,095,518** |
| **PDF A** | | | | | | | **25,000** |
| **PROJECT TOTAL** | | | | | | | **2,120,518** |