Sustainable Finance Strategy and Plan for the Belize Protected Area System

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Cover photo: Laughing Bird Caye National Park by Andy Drumm
1 Executive Summary

The Government of Belize through the National Protected Areas Secretariat (NPAS) in collaboration with the Forest Department, Ministry of Natural Resources and the Environment is implementing the project “Sustainable Finance for the Implementation of the Belize National Protected Areas System Plan, Cost of the System and Economic Valuation” with the financial support of the Global Environment Facility (GEF) Trust Fund executed through the Belizean government with support from the United Nations Development Programme, The Nature Conservancy (TNC) and PACT.

In order to continue advancement with the required obligations and implementation of the Convention of Biological Diversity (CBD) Programme of Work on Protected Areas, it is necessary to develop a plan and strategy for long term financial sustainability of the National Protected Areas System.

Belize’s protected areas are a major asset to the national economy, contributing hundreds of millions of dollars in ecosystem goods and services each year. Tourism generates nearly a quarter of Belize’s GDP, providing not only direct revenues but also fueling growth in other industries, such as construction. The tourism industry is largely dependant on protected areas. Furthermore, the timber industry is sustained by the PA system and the US$100 million fisheries sector benefits from the health of MPAs. Other ecosystem goods and services such as fresh water also depend on the well being of the PA system. Additionally, it is estimated that up to US$347 million is provided by reefs and mangroves in protection of coastal properties from erosion and wave-induced damage (Cooper, E., L. Burke and N. Bood, 2008). It is also important to bear in mind that they increase the quality of life for large numbers of Belizeans by providing recreational and educational experiences. They also constitute part of Belize’s national identity and its image in the world.

Belize’s protected areas fall under a range of categories within a system that has evolved organically to be characterized by a diversified and decentralized structure with several different government departments managing multiple areas under differing legal frameworks or co-managing with a number of different NGOs or CBOs. This diversity of management and legal frameworks brings with it both advantages and disadvantages in terms of financial sustainability. A great advantage is that co-managers all have a vested interest in Protected Areas’ financial success, because all have a financial stake in the system, either as recipients or contributors of funds. Currently, a disadvantage is the complication caused by the lack of standardization of accounting systems among co-managers and managers which makes system wide financial planning very difficult.
Belize’s Protected Area System has made enormous strides during the last few years to consolidate its financial position. It has several positive characteristics including:

- The Conservation Fee and the Commission on the Cruise Passenger tax, flowing to a trust fund (PACT) dedicated to direct the funds to the system.
- The system has developed organically, is diversified, relying on multiple sources of revenue.
- There are many stakeholders that have a direct interest in the success of the system.
- Co-managers have allowed the government to save millions of dollars and at the same time to protect the Country’s natural capital.

In 2010, the Belize protected area system received funding equivalent to about 2.6% of the Government of Belize’s annual budget or about US$3.35 per acre. In exchange for that investment, the PA system has contributed the lion’s share of attractions that generate around 20% of the country’s GDP through tourism alone, plus provided much of the country’s fresh water supply, sustained the timber industry and protected the resources on which the fishing industry depends. It has also provided recreational and educational experiences for large numbers of Belizeans and been part of Belize’s international image in the world. Quite rightly, it is a source of national pride.

However, the analysis carried out for this strategy, clearly shows that this current level of funding is insufficient to sustain these services to the national economy and to society at the current levels into the future.

Costa Rica, for example, spends about US$24 compared to Belize’s US$8 per hectare on its protected area systems budget. At the same time, pressures on the high value, natural and cultural heritage in Belize’s protected area system in both terrestrial and marine ecosystems have increased considerably since they were created. In recent years both external threats from coastal development, industrial aquaculture and agriculture, overfishing etc have all increased the importance of the protected areas as reservoirs of Belize’s heritage as it continues being lost outside them. However even when the protected areas are islands, they are affected by external influences as well as being increasingly subject to pressures generated by growing tourism demand and poaching. These pressures mean that in spite of important efforts by managers, co-managers, international collaboration and others, the capacity to manage these areas is increasingly overstretched, leaving them vulnerable to processes that are eroding the natural capital they contain.
Ensuring the adequate capacity and financial sustainability to protect and manage the finest examples of the nation’s natural and cultural heritage, the environmental services, export income and employment they generate is of strategic importance for Belize and its financial sustainability should be a national priority.

This study provides important analysis of the current financial situation of Belize’s protected area system, and identifies and quantifies what investment is needed. It also presents policy recommendations, tools and a strategy for achieving financial sustainability.

An estimated US$8.9 million was spent in total on the protected area system in 2010. Using the UNDP’s Financial Scorecard methodology (Bovarnick, 2010) and the Threshold of Sustainability for Tourism approach (Drumm, McCool, Rieger, 2011), a funding gap between current investment and funding needed to operate at a level that sustains the health of the protected areas, of US$10.2 million for a basic scenario and US$ 19.4 million for an optimal scenario has been identified.

While there is no silver bullet that can resolve the financial dilemma of Belize’s protected area system, there are a number of opportunities for action and new policy that, assuming the political will, can narrow the gap significantly over the next five years. However, there is an urgent need to draft new legislation to facilitate improved structure of the system and to address current limitations, and fine-tune proven mechanisms. In order to fund the system at minimum levels to ensure its continued integrity, urgent action needs to be taken. Business as usual is not an option. A combination of rationalization of the system, improved efficiencies adjustments to fee structures and increases in prices plus the addition of new funding mechanisms is necessary. Important investments need to be made in developing capacities and this will take time, which also means that political decisions need to be made very quickly.

Investment in the PA system alone will not be enough. Threats impinging on protected areas from outside their boundaries must also be addressed. Incompatible land use practices in coastal and marine areas such as clear-cutting of mangroves, and dredging are seriously impacting coastal - marine protected areas, overstretching management budgets eroding resource health and reducing levels of visitor satisfaction. The Land Use Policy that is almost completed will assist with this, especially the integrated planning framework that will accompany it.

There is a heavy reliance on tourism for a large proportion of revenues through three major mechanisms, and given the fundamental reliance of the tourism industry on Belize’s protected areas, it is appropriate that tourism be a major contributor. However, there is clear justification for new tourism based mechanisms to be introduced and prices increased, because despite these funding sources, it seems clear that most or all protected areas currently do not receive the necessary investments or cover the minimum operating costs.
required in order to accomplish the commitments made by the Government of Belize to the Program of Work for Protected Areas (PoWPA).

Belize was a pioneer on a global scale when it introduced the Conservation Fee component of the international airport departure tax as part of the PACT Act in 1995. But in recent years there are signs that the green sheen on Belize’s profile is in need of rejuvenating. It is now an opportune moment to revise the amount determined to correspond more closely to today’s financial needs.

Currently, it is estimated that about 8% of total PAs expenditures is dedicated to tourism related activities at the site level (US$470,000\(^1\)). This contrasts sharply with the 48% of revenues (US$5 million) from protected areas that are generated by tourism (airport and cruise taxes and entrance fees). The results of the Threshold of Sustainability assessment indicate that current levels of spending on tourism management fall far below the minimum required to mitigate the serious and growing threats that it poses to protected area integrity. If the current trend is projected into the future it is highly likely there will be significant deterioration of natural capital that will result in the loss of natural attractions, reduction in the quality of visitor experience, followed by price reductions and terminal loss of demand. Indeed, this process is already underway at some sites.

Protected areas are central to Belize’s economic development model but are not necessarily considered as such by important political stakeholders such as the ministers of finance and planning who are central in allocating funds to agencies that manage protected areas. It is essential to promote research documenting the contribution of protected areas to economic development and to invest in effective communications strategies to ensure key stakeholders are properly informed. Resource use fees and collection mechanisms are inefficient, outdated, too low or nonexistent. With a coordinated strategy among stakeholders to protect the resource base on which tourism, fresh water and other critical economic sectors depend, there are excellent and proven opportunities to close the financing gap. The alternative is not a viable option.

\(^1\) Source: 8% of site level expenditure from Table 5
2 Introduction

2.1 Scope of Work

The Government of Belize through the National Protected Areas Secretariat (NPAS) in collaboration with the Forest Department, Ministry of Natural Resources and the Environment is implementing the project “Sustainable Finance for the Implementation of the Belize National Protected Areas System Plan, Cost of the System and Economic Valuation" with the financial support of the Global Environment Facility (GEF) Trust Fund executed through the United Nations Office for Project Services (UNOPS).

A major expected outcome of the project is for the National Protected Areas System to be supported by a Sustainable Financing Strategy/Plan along with relevant tools and mechanisms that contribute to effective management of financial resources.

Aware of the need to conserve and manage its vast biological and cultural richness, the government of Belize has declared 94 protected areas accounting for a total coverage of 1.22 million hectares, representing 26.2% of the national territory. The protected areas system comprises national parks, nature reserves, wildlife sanctuaries, natural monuments, forest reserves, marine reserves, archaeological sites and archaeological reserves, as well as private reserves, strategic biological corridors and scenic landscapes of geomorphic significance. This wealth of biological diversity, coupled with a rich cultural heritage has made Belize a very popular tourist destination, providing significant economic benefits for the nation.

In order to continue advancement with the required obligations and implementation of the Convention of Biological Diversity (CBD) Programme of Work on Protected Areas, it is necessary to develop a plan/strategy for long term financial sustainability of the National Protected Areas System.

The objective of this consultancy is to develop a sustainable financing strategy and plan that meet the needs of the NPAS thereby contributing to Belize’s obligation under the CBD Program of Work of Protected Area (PoWPA).

Specific Objectives:

- Identify current revenues, expenditure and financial needs including through the application of the Threshold of Sustainability approach for tourism in PAs.
- Identify core costs of protected area management.
- Conduct screening and pre-feasibility analysis, including review PA legislation, for potential financial mechanisms for the NPA System.
- Conduct Standardization of cost reporting accounting of PAs.
• Prepare a comprehensive financial sustainability strategy and plan for ensuring long-term financial support for the system of protected areas.
• Train PA managers and relevant government agencies in the use of and completion of the financial sustainability scorecard and the threshold of sustainability.
• Recommend actions for the consolidation and optimization of existing revenue sources, price adjustments, and defining core costing approaches; and clarify legal aspects (public revenues and private spending).
• Evaluate opportunities for new sources of revenue including e.g. water tariffs.

2.2 Belizean Protected Area System

Belize’s protected areas fall under a range of categories within a system that has evolved organically to be characterized by a diversified and decentralized structure with several different government departments managing multiple areas under differing legal frameworks or co-managing with a number of different NGOs or CBOs. There are also eight private protected areas. This diversity of management and legal frameworks brings with it both advantages and disadvantages in terms of financial sustainability. A similarity among co-managers is that all have a vested interest in PAs’ financial success, because all have a financial stake in the system, either as recipients or contributors of funds.

Belize’s protected areas are a major asset to the national economy, contributing hundreds of millions of dollars in ecosystem goods and services each year. Tourism generates nearly a quarter of Belize’s GDP, providing not only direct revenues but also fueling growth in other industries, such as construction. A recent study indicates that possibly 70% of foreign visitors to Belize visit a protected area during their stay. The tourism industry is largely dependent on protected areas. Furthermore, the timber industry is sustained by the PA system and the US$100 million fisheries sector benefits from the health of MPAs. Other ecosystem goods and services such as fresh water also depend on the well-being of the PA system. It is estimated that up to US$347 million is provided by reefs and mangroves in protection of coastal properties from erosion and wave-induced damage (Cooper, E., L.Burke and N.Bood, 2008). In addition, they increase the quality of life for large numbers of Belizeans by providing recreational and educational experiences. They also constitute part of Belize’s national identity and its image in the world.

Two major sources of tourism-based revenue are generated via a Conservation Fee, a component of the airport departure tax and via a Cruise Passenger Tax. The Protected Area Conservation Trust (PACT) manages these funds. A third major source of revenue is Tourist Entrance Fees which are collected by managers and co-managers. Other current revenue generating mechanisms include, timber extraction licenses from forest reserves, and in some cases grants and other foreign contributions, including official development aid.

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2 BTB Visitor Survey 2011
Nonetheless, revenues fall short of what is needed to guarantee the sustainable management and protection in many PAs. The recent Economic Valuation Study of the Maya Mountain Massif commissioned by NPAS showed that there are significant direct use values found in Belize's protected areas. Carbon, forestry and tourism are important generators of income, present and future.

It is important to bear in mind that the current system will likely be modified in order for example, to attain its objective of including representative examples of all Belizean ecosystems. An assessment of ecosystem coverage by Meerman (2005) showed that six ecosystems were under-represented. Others will need to be extended to improve or establish connectivity.

Additionally, some protected areas, because of their legal, ecological and physical characteristics are strictly limited in terms of their potential to generate revenues and therefore will likely require funding from sources other than self-generated revenues in order to function. For example, Nature Reserves, as a category, permit no extractive use or tourism.

The Rationalization study currently underway (Wildtracks, September 2011) provides a very good basis for determining which areas maybe unable to self-generate revenues. That study defines three use characteristics - “commercial extraction”, “traditional extraction” and “cultural / tourism / recreation” that could provide quick guidance about a PA’s capacity to generate revenues and be self-sufficient. There are areas that score poorly on all three and presumably those would need to be supported by the system. However, that is only a presumption and there is no rule to predict with certainty which areas would be in that situation. A PA even without current apparent potential, could, assuming very good management capacity and closer, more detailed analysis such as that currently underway in the Socio Economic Analysis of eight PA consultancy, turn out to generate revenues.

Data on expenditures, particularly the core costs of PA management are not centrally available, but are held in differing formats and structured according to diverse criteria within each of the managing and co-managing entities. Initial perceptions are that many protected areas are not currently able to make the necessary investments or cover the minimum operating costs required in order to accomplish the commitments made by the Government of Belize to the Program of Work for Protected Areas (PoWPA).
The Government of Belize through the Ministry of Natural Resources has since the early 1990's entered into ad-hoc co-management agreements with non-government organizations (NGOs) and community based organizations (CBOs).
Sustainable Financing Strategy for Belize’s National Protected Areas System

for the management of protected areas under the National Parks System Act. In 2008, at the tenure of the current Government, most existing co-management agreements were either expired or near expiration. In revising its policy for co-management arrangements, the Ministry of Natural Resources and the Environment confirmed that the traditional practice of allowing non-government agencies to collect and use the public revenues generated by the protected areas was not in conformity with the Finance and Audit Act.

Consequently, the MNRE through PACT submitted an interim proposal called “improving the Collection, Allocation and Management of Public Revenues generated by Belize’s Protected Areas” to the Ministry of Finance dated May 16th, 2011 (PACT/MNRE). In their proposal the MNRE proposes to partner with PACT as the national conservation trust fund, to institute an interim mechanism until the MNRE completes the design of a “protected Areas Fee Framework” expected to be completed by mid 2012, that will be developed via the GEF/GOB “Strengthening National Capacities for the Operationalization, Consolidation, and Sustainability of Belize’s Protected Areas System” project.

“The PACT/MNRE partnership’s specific objectives are to:

Ensure conformity with the Finance and Audit Act.

Ensure efficiency, accountability and transparency for use of these public sources of revenues.

Maximise revenue collection and ensure that funds are utilized in a manner consistent with the national priorities for protected areas.

Improve the Government of Belize’s ability to measure its investment in the National Protected Areas System.

Provide an interim revenue collection measure to facilitate the transition to a comprehensive national protected areas fee collection system.”

In the PACT/MNRE proposal PACT proposes a percentage split of 85% of total revenues to be allocated for the PA to support recurrent or “core costs” expenses and 15% to be retained by PACT for administration and management.

The Ministry of Finance later approved the PACT/MNRE proposal via correspondence date June 20th, 2011 (ref:GEN/38/011(6)). The correspondence further details the process that should be followed:

“In the first instance, revenue generated from Belize’s protected areas will be deposited into the MNRS’s recurrent revenue account 23017/11722/120/15 – “Visitation Fees – Belize Protected Areas System.”
Thereafter, the MNRE will transfer the funds to PACT from a recurrent grants vote which has been created under 23017/35107/510/1732 – Belize Protected Areas System.”

This proposed interim mechanism has encountered major opposition from co-managers, which is probably why it has not been implemented. According to APAMO it would add layers of bureaucracy and could also be against the Finance and Audit Act. While this interim mechanism sought to resolve the issue of the ad hoc practice of allowing non-government agencies to collect and use the public revenues generated by the protected areas - which is not in conformity with the Finance and Audit Act, the interim mechanism has not yet been implemented, therefore business has continued as usual with site level collection of PA entrance fees.

Currently the terms and conditions of the co-management agreements are under review. A draft framework co-management agreement between the Government of Belize as represented by the Ministry of Natural Resources and the Environment, the Ministry of Agriculture and Fisheries and the Ministry of Tourism and the NGO’s and CBO’s represented by the Association of Protected Areas Management Organization (APAMO) and the Belize Association of Private Protected Areas (BAPPA) is being reviewed. The National Protected Areas Co-Management Framework (December 2008) developed by APAMO presents technical guidelines for co-management agreements, among other areas (as called for by Action 2.1.1 in the NPASP). Specifically, the National Protected Areas Co-Management Framework aims to achieve the following: 1) Provide guidance on how to deal with specific co-management issues; 2) Define the scope that will ensure effective management, sustainability, equity and good governance of Belize’s co-managed protected areas by both the government agencies and the NGOs and CBOs co-managers of these areas; and 3) Provide written procedures or guidelines that are consistently utilized by government agencies and co-managers to assess the feasibility of co-management and to guide the process of co-management GOB currently has various agreements with co-managers: some where monies are collected and spent, some where monies are collected and deposited into GOB accounts etc); As of Aug 31st 2011 a co-management agreement has been agreed by all parties involved, GOB, co-managers etc.,(see draft co-management agreement in Appendix 6) -Fees and investment...has been left out of the agreement due to the ongoing Consultancy being carried out by AHA/PACT team. The co-management agreement will be legally formalized through the PA legislation consultancy also being carried out.

The National Protected Area System of Belize aims to have all protected areas included in one coherent framework that meets Belize’s international obligations. It is the result of 2 years of work by the “Protected Areas Task Force”, a group of individuals from different ministries APAMO, PACT and the Belize Tourism Board that lead numerous and widespread consultations to come up with the National Protected Area System Plan. This plan is an expression of the National Protected Area Policy, the key statement on the role and management of protected areas.
Currently, protected areas are managed separately by each of the lead ministries involved. The system consists of an aggregation of protected areas with different management categories; not yet a system as such. Three ministries share the responsibility of managing the different areas (see Figure 2), including Archaeological Reserves, Natural Reserves, National Parks, Natural Monuments, Wildlife Sanctuaries, Forest Reserves, Marine Reserves and spawning aggregation sites (SPAGs). However, there has been a tendency to consider only the most protective management regimes as protected areas (NPASP, 2005). The objective of Belize’s Protected Area System is to be comprehensive, ecologically representative, integrated with regional and national projects, and that it will optimize economic benefits, maintaining biodiversity values and facilitating sustainable resource management.

Figure 2. Government Agencies with Legal Jurisdiction over Protected Areas.

Source: adapted and revised from De Vries et. Al..2003

2.3 Legislative Context

The Acts governing the establishment of protected areas and the management of the fifty six (56) protected areas administered by the Forestry Department under the Ministry of Natural Resources and the Environment are as follows, the Belize National Parks Act Chapter 215 - Revised Edition 2000 and 2003 (National Parks, Nature Reserves, Wildlife Sanctuaries & Natural Monuments); the Private Forest (Conservation) Act Chapter 217 - Revised Edition 2003 (private reserves); and the Forest Act Chapter 213 - Revised 2000 (Forest, Forest Reserves, Forest Produce, Forest Roads, Private Lands) and the Wildlife Protection Act of 1982 Chapter 220 revised 2000.

The Fisheries Department under the Ministry of Agriculture, Fisheries and Cooperatives is responsible for the establishment and management of the eight
(8) marine reserves in Belize along with the eleven (11) spawning aggregation sites. The Fisheries Act of 1948 Chapter 210, revised 2000 regulates commercial fishing, exportation and scientific research activities. The Fisheries Regulations, which is an extension of the Fisheries Act Chapter 210S Revised Edition 2003 further strengthens the authority of the Fisheries Department. Chapter 210:01 The Ancient Monuments and Antiquities Ordinance of 1970 Chapter 330 was repealed in 2000 and the National Institute of Culture and History (NICH) Act Chapter 331 was passed giving NICH the management of Archaeological sites and Reserves. NICH has four institutes of which the Institute for the Research and Management of Material Culture (formerly Archaeology Department) is responsible for the enforcement of the Ancient Monuments and Antiquities Act. The Abandoned Wrecks Act Chapter 235 Revised Edition 2000 establishes an Authority that is composed of the Chief Executive Office under the Ministry of Natural Resources and the Environment, the Director of Museums under NICH Institute "Museum of Belize, the Fisheries Administrator along with the Harbour Master.

The Protected Areas Conservation Trust (PACT) was established in January 1996 with the passing of the Protected Areas Conservation Trust Act, Chapter 218 of 1995, Revised Edition 2003. The PACT Act is the first legislation of its kind in Belize. The PACT Act provides for the generation and collection of revenues, and for the disbursement of its funds to projects which are congruent with PACT's mission. PACT is funded principally through two mechanisms a conservation fee of BZ $7.50 (US $3.75) introduced under section 33 of the PACT Act on visitors to Belize upon departure and a 20% commission from cruise ship passenger fees imposed under section 21 of the Act.

The table below lists the laws and regulations administering and regulating protected areas management in Belize as well as the enforcing agencies/ministries. Of particular importance for this report and assessment are legislations/regulations regarding protected areas financing, ecosystem services and how they relate to each category of protected areas.

Table 1. Relevant PA Legislation

<table>
<thead>
<tr>
<th>Title of Article/Publication</th>
<th>Department/Ministry</th>
<th>Description</th>
<th>Importance</th>
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<tbody>
<tr>
<td>Belize National Park Acts Chapter 215 - Revised Edition 2000</td>
<td>Forest Department, Ministry of Natural Resources and the Environment</td>
<td>Part III General section 10 (1) and 10 (2); Appointment of Officers page 12 &amp; 13;</td>
<td>Provision for co-management of PAs</td>
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<tr>
<td>Belize National Parks System Act Chapter 215 - Revised 2003</td>
<td>Forest Department, Ministry of Natural Resources and the Environment</td>
<td>Section 27. National Parks Entry Fee Collections Regulations, page 117 to 119</td>
<td>Provision for entrance fees at PAs (national parks and wildlife sanctuaries)</td>
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<tr>
<td>Title of Article/Publication</td>
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<tr>
<td>Private Forest (Conservation) Act Chapter 217 - Revised Edition 2003</td>
<td>Forest Department, Ministry of Natural Resources and the Environment</td>
<td>Part III General section 10 (1) and (2). Administration and section 14. Recovery of money due to the Government, page 15</td>
<td>Recovery of money due/owe to the Government for Forest Produce</td>
</tr>
<tr>
<td>Forest Act Chapter 213 - Revised 2000</td>
<td>Forest Department, Ministry of Natural Resources and the Environment</td>
<td>Part III Administration section 7 Royalty; Royalty Rates page 25 to 28</td>
<td>Establishment of royalties on forest produce</td>
</tr>
<tr>
<td>Protected Areas Conservation Trust Act Chapter 218 – Revised Edition 2003</td>
<td>PACT, Ministry of Natural Resources and the Environment</td>
<td>Part V Financial Provisions, Accounts and Reports section 20 establishment of trust fund; section 21 revenues of trust fund page 19; cruise passenger fee section 33 conservation fee page 23</td>
<td>PACT Trust Fund established to manage receipts/ and revenues for PAs; The Act mandates that 20% of all concessions be deposited into the Trust Fund. This has not yet been implemented.</td>
</tr>
<tr>
<td>National Institute of Culture and History (NICH) Act Chapter 331 - 2000</td>
<td>Institute for the Research and Management of Material Culture</td>
<td>Part VI Institute for the Research and Management of Material Culture, section 30</td>
<td>Enforcement authority of the Act</td>
</tr>
<tr>
<td>Abandoned Wrecks Act Chapter 235 Revised Edition 2000</td>
<td>NICH/Ministry of Tourism, Civil Aviation and Culture</td>
<td>Section 4 Abandoned Wreck Authority</td>
<td>Governing authority</td>
</tr>
<tr>
<td>Fisheries Act of 1948 Chapter 210 - Revised 2000</td>
<td>Fisheries Department/Ministry of Agriculture and Fisheries</td>
<td>Section 14 Marine Reserves</td>
<td>Establishment of marine reserves</td>
</tr>
<tr>
<td>Draft Fisheries Act - Sept 2011</td>
<td>Fisheries Department, Ministry of Agriculture and Fisheries</td>
<td>Part III section 6 (1) Fisheries Fund page 15</td>
<td>Establishment of a Fisheries Fund</td>
</tr>
<tr>
<td>Environmental Protection Amendment Act 2009</td>
<td>Department of the Environment</td>
<td>Section 68(g) stipulates that “twenty per centum of all revenues derived from the implementation of section 21(a) and (b) and section 33 of the Protected Areas</td>
<td></td>
</tr>
</tbody>
</table>

Three of the objectives of the EMF are similar to PACT’s key objectives. Not yet enacted.
Many studies have been conducted on the policies that directly regulate protected areas. The overarching results of these studies indicate a lack of enabling legislation for protected areas to be able to fulfill their intended objectives. Revenue generation is as such one of those key objectives. It is intended that this will be addressed in the National Protected Areas System Act with recommendations emerging from the PA legislation consultancy. A priority recommendation made by Wildtracks in the State of the Protected Areas Report 2009 is for the strengthening of the protected areas legislation and policies. In the case of ecosystems services there is no legislation in this regard. However, it has been recommended that the payment for Environmental Services should be established as a mechanism to provide financing and financial sustainability for core operational costs for protected areas management (Wildtracks, 2009).

The Environmental Protection Amendment Act (EPA) would appear to overlap with three of PACT’s key objectives: 1) “to encourage local environmental initiatives”, 2) “to promote, support, and encourage activities relating to protection and management of the environment” and 3) “to plan and implement other initiatives important for the effective and efficient management of our natural and environmental resources.” When it takes effect, this Act would effectively curtail the current income derived by PACT from conservation fees, cruise ship passenger fees, and other related fees by 20%.

For practical reasons, NGO and CBO co-managers have had provisional authorization to collect entrance fees and apportion them according to the co-management contract, instead of allocating it into the general revenue. (Young, M. 2008). This arrangement is not consistent with the Finance and Audit Act Chapter 15 Part II Finance Section 4 Consolidated Revenue Fund page 7, which indicates that all monies raised or received for Belize shall be paid into and form one Consolidated Revenue Fund.

The Belize National Protected Areas System Plan page 37 to 41 (4.3.1 to 4.3.4) 4.3 Legislative Measures, highlights two levels of the current legislative framework, the fulfillment of national obligations and responsibilities under international agreements and that of national legislation base on local policies.
Table 2 shows the list of international conventions and regional agreements ratified by Belize.

Table 2. International Conventions and Regional Agreements

<table>
<thead>
<tr>
<th>International Conventions and Regional Agreements</th>
<th>Ratified</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>International Convention for the Protection and Conservation of Sea Turtles for the Western Hemisphere</td>
<td>1997</td>
<td>To promote the protection, conservation and recovery of sea turtle population and the habitats on which they depend</td>
</tr>
<tr>
<td>Alliance for the Sustainable Development of Central America</td>
<td>1994</td>
<td>Regional alliance supporting sustainable development initiatives</td>
</tr>
<tr>
<td>Convention on Biological Diversity</td>
<td>1993</td>
<td>To conserve biological diversity to promote the sustainable use of its components, and encourage equitable sharing of benefits arising from the utilization of natural resources</td>
</tr>
<tr>
<td>Convention on the Conservation of Biodiversity and the Protection of Priority Wilderness Areas in Central America</td>
<td>1992</td>
<td>To conserve biological diversity and the biological resources of the Central American region by means of sustainable development</td>
</tr>
<tr>
<td>United Nations Framework Convention on Climate Change</td>
<td>1992</td>
<td>An overall framework for intergovernmental efforts to tackle the challenge posed by climate change. It recognizes that the climate system is a shared resource whose stability can be affected by industrial and other emissions of carbon dioxide and other greenhouse gases</td>
</tr>
<tr>
<td>UNESCO Man and the Biosphere Programme</td>
<td>1990</td>
<td>To promote the sustainable use and conservation of biological diversity and for the improvement of the relationship between people and their environment globally, through encouraging interdisciplinary research, demonstration and training in natural resource management</td>
</tr>
<tr>
<td>Central American Commission for Environment and Development</td>
<td>1989</td>
<td>Regional organizations of Heads of State formed under ALIDES(^3), responsible for the environment of Central America. Initiated Mesoamerican Biological Corridors and Mesoamerican Caribbean Coral Reef Programmes</td>
</tr>
<tr>
<td>Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region</td>
<td>1983</td>
<td>To protect the marine environment of the wider Caribbean region for the benefit and enjoyment of present and future generations</td>
</tr>
<tr>
<td>United Nations Convention on the Laws of the SEA</td>
<td>1983</td>
<td>A legal order for the seas and oceans which will facilitate international communication, and will promote the peaceful uses of the seas and oceans, the equitable and efficient utilization of their resources, the conservation of their living resources, and the study, protection and preservation of the marine environment to protect migratory species</td>
</tr>
<tr>
<td>Convention on the Conservation of Migratory Species</td>
<td>1979</td>
<td></td>
</tr>
</tbody>
</table>

\(^3\) Central American Alliance for Sustainable Development
Sustainable Financing Strategy for Belize’s National Protected Areas System

Species of Wild Animals
Convention on the Protection of Archaeological, Historical and Artistic Heritage of American Nations
1976 to protect the Archaeological heritage of signatory countries. Several Maya Archaeological sites exist, four of which have been identified during the Maya Mountain Project - including the second largest site in Southern Belize

Convention on International Trade in Endangered Species of Wild Fauna and Flora
1973 to ensure that international trade in specimens of wild animals and plants does not threaten their survival

Convention Concerning the Protection of the World Cultural and Heritage
1972 To encourage the identification, protection and preservation of cultural and natural heritage around the world considered to be of outstanding value to humanity

Convention on Wetlands of International Importance
1971 to stem the progressive encroachment on and loss of wetlands now and in the future, recognizing the fundamental ecological function of wetlands and their economic, cultural, scientific and recreational value

International Planet Protection Convention
1951 to promote the protection, conservation and recovery of sea turtle population and the habitats on which they depend

Source: adapted and revised from E. Wo. Chi et Al..2005

2.4 Methodology

Preparatory Phase One included meetings in Belmopan with the NPAS team and other consulting teams, participating in the presentation of the Economic Valuation consultancy presentation and reviewing literature. Phase Two - Stakeholder Consultation and Data Collection. This included a Threshold of Sustainability for tourism assessment and a Financial Scorecard and Validation workshop.

Preliminary results of the financial data collection and stakeholder consultations were presented for validation by the team and validated by PA managers and co-managers at a one-day workshop forum at the Belmopan Convention Hotel on August 12th. An impressive 28 key stakeholders from government departments, NGOs and CBOs participated actively in breakout groups and plenary discussions. In addition to validating the data, with the guidance of Drumm Consulting, the participants reviewed and validated the (UNDP) Financial Scorecard (UNDP). The active participation of a broad mix of stakeholder experience and expertise was extremely valuable to ensure that the most comprehensive and accurate data was input into completing the Financial Scorecard, as well as to consolidate stakeholder buy-in to the process.

A Threshold of Sustainability Assessment for tourism (See Appendix 1) was carried out between July 25th and August 3rd, including field assessments at 17 protected areas from each of the three sub-systems (Forestry, Fisheries and Archaeology) and interviews with protected area managers and co-managers
and other staff at each site. The assessment included identification of critical threats and management weaknesses and identified tourism management strategies to address them. Cost estimates were made for the needed minimum tourism management capacities including both operational costs and capital investments. Results of the in-depth analysis of the specific representative protected areas were aggregated, extrapolated system wide for those areas that receive tourism, and input into the Financial Sustainability Scorecard. Additionally, cost-reduction opportunities were identified.

The methodology for this analysis consisted of two complimentary components: an overarching framework – the application of the UNDP Financial Scorecard, and an assessment of the Threshold of Sustainability for tourism – as tourism is the single most important source of revenue for the Belizean protected area system. In the next sections the framework provided by the Financial Scorecard developed by UNDP (2010) will be used to assess the financial sustainability of Belize’s Protected Area System. Results from the Threshold of Sustainability Assessment are integrated into the Financial Scorecard.

2.4.1 UNDP Financial Scorecard

The United Nations Development Program has developed a tool to assess the financial sustainability of protected area systems. The Financial Sustainability Scorecard is intended to assist governments track their progress to make PA systems more financially sustainable (UNDP. 2010). The scorecard has three parts. Part 1 looks at the overall financial status of the system, including revenues, costs and calculation of the financing gap (see Section 3.2.1). Part 2 is more qualitative and looks at the different elements that comprise the financial system, including those related to revenue generation, the legal and regulatory framework and business planning (see Section 3.2.4). Part 3 summarizes and combines the results.

2.4.2 Threshold of Sustainability Assessment

The threshold of sustainability (ToS) framework enables protected area managers to define the minimum amount of investment in tourism management capacity that is needed in order to ensure the health and viability of biodiversity and other natural capital, and to maintain high quality tourism experiences within a protected area. It consists of a rapid assessment of tourism related threats, management weaknesses, the identification of key basic tourism management actions and strategies and a cost calculation for the implementation of these actions and strategies.

Given that tourism is such an important component of the financial structure of PAs in Belize, it is given a more detailed analysis. The complete analysis and description of the ToS approach is found in Appendix 1.
3  Financial Analysis: needs and gaps

Historically, protected areas in Belize have been funded through a combination of government resources; entrance fees at the sites; the airport departure tax and cruise ship passenger fee; forestry licenses in Forest Reserves, and donations from bilateral aid and foreign NGOs. Government allocations for operational budgets have generally remained constant in the last five years for the Forestry Department of the Ministry of Natural Resources and the Environment, the Fisheries Department of the Ministry of Agriculture and Fisheries and the Archaeology Department at the National Institute of Culture and History (NICH), however, capital investment budgets have been reduced, resulting in a limiting of programme activities at the site level. While overall operating budgets and expenditures have remained consistent over the last five years for both the Fisheries and Forestry Department, of these expenditures a 4 year average shows that 72% of the Fisheries expenditures are for personnel costs, a 3 year average shows that 82% of the Forestry expenditures represent personnel costs.

Co-managers have had varying degrees of success in mobilizing additional funding from multiple sources to compliment government allocations. However, there is a widespread perception that the resources currently allocated to the PA System are insufficient to maintain the country’s natural capital or to achieve the objectives of particular areas.

In this section we present general information about the system, a financial analysis that includes available finances as well as costs and financing needs, the annual financing gap, and an assessment of the different elements of the financing system.

3.1  Basic Information on PA System

The Protected Area System includes sites under different management categories that fall under the jurisdiction of the Fisheries Department and the Forestry Department of the Ministry of Natural Resources and the Environment, and the Institute of Archaeology of the National Institute of Culture and History. In this case, protected areas were grouped according to the administering institution.

With more than 1 million hectares under protection the system covers close to a third of the land area of Belize. The larger share falls under the jurisdiction of the Forestry Department, which manages a total of 56 PAs and covers almost 75% of the country’s protected area. However, there are a few PAs\(^4\) that have marine components but that fall under the Department of Forestry’s domain.

\(^4\) Laughing Bird Caye is a National Park designation; Swallow Caye Wildlife Sanctuary; Corozal Bay Wildlife Sanctuary; Half moon Natural MONUMENT; the seven bird sanctuaries are cayes; Caye Caulker and Bacalar Chico have both forest and marine reserve designation.
Table 3. Basic Information on Belize’s National Protected Area System, Sub-systems and Networks

<table>
<thead>
<tr>
<th>Sub-system</th>
<th>Number of Sites</th>
<th>Terrestrial ha covered</th>
<th>Marine ha covered</th>
<th>Total ha covered</th>
</tr>
</thead>
<tbody>
<tr>
<td>National System of PAs</td>
<td>98</td>
<td>814,592</td>
<td>254,035</td>
<td>1,068,627</td>
</tr>
<tr>
<td>PA Subsystem 1. Forestry</td>
<td>56</td>
<td>663,030</td>
<td>85,131</td>
<td>748,161</td>
</tr>
<tr>
<td>PA Subsystem 2. Fisheries</td>
<td>19*</td>
<td>9,027</td>
<td>168,904</td>
<td>177,931</td>
</tr>
<tr>
<td>PA Subsystem 3. Archaeology</td>
<td>15**</td>
<td>11,637</td>
<td></td>
<td>11,637</td>
</tr>
<tr>
<td>PA Subsystem 4. Private</td>
<td>8</td>
<td>130,898</td>
<td></td>
<td>130,898</td>
</tr>
</tbody>
</table>

*Includes 11 SPAG sites.
**12 currently have visitation

Forestry Sites with Terrestrial attributes: Bacalar Chico National Park and Caye Caulker Forest Reserve
Fisheries Sites with Marine attributes: Laughing Bird Caye National Park, Swallow Caye Wildlife Sanctuary, the 7 Bird Sanctuaries, Halfmoon Caye Natural Monument, Blue Hole Natural Monument, Corozal Bay Wildlife Sanctuary

3.2 Financial Analysis of the Protected Area System

3.2.1 Available Finances

3.2.1.1 Revenue

According to the various sources consulted, revenues for the protected areas originate both from the central government budget, allocated through Forestry, Fisheries and Archaeology. There are extra budgetary funds for protected area management that originate from the airport departure tax (conservation fee) and cruise ship passenger fee. Furthermore, there is collection at the sites, both in terms of entrance fees, resource use licenses and donations.

Table 4 shows the revenues that are generated by the system via central Government direct (budget allocations) and indirect allocations (such as PACT fund through taxes, fees and endowment interest) and site-based self-generation (entrance fees, grants and any other). As the Fisheries and Forestry Departments report that the PA system is overwhelmingly their largest financial commitment, a figure of 85% of the annual expenditures recorded in the central Government Budget report was taken as the amount dedicated to protected area system management. The Forest Department indicated that no site specific data was available for PA sites and the Fisheries Department provided only an estimation (See appendix).

The total annual revenues from government allocations and all self generated sources from protected areas in 2010 amounted to US$10.7 million (see Table

5 Sources include government budgets, co-manager budgets, NGO sources, published and unpublished reports.
4). Self-generated revenue from site level is the biggest single source (US$3.8 million) with tourism entrance fees the largest component. Overall, tourism contributed 48% of total revenues through entrance fees, conservation fee and the cruise passenger tax.

Two types of Concessions are identified - Logging concessions and tour operator equipment rental at some sites and artisan stands. However, the latter generate very small amounts that were not quantified in this study.

Although the source data analyzed was in varying formats and often with limited detail, it is believed that the estimations made are reasonably accurate.

Table 4. Annual Protected Area System Revenues 2010 (US$)

<table>
<thead>
<tr>
<th>REVENUES</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total central government allocation</td>
<td>1,879,265</td>
</tr>
<tr>
<td>Forestry</td>
<td>843,460</td>
</tr>
<tr>
<td>Fisheries</td>
<td>1,035,805</td>
</tr>
<tr>
<td>Archaeology</td>
<td>0</td>
</tr>
<tr>
<td>Extra budgetary funding (PACT)</td>
<td>2,375,437</td>
</tr>
<tr>
<td>Conservation Fee (airport departure tax)</td>
<td>887,770</td>
</tr>
<tr>
<td>Commissions (20%) Cruise Passenger Tax</td>
<td>1,073,229</td>
</tr>
<tr>
<td>Interest income</td>
<td>276,238</td>
</tr>
<tr>
<td>Other Income</td>
<td>13,200</td>
</tr>
<tr>
<td>Debt swap</td>
<td>125,000</td>
</tr>
<tr>
<td>Total self-generated at site level</td>
<td>3,816,111</td>
</tr>
<tr>
<td>Entrance fees</td>
<td></td>
</tr>
<tr>
<td>Archaeology Reserves</td>
<td>1,422,265</td>
</tr>
<tr>
<td>Forestry PAs (ave.=10)</td>
<td>656,300</td>
</tr>
<tr>
<td>Marine PAs (ave.=10)</td>
<td>1,046,320</td>
</tr>
<tr>
<td>Rental Concessions at Archaeology</td>
<td></td>
</tr>
<tr>
<td>Reserves</td>
<td>58,226</td>
</tr>
<tr>
<td>Logging Concessions</td>
<td>633,000*</td>
</tr>
<tr>
<td>Other (includes grants)</td>
<td>2,600,000</td>
</tr>
<tr>
<td>Grand Total</td>
<td>10,670,812</td>
</tr>
</tbody>
</table>

Notes: excludes private PAs. Figures in US$; * Includes both private and public PAs
Source: Government budgets, PACT, UNDP, others.
3.2.1.2 Expenditures

While reviewing the central Government budget allocations it is of note that while overall operating budgets and expenditures have remained consistent over the last five years for both the Fisheries and Forestry Department, of these expenditures a 4 year average shows that 72% of the Fisheries expenditures are for personnel costs, a 3 year average shows that 82% of the Forestry expenditures represent personnel costs.

Each organization has its own practice for investing funds in PAs, co-managers we assumed invest 100% in the system, Archaeology invest 25% of entrance fees at site level, Fisheries is more complex, and re-invests 33% of entrance fees at site level. Hol Chan MPA though has a more independent management within the Fisheries structure and retains its entrance fee revenues. In most cases though, it is unclear exactly how much is spent on system level activities versus site level activities.

With the data available it was not possible to determine the exact rate of administrative costs for individual institutions, and therefore a 25% rate is assumed as a practical scenario, and this distribution has been used for the purposes of this study (See Table 5) with the exceptions noted below. It should be noted that the figure falls within the broad range found for similar organizations, which are usually between 15% and 30%.

Total annual site revenues from entrance fees were calculated using an average rate for each sub system and multiplied by the number of visitors (from available data). This average remains consistent with the UNDP scorecard analysis in late 2009. This average was used due to the inconsistency of the visitor data, some of the data was not recorded separating national from international visitors whom have different level of entrance fees. Important to note, that the entrance fees collected by co-managers who have a current fee structure remain in the system for functional PA management. In the case of Fisheries Department however, only 33% of entrance fee is distributed for PA management, 100% of Hol Chan remains at the site level.

US$2.6 million is estimated as the level of grant funding received and spent in the PA system, excluding debt for nature swaps. This estimation comes from UNDP data analysis in late 2009. One can assume this is a relatively low estimation. We did not have complete data/records from each co-manager to quantify. Most of the co-managers who do not generate tourism entrance fees are dependent on grant funding at the local level from the PACT fund, which is already included in the available indirect annual Government revenue. The Belize Audubon Society with responsibility for the co-management of nine PAs in Belize reports US$122,000 in grants for 2010, Friends for Conservation

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6 We recognise that co-managers such as TIDE and SEA collect entrance fees and deposit them into a fund managed by the Fisheries Department.
Development over US$175,000, Ya’axche over US$450,000 completely dependent on grant funding, while Southern Environmental Association reports over US$550,000 in grant support. Many of the smaller co-management organizations report a dependency on grant support whether from the local PACT fund or from international funding agencies to remain functional. Even Archaeology generating over US$1 million a year in entrance fees collections still seeks grant funding to support exploration exercises.

Table 5. Annual Protected Area System Budget 2010 (US$)

<table>
<thead>
<tr>
<th>Sub system Source</th>
<th>System Level</th>
<th>Site Level</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>PACT</td>
<td>1,377,753</td>
<td>997,683*</td>
<td>2,375,436</td>
</tr>
<tr>
<td>Forestry</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>From Govt. Allocation</td>
<td>210,865</td>
<td>632,595</td>
<td>843,460</td>
</tr>
<tr>
<td>From reinvested revenues**</td>
<td>164,075</td>
<td>492,225</td>
<td>656,300</td>
</tr>
<tr>
<td>Fisheries</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>From Govt. Allocation***</td>
<td>275,625</td>
<td>826,875</td>
<td>1,102,500</td>
</tr>
<tr>
<td>From reinvested revenues *****</td>
<td>228,933</td>
<td>686,798</td>
<td>915,730</td>
</tr>
<tr>
<td>Archaeology</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>From Govt. Allocation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>From reinvested revenues</td>
<td>73,348*****</td>
<td>293,390****</td>
<td>366,738</td>
</tr>
<tr>
<td>Other (includes grants)</td>
<td>650,000</td>
<td>1,950,000</td>
<td>2,600,000</td>
</tr>
<tr>
<td>Total annual PA System Budget</td>
<td>2,980,599</td>
<td>5,879,566</td>
<td>8,860,164</td>
</tr>
</tbody>
</table>

*42% of revenue as grants to PAs; ** 100% of entrance fees at site level *** $157,500 budget for the 7 marine site source Fisheries (J. Azueta); ****25% of entrance fee revenues; ***** 25% of site level funding;******33% of entrance fee revenue for Fisheries marine sites established through CAP II budget, 100% for Hol Chan Marine Reserve and co-managed sites.

3.2.2 Costs and Financing Needs

Of the US$10.7 million in revenues presented in Table 4, an estimated $8.9 million was actually spent on protected areas, either by government, co-managers, NGOs, CBOs and foreign assistance. However, that number tells only the part of the story since it does not include for instance the delivery rate (or the capacity to spend budgeted resources) nor says anything about the optimal level of expenditures or even the basic level. This is simply the best estimate of current expenditures.

Because of the differing systems of accounting used by managers and co-managers, it is not possible to state with certainty how this budget is distributed.
between management programmes across the system as a whole. However, by using the costs estimated and the functional areas used during previous exercises using information from the PAs we developed the estimates shown in Table 6. These were determined from UNDP Activity Base Matrix used to extrapolate data for Financial Sustainability Scorecard exercise compiled in 2010. The results reflected in the UNDP document underwent significant stakeholder scrutiny with data collection and validation being a highly participatory process with all significant stakeholder groups (state and non-state being very well represented in the process).

### Table 6. Functional Areas & Programmes

<table>
<thead>
<tr>
<th>Functional Areas &amp; Programmes</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>RESOURCE MANAGEMENT &amp; PROTECTION</strong></td>
<td>39%</td>
</tr>
<tr>
<td>Patrolling and Enforcement</td>
<td></td>
</tr>
<tr>
<td>Scientific Monitoring and Research</td>
<td></td>
</tr>
<tr>
<td>Wildlife Management and Habitat Restoration</td>
<td></td>
</tr>
<tr>
<td>Cultural Resource Management</td>
<td></td>
</tr>
<tr>
<td>Zoning and Boundaries</td>
<td></td>
</tr>
<tr>
<td><strong>TOURISM &amp; RECREATION</strong></td>
<td>8%</td>
</tr>
<tr>
<td>Visitor Safety and Protection</td>
<td></td>
</tr>
<tr>
<td>Recreation Fee Collection</td>
<td></td>
</tr>
<tr>
<td>Visitor Education and Interpretation</td>
<td></td>
</tr>
<tr>
<td>Concession and Recreation Special Uses</td>
<td></td>
</tr>
<tr>
<td><strong>MANAGEMENT &amp; ADMINISTRATION</strong></td>
<td>17%</td>
</tr>
<tr>
<td>General Management and Administration</td>
<td></td>
</tr>
<tr>
<td>Financial Management and Administration</td>
<td></td>
</tr>
<tr>
<td>Partnership Relations</td>
<td></td>
</tr>
<tr>
<td>Marketing</td>
<td></td>
</tr>
<tr>
<td><strong>COMMUNITY DEVELOPMENT &amp; OUTREACH</strong></td>
<td>9%</td>
</tr>
<tr>
<td>Formal Environmental Education</td>
<td></td>
</tr>
<tr>
<td>Public Outreach and Information</td>
<td></td>
</tr>
<tr>
<td>Stakeholder Engagement</td>
<td></td>
</tr>
<tr>
<td>Sustainable Livelihoods &amp; Training</td>
<td></td>
</tr>
<tr>
<td><strong>FACILITY OPERATIONS &amp; MAINTENANCE</strong></td>
<td>13%</td>
</tr>
<tr>
<td>Buildings, Grounds, and Utilities</td>
<td></td>
</tr>
<tr>
<td>Roads</td>
<td></td>
</tr>
<tr>
<td>Trails</td>
<td></td>
</tr>
<tr>
<td>Docking Facilities (Marine)</td>
<td></td>
</tr>
<tr>
<td>Mooring Buoys and Navigation Markers</td>
<td></td>
</tr>
</tbody>
</table>
Transportation and Fleet
Campgrounds and Picnic Facilities

**CAPITAL INVESTMENTS 14%**

Source: UNDP financial scorecard, programme areas, (2009) and Hammond et al (2011)

Figure 2 provides a comparison of how PA management budget distributions between functional areas vary widely between sites and countries. Indeed, there is some inconsistency in the actual functional areas that are included in the budgets and how they are defined in terms of what they include. For example Blue Hole & Half Moon Caye and Gladden Spit & Laughing Bird Caye, all have large tourism/public use management programmes, yet they do not seem to be reported in the table.

**Figure 3. Distribution of Budget between Functional Areas for a selection of protected Areas in Latin America**

Field visits to a representative sample of sites during the threshold of sustainability assessment confirmed the conclusion from previous reports that protected areas are grossly underfunded, and are not able to pay for some of the basic expenditures required for their management. Therefore, it is important also to look at two additional budgeting scenarios. One is associated with a “basic” scenario whereby only those activities that are strictly necessary for a given protected area achieving its most fundamental objectives are considered. This is usually referred to as the “mission critical” or “essential operating capacity”. The other level is associated with an “optimal” scenario, which includes all activities needed for the areas optimal operation and full implementation of its management plan.

Given that it has been widely accepted that the current funding level estimated in this report to be US$8.8 million is below actual basic needs, and in order to assist the Belizean government fulfill its commitment to implement the Programme of
Work on protected Areas under the Convention on Biodiversity, the UNDP (2009) developed estimates for both the basic and the optimal funding scenarios for the Belize PA system. These values were based on average management cost per acre as determined through an unpublished study by Programme for Belize and estimated at \textbf{US$15,808,000 and US$24,050,000} for the basic and optimal scenarios, respectively of a country-wide protected areas system. These numbers have been used as a benchmark and widely accepted as a good approximation.

The current study both updates the 2009 UNDP calculation and adds an additional level of specificity to it in order to give an even more precise understanding of the size and nature of the existing financial gap.

As mentioned above, a brief analysis by functional area showed that approximately 8% of PAs' total expenditure was spent on tourism and recreation activities. That means that under a basic scenario tourism would amount to US$1.2 million, while under the optimal scenario US$1.92 million, assuming the same percentages are maintained. However, the more detailed ToS analysis of the financial needs for Tourism and Recreation (Public Use) programs showed a need in minimum annual expenditures of US$2.6 million for basic and US$4 million per year under the optimal scenario, thus increasing the basic scenario by US$1.4 million and the optimal scenario by US$2.08 million.

Additionally, given that so many critical threats to protected area integrity and conservation objectives (and therefore, also to the PAs' potential to generate revenues) originate in neighboring communities and considerable opportunities exist for community engagement in sharing the benefits of protected areas, it is estimated that initial estimates of the financial needs of Community Development and Outreach programme - US$1.42 million (basic) and $2.16 million (Optimal), based on an allocation of 9% of the budget would need to be significantly increased by a similar magnitude to that of the tourism programme functional area i.e. by a minimum of approximately a further 100% to US$2.84 million and $4.32 million, respectively. These amounts are added to the basic and optimal scenario costs reported by UNDP (2009), Table 7 shows Current, Basic and Optimal PA system budgets.

\textbf{Table 7. Current, Basic and Optimal Budgets}

<table>
<thead>
<tr>
<th>Item</th>
<th>US$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current Annual expenditures</td>
<td>8,860,164</td>
</tr>
<tr>
<td>Financing needs for basic</td>
<td>18,558,000</td>
</tr>
<tr>
<td>Financing needs for optimal</td>
<td>28,290,000</td>
</tr>
</tbody>
</table>

\footnote{7}{Source: UNDP (2008) plus ToS for Tourism difference, plus 100\% increase for Community Development & Outreach}  
\footnote{8}{Source: As above for Optimal}
3.2.2.1 System Level

It should be noted that cost estimates and calculations to this point have consisted of the amalgamation of needed expenditures at site level. In order to establish a more accurate understanding of the financial needs of the system, it is also necessary to estimate the BASIC and OPTIMAL budgetary needs at system level. Information on actual system level costs was not available. However, an example of system level costs are identified below, and for the purpose of this study, it was estimated that currently approximately 25% of PA system expenditure is spent at system level on these sorts of functions.

In addition to the needs described above, it is important to include the estimated cost of crucial training needs. This is required in order for the PA system to achieve the capacity levels necessary to implement the required increased spending. These costs are estimated to be US$180,000 (basic), and US$420,000 (optimal) every three years.9

Table 8. Illustrative System Level Cost Categories

<table>
<thead>
<tr>
<th>Cost Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Audit Fee</td>
</tr>
<tr>
<td>Other Financial and Bank costs</td>
</tr>
</tbody>
</table>

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9 Dr. Elma Kay, Environmental Research Institute; University of Belize (personal communication)
### Cost Category

- Legal costs
- Salaries and benefits - administration
- Rent
- IT services
- Utilities
- Consultancy costs
- Postage and office supplies
- General insurance
- Technical Assistance
- Training
- Fundraising
- Human Resources
- Security

#### 3.2.3 Annual Financing Gap

According to the results presented above it is evident that the system is currently facing a significant financial gap as shown in Table 9. Thus, the financial shortfall for an adequately managed system of protected areas in Belize ranges from **US$9.7 million**\(^\text{10}\) (basic level) to **US$19.4 million**\(^\text{11}\) (optimal) per year. This is very significant, since it means at least doubling or tripling the amount that is currently being allocated for protected area management in Belize (see Table 4).

However, to raise those additional resources, a significant investment is needed in terms of effort and personnel time and promotion expenses. It is estimated that a one off fundraising component of approximately 20% (US$596,000 of system level cost estimate must be added to the system level budget of the Basic Scenario, thus raising further the current financial gap to **US$10.3 million**.

**Table 9. Financing Gap for the Belize Protected Area System (US$)**

<table>
<thead>
<tr>
<th>Management Scenario</th>
<th>Annual Financing GAP</th>
<th>Fundraising Costs</th>
<th>Total Annual Financing GAP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic</td>
<td>9,697,836</td>
<td>596,120*</td>
<td>10,293,956</td>
</tr>
<tr>
<td>Optimal</td>
<td>19,429,836</td>
<td>596,120*</td>
<td>20,025,956</td>
</tr>
</tbody>
</table>

\(^*20\%\) of system level cost estimate

In terms of program areas, and using a subset of protected areas for the calculation, Figure 5 shows the gap between current expenditures and the basic and optimal scenarios. Note how tourism, which delivers a significant portion of revenues, is the program area with the smallest percentage being currently

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\(^\text{10}\) See footnote 3

\(^\text{11}\) See footnote 3
Sustainable Financing Strategy for Belize’s National Protected Areas System

The threshold of sustainability assessment showed that current levels of spending on tourism management fall far below the minimum required to mitigate the serious and growing threats that it poses to protected area integrity. If the current scenario is projected into the future then there will be significant deterioration of natural capital that will result in loss of natural attractions, reduction in the quality of visitor experience, price reductions and terminal loss of demand. Indeed, this process is already underway at some sites.

Since financial transactions are not registered per functional area in a consistent fashion among managers and co-managers, once the gap was determined, their value was distributed to the different functional areas using the same percentages shown above in Table 6. For the cases of tourism management and community outreach additional amounts derived from the threshold of sustainability analysis were added.

Figure 5 shows that by far the greatest investment, in absolute terms must be in Resource Management and Protection. However, it is possible to see also how in relative terms Tourism and Recreation, and Community Development and Outreach require a substantially larger increase. Taking into consideration the importance of tourism for revenue generation the situation is even more worrying.

Part of the newly calculated tourism expenditures for basic and optimal scenarios includes capital investments as described above. However there are other capital investments that are not necessarily related to tourism and recreation, and are represented in the right hand side of the Figure. These values, again, are calculated by applying the observed percentages to the totals calculated in Section 3.2.2.

Figure 5. Financial Gap Analysis by Program Area
3.2.4 External Sources of Costs for Protected Area Management

Figure 5 shows the gap in investment needed to guarantee the health of the protected areas. Although beyond the scope of this study to analyze, it is however, very important to note that land use management in private lands and also in other non-protected areas are generating impacts for the protected area system. These impacts increase the costs of resource management in protected areas above and beyond the internal PA management needs.

In projecting protected area management costs, it is necessary to also consider the environmental matrix in which each protected area is located. No protected area is an island (even those that are, in fact, islands) and planning for a destination’s resource health extends also to the ecological systems of which they are part. It should be noted that Belize’s protected areas were not originally designed with ecological borders in mind – they are each part of broader, interconnected systems. Poor land use such as clearing of coastal mangrove habitat for vacation homes and hotels and water use, lax enforcement of environmental regulations, and resource concessions degrade neighboring protected areas over time and impacts will need to be accounted for in protected area management budgets.

For example, marine managers have long known that mangrove destruction impacts local fisheries, coastal health and human safety, yet mangroves and littoral forest systems continue to be sold to private developers and then cleared for development. This development, in turn, is producing negative impacts on marine protected areas through sedimentation and pollution. Fish and lobster populations are further challenged by common practices of selling undersized or protected species. Expected climate change impacts in coastal and marine systems make it ever more urgent to increase resilience of these systems by limiting local land management impacts from outside the protected area. Further inland, illegal forest cutting activity and fires affect visual quality and ecosystem health (for example at Mountain Pine Ridge Reserve). It is increasingly recognized that forests that lie between protected areas add resilience in many ways, including buffering protected areas from adverse impacts (water storage, temperature moderation, carbon storage) and providing conduits for species movement. However, many of the forest concessions are managed unsustainably; degrading connectivity characteristics and indicating that thoughtful restoration - an additional investment – will be needed. Environmental restoration costs are typically far higher than holistic costs of protecting system health.

It is understood that the spill over effects of the poor management and inappropriate land use of surrounding land and water resources will increase cost of managing protected area ‘islands’. Additional to these costs are the potential losses in tourism revenue as a result of the loss of quality of the visitor experience. A challenge lies in itemizing the cost of degraded systems on tourist experience. For example, suspected outwash from shrimp farms and sewage
sullies the reef experience at Laughing Bird Caye (SEA, 2011, personal comm.), leaving visitors disappointed with their snorkeling experience. Poor enforcement of illegal forest cutting and xate poaching in the Maya Mountains region puts safety of tourists at risk at various sites, for example at Chiquibul National Park and Caracol Archaeological Reserve, requiring armed escorts, and leading to lopsided protected areas budgets favouring enforcement.

3.2.5 Assessing elements of the Financing System

Part 2 of the Financial Scorecard is useful for understanding the qualitative aspects related to having a sustainable financial system. Features are grouped into three major components as shown below:

- Component 1. Legal and Regulatory Framework.
- Component 2. Business planning and tools for cost-effective management
- Component 3. Tools for revenue generation by PAs

Each component has different elements that together provide an idea of the system’s financial sustainability. The team evaluated each of the items that conform each element and in turn each component. As shown below, the system as a whole scored poorly in each of the three major components. Revenue generation scored better than the other components because of several positive features of the system that operates in Belize. On the other hand, business planning and tools fares the lowest since the system lacks most of the elements in this component. Figure 6 shows the relative results obtained by each component (by averaging the elements). It is clear that the scores are very low, and that revenue generation, the component with the higher score, is still only about 36% of the possible total. Legal, regulatory and institutional aspects rank in second place with 32%, and in last place business planning and tools with 13%.

Figure 6. Components of the Financial System of Belize’s PAs’ Scores

The scorecard provides values for the different degrees of progress for each factor. As a result a maximum score of 100% is possible in each component.
3.2.5.1 Legal and Regulatory Framework

The legal and regulatory framework presents a mixed picture, with positive and negative aspects (see Figure 7). Positives include clearly defined institutional responsibilities related to the financial management of protected areas, including the mandates of public institutions, and good “revenue retention” since there are laws and policies that allow, in some cases, the retention of funds at the protected areas. There are also several funding sources.

However, negative aspects include lack of adequate levels of staff and while there is financial information being collected, it is not presented in standard formats that would allow for comparisons and monitoring. Furthermore, there is no systematic allocation of resources to the sites according to established, and agreed upon criteria. It must be mentioned, though, that the current legal framework agreement between GOB and co-managers has been recently revised and when the NPAS legislation consultancy is complete, this will be finalized. It is expected that these weaknesses will be addressed in the new agreement.

As a result, the legal and the regulatory frameworks are not conducive to a sustainable financial system, but are being addressed through ongoing work commissioned by NPAS. Currently, the legal and regulatory conditions lack the elements highlighted above to be supportive of a sustainable financial strategy. Other elements are very positive, like the existence of the Protected Areas Conservation Trust (PACT), a statutory body governed by the PACT Act, with clear legal and regulatory conditions. This trust provides sustainability to the system in the long run.

Figure 7. Component 1. Legal and Regulatory Framework

3.2.5.2 Business Planning and Tools for Cost-effective Management

As mentioned above, this component fared last of all in the analysis of Belize’s PAs System’s financial status. And as shown in Figure 8, many of the elements had a score of 0% since the system as a whole lacks the tools for cost-effective
management. This has resulted in many opportunities for cost savings being lost, as will be detailed below. There are experiences at site level, and some NGOs and CBOs have made progress developing these tools. However, at the system level there is very little to show for business planning and there are almost no tools for cost-effective management.

First of all, most protected areas do not have management plans, based on conservation objectives, management needs, and cost effectiveness analysis. Moreover, in the reduced number of cases where management plans do exist, they are usually outdated. There are generally no business plans that are linked to site or system conservation objectives. Finally, business plans contribute little at the system planning level and there is very little monitoring. Even then, and because there have been a few isolated efforts at the site level, and by some co-managers, the element received a score of 33%.

The accounting and auditing systems were considered operational, transparent and useful, only to a very limited extent. And while some sites may have such accounting and auditing systems, the system as a whole is not planning and budgeting based upon one. Furthermore, revenue tracking for each protected area is not efficient now, and the information is dispersed in different institutions.

In terms of monitoring and reporting on financial management performance the protected area system gets no points. For instance, the system is not reporting all revenues and expenses fully and accurately to stakeholders; the financial returns on tourism related investments is not known; there is no system to allocate financial resources across sites and to central level management. Finally, there is no reporting about the effectiveness with which site managers utilize the available funds.

The allocation of funds from the national budget across individual sites is not done based on agreed and appropriate criteria, even though it is currently being done by co-managers amongst their own sites but not necessarily according to pre-established criteria.

Regarding training and support of managers for cost effectiveness, the system again has no elements in favor. There is very little or no guidance on cost effective management, managers are not sharing cost information, and comparisons between sites are not available. And while managers sporadically receive training in related subjects, it is not specific training in financial management and cost effective management.

It was discouraging to see how few managers knew about other protected areas in other managing agencies. Income could be boosted by making each manager part of a more exciting whole, and versed in the sights and experiences of other PA's in Belize.
3.2.5.3 Tools for Revenue Generation

An evaluation of the revenue generation component of Belize’s PA system reveals it has strong points (Figure 9). First of all, it is actually collecting fees, an elusive feat for many countries in the region and the world. The fee collecting system is efficient, although it could improve; it is being monitored, evaluated and acted upon. Furthermore, there are non-tourism entrance fees that generate additional revenues.

Secondly, the setting of user fees is carried with the collaboration of the tourism industry and other stakeholders. However, entrance fee levels are generally well below international levels for most sites, and also well below a fair market value or what visitors are prepared to pay. They are also, crucially, well below levels required to cover even the basic costs of tourism management. Also, there is a lack of diversity of tourism based revenue generation mechanisms. Notably tour operators are currently not required to pay for access to protected areas.

However, in Belize there are no communications strategies directed at the different stakeholders highlighting the usefulness and importance of tourism fees and conservation taxes, either at the national or the local level. There are not payment for environmental services schemes, which have proven very effective in countries like Costa Rica and Mexico.

There are further weaknesses in terms of the concessions operating currently or in the future and in training for the staff. There are opportunities, assuming appropriate enabling legal conditions, for accommodation, food and activity tourism concessions at several protected areas.
3.2.6 Scoring and Measuring Progress

As a whole the Belize system of protected areas receives a total score of 28%. This puts Belize’s system in need of substantive financial strengthening (along with countries such as El Salvador, Guatemala, Nicaragua, Brazil, Paraguay, Chile, and Uruguay). This compares with the 49-59% scores of Colombia, Argentina, Costa Rica and Cuba, the countries that scored highest (UNDP 2010).
4 Existing Financial Mechanisms

The Belize protected area system has several principal financial mechanisms to generate and transfer funds for management. One is the government budget allocation through the Fisheries, Forestry and Archaeology departments. Another is PACT. The rest includes entrance fees collection at the sites, by government and co-managers, grants, and forestry concessions. (see Figure 10).

Currently there are a series of tourism finance mechanisms that provide funding for PA management. Tourism is by far the most important source of revenue with approximately 27% self-generated through entrance fees and around a further 19% derived from the airport departure tax and the cruise ship passenger fee managed by PACT. This means that approximately 46%, or US$4.75m, of the total PA system revenues of US$10.3m is derived from tourism.

Figure 10. Protected Area System Financial Structure

4.1 Protected Areas Conservation Trust (PACT)

The Protected Areas Conservation Trust, established as a statutory body in 1996, serves as a conservation trust fund. PACT provides funds for supporting conservation and promoting environmentally sound management of Belize’s natural and cultural resources to foster sustainable development.
It is funded principally through two mechanisms: a conservation fee of BZ $7.50 (US $3.75) collected as part of the airport departure tax which is currently US$39.25, and a 20% commission from the cruise ship passenger tax of US$7 per person.

As shown earlier, both generated about US$2 million in 2010. Expenditures have kept pace with revenues as seen in Figure 11 and both have an upward trend, consistent with the number of visitors. After a dip in 2007 and 2008 as a result of the global economic woes, the revenue trend seems to be edging higher. This could represent additional resources in the near future, if both cruise ship and airport users increase.

**Figure 11. PACT’s Revenues and Expenses (2000-2010)**

PACT allocates grant funding to PA managers through a competitive bidding process. The PACT funding process has transferred significant financial resources to the NGOs and CBOs that manage protected areas since its creation. However, the bidding process is onerous both for the site managers and for PACT. In 2010 PACT disbursed more than US$850,000 (about 42% of the total budget) in project grants out of total revenues of US$2.25 million to protected areas through co-managers and other organizations. The Trust also had just under US$350,000 or 16% of its revenues as committed to grants but unpaid due, largely, to the scheduling of disbursements for projects. In total, this represents a commitment of some US$1,200,000 or 57% its revenues. Operating expenses accounted in that same year for close to 33%.
4.2 Tourism Entrance Fees

Approximately US$2.8 million was generated from tourism entrance fees in 2010. However, significant proportions of these revenues are not reinvested at sites. The Institute of Archaeology reports 25% are reinvested and Fisheries 33%.

Fees at many protected areas tend to be lower or considerably lower than might be expected given the quality of the attraction and the experience and when compared to entrance fees in other countries. It is anticipated that the market would be prepared to pay significantly higher fees in some protected areas than they are currently asked to, such that entrance fee revenue could probably increase by 100% with little impact on demand. The AHA/PACT team of consultants currently working on the Fee Framework will make recommendations on this.

It is estimated that up to 30% of PA visitation is not reported in order to avoid payment or declaration of entrance fees (Haas, G. and Aukerman, R., 2011). This is potentially a value of US$1 million per year being lost to the system. Recommendations are made below on how to improve efficiency of fee collection.
4.3 Forest Concessions and Licenses

Government receives payment for the extraction of wood in Forest Reserves from different instruments. Royalties include charges for the right of use of any forest resources and is usually charged by volume. Concessions, on the other hand, refer to long term forest licenses, that must meet conditions and requirements in terms of a management plan, an annual plan operation, cutting permits and others. Finally, the term licenses is used to refer to one year logging licenses. Concessions may also include government permission to non-state partners (usually private individuals or companies) to use the land/area for income generation purposes, which may or may not be logging endeavors (such as eco-tourism ventures and accompanying snack shops etc).

Long term and short term logging concessions generated US$270,141 in 2010, after a sharp drop in revenues was experienced in 2006 and 2007. The revenue from these payments is paid into General Revenue.

The Forest Revenue and Exploitation Control Program (FREC) within the Belize Forestry Department under the Ministry of Natural Resources and the Environment bears the responsibility of assessing royalty payments due to the Government by logging companies and individual loggers. Royalties are charged based on the Royalty Schedule set out in the Forest Rules and Forest Act. The program is responsible for administering petty-permits and NTFP permits for non-timber forest produce extraction.

Loggers are billed per unit of resource extracted (volume, individual tree or seedling tree, or number of bush sticks etc), and prices vary with the species of tree or plant being extracted. The movement of any extracted resource must be approved and proof of approval is by the possession of a valid permit or waybill that allows the person to move forest produce. For medium and large scale logging, the stamping of logs with certified Forest Department hammers is in place to ensure control measures. Each log should bear two hammered marks, one bearing a numbered symbol and the other being the registered symbol of the logger/logging company.

It is necessary however to take a closer look at management systems being used for forest stocks to guarantee their sustainability. At the same time the fee structure should be examined along with the legal and regulatory framework (forest cutting practices act and review of cut areas) to increase revenues and provide adequate management. Without this it is likely that the resource will be critically impacted over time and revenue will diminish over time. Also Forest Certification tools can increase marketing value of timber.

Illegal use of forest resources is a pervasive problem and some sources mention that as much as 60% of timber is harvested illegally. However, controlling this
problem has been very difficult in the region and there are virtually no examples of successfully reducing illegal deforestation. Payment for environmental services is seen as one way of providing the proper incentives to forest owners, however, in Belize’s case, since timber is very good quality, higher price compensations would be necessary.

**Figure 13. Revenues Generated by Forest Concessions**

![Graph showing revenues generated by forest concessions from 2005 to 2010](image)

### 4.4 Government Budget

The government budget is a reliable source for management of the Protected Areas System of Belize. It is not nearly enough to cover all of the basic needs of the Protected Areas System but provides a base flow of financial resources. It is important to recognize that given Belize’s small tax base, its high level of indebtedness, the size of the PA system and the indices of poverty in the country that government has been consistently allocating about US$2.17 million to PAs, not an insignificant figure. The NPAS is a catalyst for change and coordinates and maintains what is currently a virtual system.

### 4.5 Development Aid

Development aid, including debt swaps, is constant though unpredictable. The better-positioned NGOs (BAS, SEA, TIDE and others) are in a good shape to attract funds from abroad to improve the conditions of their co-managed sites. At the same time multilateral agencies such as UNDP promote projects under the biodiversity window of the Global Environmental Fund (GEF).

It is hard to estimate the average amount that could be raised. However, UNDP recently as part of a Project Preparation Grant estimated this flow in about

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13 We are waiting for historical data of government department protected area budgets.
US$2.6 million a year. Considering that Archaeology was able to receive grant support for more than US$375,000 in 2010, that figure seems to be a conservative and accurate estimate.

4.6 Debt Swaps

Debt swaps are a very interesting option for the PA System of Belize and there are good precedents in Belize. In 2001 an agreement was signed to cancel part of the debt owed by Belize to the Government of the United States with the participation of The Nature Conservancy. The total amount was approximately US$8.5 million and covered three different loans. The beneficiaries included the Belize Audobon Society, Programme for Belize, Toledo Institute for Development and Environment, and the PACT Foundation. For example, the PACT Foundation only uses the interests earned to provide small grants of US$20,000 for the conservation of forests; it allows a 10% administration fee. This funding is very important because it is much more flexible than other sources.

In 2010 the Foundation disbursed US$81,750 in grants to groups such as the Aguacaliente Management Team, the Community Baboon Sanctuary Women Community Conservation Group, the Forest and Marine Reserve Association of Caye Caulker, the Sarstoon Temash Institute for Indigenous Management, the Steadfast Tourism and Conservation Association (STACA), the Rancho Dolores Environmental and Development Company Limited, and the Rio Blanco Mayan Association.
5 Market Analysis of Revenue Generating Options

In this section we determine the current and potential resource uses (market analysis); the potential demand for the different resources provided by the PA system, including a list of ecosystem goods and services provided by the system; and the value of these, using available information, and especially recent results presented by Hammond et al (2011).

First, a comprehensive list of ecosystem goods and services provided by the Belize PA System is presented. Then reference is made to the current uses of resources within the PA system, mainly tourism, logging and fishing and their future outlook. Finally, an analysis of new revenue sources is provided that includes the diversification of tourism revenues, the implementation of watershed conservation fees for PA management, carbon sequestration and storage and other additional sources.

5.1 List of Ecosystem Goods and Services Provided by the Belize PA System

There are significant environmental services being produced at PAs that have enormous economic value. Different valuation studies have tried to measure some of these benefits. For example, Hargreaves-Allen (2010) estimated the economic value of the Gladden Spit and Silk Cayes Marine Reserves in Belize; Echeverría (1999) calculated the economic value of the Hol Chan marine Reserve; and Cooper et al (2008) calculated the economic contribution to of Belize’s coral reefs and mangroves. More recently, Hammond et al (2011) listed the environmental services that are provided by protected areas in Belize, with emphasis in the Maya Mountain Massif and the Maya Mountain Marine Corridor (Terrestrial Area). These benefits include but are not limited to:

- **Tourism.** Protected areas attract a large proportion of tourists visiting Belize as well as growing numbers of Belizeans, and at the same time promote the health of fisheries and significantly boosts seasonal demand for fisheries products. Last year international tourists spent **US$250 million** in Belize. It is hard to imagine more than a tiny part of that being spent if it were not for the power of attraction of the protected areas.

- **Fisheries** are very important to the Belize economy and generate exports with a value of about **US$45 million** a year. Furthermore, it provides direct work opportunities to more than 3,000 Belizeans.

- **Hydrologic services.** These are important, amongst other things, for the generation of hydroelectricity. For example, in 2010 the total net earnings of hydroelectricity generation were **US$17.5 million** on total revenues of **US$90**
million. However, Protected Areas also provide benefits in terms of potable water, reducing treatment costs and regulating flow.

- **Carbon.** Forests not only absorb but also store it when preserved. A brief analysis of the Maya Mountain Massif showed that the value of carbon was potentially up to **US$165 million for a 30 year period**.

- **Timber.** Timber has been an historically important industry in Belize, contributing close to US$8 million to GDP in 2008. Nevertheless, lack of adequate management has resulted in several threats to forest resources (fire and the southern pine bark beetle that have decimated the Mountain Pine Ridge Forests). If the timber industry is to remain viable it needs to increase investments in sustainable forest management.

- **Non-timber forest products.** Xaté, Bayleaf and botan plant production occurs within the PA system, however estimated values are much lower, and are dependent on different market circumstances.

Hargreaves-Allen provides a different classification, using “value categories” for the aforementioned marine reserves and separates the value categories in: visiting tourist values; non-visiting tourists; community values; fishing values; and tourism values. The net present value of the flow of use and non-use values for a period of 25 years range from US$ 40 to US$93 million. Considering that the Gladden Spit and Silk Cayes Marine Reserve comprises 10,665 hectares, that places a NPV of per hectare of between US$3,750 and US$8,720. This is in the same order of magnitude as the US$1,353 per hectare that Hammond (2011) estimated. While significantly smaller, this latter figure applies to a much bigger area (more than 500,000 thousand hectares).

Cooper et al. (2008) estimated that current benefits from Belize’s coral reefs and mangroves contributed US$150 million to the national economy in 2007 in benefits associated to tourism alone. In terms of fisheries the contribution of those two ecosystems is estimated at US$14 million per year. Furthermore, the protection of coastal properties from erosion and wave-induced damage is estimated at more than $US230 million per year.

These values are only from Belize’s coral reefs and mangroves and not from the whole system of protected areas. Moreover, it includes only three services provided by these ecosystems. Thus, it is expected that the system as a whole, and considering services such as carbon sequestration and storage, regulation of the water-cycle and biodiversity, the total should exceed US$500 million per year. That is more than one-third the value of Belize’s gross domestic product of US$1.4 billion in 2010 (IMF, 2011).
5.2 Current Resource Use

Currently the natural resources comprised within the System of Protected Areas of Belize generate many and very significant environmental services and products to society. From the scenic beauty and biodiversity that fuels the tourism industry, to storing and releasing the water that feeds hydroelectric projects and cities, providing wood for many different uses and capturing CO2. The legislation, through different acts specifies what type of use is allowed in each class of PA.

Consolidated uses that generate revenues for the PA system currently include tourism, logging, fishing and scientific research\textsuperscript{14}. These uses are supported by the PAs legislation that determines the different possible uses allowed, and the restrictions imposed upon each type of protected area (see Table 10). Nature reserves, national parks, natural monuments, wildlife sanctuaries and bird sanctuaries are very restrictive. On the other hand, forest reserves and marine reserves are more permissive and allow for different resource uses as shown in Table 10. These uses are all contingent upon getting the appropriate permits from the corresponding department (Forestry or Fisheries). It is interesting to see, however, that in the cases where there are no uses allowed, there is an exception that reads: “except with the authorization of the Administrator”. This is probably something that should be eliminated under new legislation.

Table 10. Categories of Protected Areas/Uses and Area

<table>
<thead>
<tr>
<th>PA Category</th>
<th>Objective</th>
<th>Allowed Use Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nature Reserve</td>
<td>“for scientific study, monitoring, education and the maintenance of genetic resources”</td>
<td>Very restrictive, no uses “except with the authorization of the Administrator”</td>
</tr>
<tr>
<td>National Park</td>
<td>“for the protection and preservation of natural and scenic values of national significance for the benefit and enjoyment of the general public”</td>
<td>Very restrictive, no uses “except with the authorization of the Administrator”</td>
</tr>
<tr>
<td>Archaeological Reserve</td>
<td>An area designated for protection of historical archeological importance.</td>
<td>Search, exploration, excavation; restoration; import, sell or trade; removal of earth or stone. Interestingly says nothing about tourism or visitation.</td>
</tr>
<tr>
<td>Natural Monument</td>
<td>“to provide opportunities for interpretation, education,</td>
<td>Very restrictive, no uses “except with the authorization of the Administrator”</td>
</tr>
</tbody>
</table>

\textsuperscript{14} For example archaeological activities.
### Sustainable Financing Strategy for Belize’s National Protected Areas System

<table>
<thead>
<tr>
<th>PA Category</th>
<th>Objective</th>
<th>Allowed Use Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wildlife Sanctuaries</td>
<td>“for their perpetuation”</td>
<td>Very restrictive, no uses “except with the authorization of the Administrator”</td>
</tr>
<tr>
<td>Bird Sanctuaries</td>
<td>“for the protection of key bird nesting and roosting sites.”</td>
<td>Very restrictive, no uses</td>
</tr>
<tr>
<td>Marine Reserves</td>
<td>“for extractive and non-extractive use, conservation protection, use concentrating on sustainable fishing, tourism, research and education. to promote scientific study and research in respect of such area; to preserve and enhance the natural beauty of such areas”</td>
<td>“allow for extractive and non-extractive use, conservation protection, use concentrating on sustainable fishing, tourism, research and education.”</td>
</tr>
<tr>
<td>Forest Reserves</td>
<td>“for the protection of trees and forest produce”</td>
<td>The most “uses” allowed in terms of products: forestry, cattle ranching; hunting; quarrying stone, burning lime or charcoal. In fact “collecting, manufacturing or removing any forest produce”</td>
</tr>
</tbody>
</table>

#### 5.2.1 Tourism

**5.2.1.1 Tourism in the Belize Economy**

Tourism generates over 20% of Belize’s GDP, providing not only direct revenues but also fuelling growth in other industries, such as construction, fisheries and agriculture.

Annual tourist spending ascended to almost US$250 million in 2010 (see Figure 14). This represents a strong recovery from a sharp dip in the wake of global economic recession to US$211 million from a peak of US$293 million in 1997.

In contrast to the trend in other Central American countries which have experienced increased demand; total international arrivals to Belize have declined from a peak in 2004. Then, 2009 and 2010 saw a return to growth in demand, back to over a million annual visitors (see Figure 15).

The international market for Belize tourism has two major components: overnight visitors and cruise passengers. These two components have significantly distinct
profiles and spending patterns, and markedly differing contributions to the economy.

**Figure 14. Total Annual tourism revenues in US$ (millions)**

![Graph showing total annual tourism revenues in US$ (millions) from 1999 to 2011.](image)

*Source: BTB (2011)*

In 2010, 650,000\(^\text{15}\) cruise passengers are estimated to have come ashore in Belize for a day trip, compared to 238,000 overnight passengers staying an average of 7.2 days. Overnight visitors spend on average of US$840 per person, while cruise passengers spend an average of US$65 per person. In aggregate, overnight visitors account for approximately 75% of tourist spending and cruise passengers around 25%.

Visitor numbers showed signs of recovery in 2010 in the wake of the global economic crisis. Although cruise passenger numbers are behind the lion’s share of growth in volume, revenues and economic multipliers through the national economy are much higher for the overnight tourism sector.

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\(^{15}\) Based on BTB estimate of 85% of those on board choosing to come ashore. The cruise industry association, FCCA, estimates that only 69% come ashore.
5.2.1.2 Tourism in Protected Areas

Belize’s protected areas contain the country’s most important tourism attractions. Annual visitation to Belize’s protected areas in 2010 was up 23% on the previous year to 416,000, (see Figure 16) indicating a robust recovery from the declines experienced during the peak of the financial crisis which affected major tourism markets. It is likely that the figure is much higher in reality as several protected areas do not have the capacity to register visitors.

A recent study indicates that over 60% of foreign visitors to Belize visit a protected area during their stay. This is a high percentage and indicates, together with visitation trends the significance and growing importance of protected areas as the most important attraction and the most important generator of business for the Belizean tourism industry, and thus to economic growth for Belize.

Most protected area visitors visit sites that are administered by the Institute of Archaeology (65%), followed by Fisheries (25%) and Forestry (15%) (see Figure 16). The major source of tourism revenues from PAs is entrance fees. Table 11 compares Belize PA entrance fees with that of a sample from the region and shows how Belize’s are some of the lowest, with the exception of Blue Hole.
**Table 11. Protected Area Entrance Fees for International Visitors in Latin America and Belize**

<table>
<thead>
<tr>
<th>Country</th>
<th>Category/Site</th>
<th>(US$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ecuador</td>
<td>Galapagos</td>
<td>100</td>
</tr>
<tr>
<td><strong>Belize</strong></td>
<td><strong>Blue Hole Natural Monument</strong></td>
<td><strong>30</strong></td>
</tr>
<tr>
<td>Colombia</td>
<td>Category 4</td>
<td>18</td>
</tr>
<tr>
<td>Guatemala</td>
<td>Tikal</td>
<td>17</td>
</tr>
<tr>
<td>Costa Rica</td>
<td>Monteverde</td>
<td>17</td>
</tr>
<tr>
<td><strong>Belize</strong></td>
<td><strong>Gladden Spit Marine Reserve - Whale Shark</strong></td>
<td><strong>15</strong></td>
</tr>
<tr>
<td>Argentina</td>
<td>Iguazu</td>
<td>14</td>
</tr>
<tr>
<td>Peru</td>
<td>Manu</td>
<td>14</td>
</tr>
<tr>
<td>Colombia</td>
<td>Category 3</td>
<td>10</td>
</tr>
<tr>
<td><strong>Belize</strong></td>
<td><strong>Hol Chan Marine Reserve</strong></td>
<td><strong>10</strong></td>
</tr>
<tr>
<td>Costa Rica</td>
<td>Corcovado</td>
<td>7</td>
</tr>
<tr>
<td><strong>Belize</strong></td>
<td><strong>Archaeological Reserves</strong></td>
<td><strong>5</strong></td>
</tr>
<tr>
<td><strong>Belize</strong></td>
<td><strong>Cockscomb Basin Wildlife Sanctuary - Jaguar Reserve</strong></td>
<td><strong>5</strong></td>
</tr>
<tr>
<td><strong>Belize</strong></td>
<td><strong>Caye Caulker Marine Reserve</strong></td>
<td><strong>5</strong></td>
</tr>
<tr>
<td><strong>Belize</strong></td>
<td><strong>South Water Caye Marine Reserve</strong></td>
<td><strong>5</strong></td>
</tr>
<tr>
<td><strong>Belize</strong></td>
<td><strong>Crooked Tree Wildlife Sanctuary</strong></td>
<td><strong>4</strong></td>
</tr>
<tr>
<td><strong>Belize</strong></td>
<td><strong>Guanacaste National Park</strong></td>
<td><strong>3</strong></td>
</tr>
</tbody>
</table>
In 2010, the annual budget for tourism management in the Belize protected area system was estimated at about US$490,000. At the same time the system generated US$2.8 million in entrance fees, almost four times expenses! However, these figures mask the cost to natural capital which undermine these values in the short to medium term and which need to be offset by increasing considerably the current investment in tourism management. They also mask an under valuation of the visitor experience and an absence of rents collected from your operators.

The protected area system is also heavily dependent on tourism for income. Tourism generates 46% of its revenues from three principal sources: entrance fees, airport departure tax, cruise passenger fees. Such a high level of dependence means the protected areas are both vulnerable to market fluctuations which are often beyond the control of the Belize economy. In the absence of basic management capacity, such high dependence on tourism for revenue, as would be the case with any heavy dependence, can also lead to mission drift, where the need to generate tourism dollars can become more important than the primary conservation function for which the area was established.

5.2.2 Logging Concessions

Timber production has always been an important part of Belize’s economy that currently supplies building materials to the domestic construction and furnishing
markets and exports high-value lumber. The total contribution of the forestry and logging sector to Belize’s GDP was a bit over US$7.5 million in 2008 (Statistical Institute of Belize). Approximately US$2 million is exported annually, mainly to the United States, Europe and the Caribbean as sawn, veneer and plywood products (Hammond, 2011).

As shown above in Table 10, the use of natural resources within forest reserves is allowed if proper permitting is obtained for a variety of different uses (See Appendix 1 for a detailed of forest produce).

Royalties paid for the right to extract wood from forest reserves have grown steadily for the last few years. After declines in 2006 and 2007 revenues have increased significantly and at a healthy rate. In 2010 revenues from royalties paid amounted to just over US$ 270,141 see Figure 13. Using a total value of US$7.5 million, that means about 3% of the total value of the timber production.

The fee structure of forestry concessions and tools such as forest certification should be examined for restoring and/or ensuring health of the matrix forests. In this way, long term income might be realized in forestry concession fees, water resources and carbon sequestration while adding resilience to individual protected areas and marketing Belize’s conservation ethic to the world.

5.2.3 Fisheries

Fisheries contribute significantly to the economy of Belize from lobster, conch, and shrimp exports. Fisheries contributed 5% to Belize’s Gross Domestic Product (GDP) in 2003 (Environmental Statistics for Belize, 2004). According to the Ministry of Agriculture and Fisheries between 2004 and 2006 real output declined from US$ $56 to $47. million. Most exports in 2004 were, however, marine farmed shrimp, which accounted for 79%, while lobster accounted for 14% of the total exports, and conch for 5% (Belize Fisheries Department, 2004).

More recent information shows that the fisheries sector contributed 1.5% to the country’s GDP in 2007 and generated export earnings of nearly US$50 million in 2008. The Capture Fisheries contributed close to US$20 million (mainly from conch and lobster products) and aquaculture US$23 million approximately to export earnings.

The sector employs 2,500 fishers and 643 fishing vessels and provides work to over 125 people at its processing plants (Department of Fisheries, 2011). The industry is lucrative and successful because of the good prices obtained on the foreign market. Four main cooperatives owned by local investors and fishermen play a dominant role in the industry and are protected by the legislation.

Most fishing is done in shallow waters of the barrier reef and atolls. The shallow lagoon between the mainland coast and barrier reef and inside the coral atolls provide ideal habitats for the development of often extensive seagrass beds which provide breeding or feeding areas for numerous commercially valuable
species including lobster, conch and many fish species. Protected Areas and especially marine reserves play a key role in providing the habitat needed from these processes.

Under the Fisheries Act, Marine Reserves are zoned as multi-use, but include some fully closed areas. All of the Marine PA sites have a zoning scheme providing for small-scale fishing by traditional users, and total protection of key habitats and species in "no-take zones".

SPAG sites are closed year round except with the issue of special permit – at Gladden Spit Marine Reserve SEA issued such permit this year $25BZ for a 3 months period only this is site specific base on co-manager and Fisheries agreeing.

According to the National Food & Agriculture Policy, the main policy objective for the fisheries is “to maintain a sustainable yield of the fisheries resources while continuing to contribute to food production, foreign exchange earnings, to optimize future and present benefits and to improve nutritional status in the longer term. The Fisheries Department main policy objectives are to:

- Encourage and promote sustainable fish production systems in both sea areas and inland fisheries;
- Diversify production of the underutilized and non traditional fish species in territorial waters so as to reduce pressure on high valued fish;
- Encourage deep sea fishing to take advantage of Belize’s resources in its deep sea territorial waters;
- Retain product quality and remain competitive in export markets;
- Increase value added activities in the production system and fish processing;
- Stabilize landings for export markets;
- Maintain maximum economic sustainable yield;
- Improve management of the ecological systems and the marine environment of fish habitats;
- Improve the economic and social well-being of the fishers and their communities.

The fishing industry generates revenues for the Belize Government from licensing the different activities presented above in Table 10 that “allow for extractive and non-extractive use, conservation protection, use concentrating on sustainable fishing, tourism, research and education”. These are presented in

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Table 12. It is worth noting that the amounts are very low. For example, a fishing license costs close to US$1 per month!!

Total revenues in fishing licenses increased to US$79,356 in 2010, up 6.8% from 2009. Nevertheless, this is less than one half of one percent of the value of fisheries as calculated by Hammond (2011). One would expect a significant opportunity to increase revenues from these sources given such a low base; however, the fishing sector is very sensitive to increases in the price of licenses. Nevertheless, since the fishing sector is considered very sensitive from a social point of view, the fees for boat licenses have been dropped as of this year. Furthermore, new and more modern fisheries management systems could be introduced linked to economic instruments and incentives.

Table 12. Use Fees in protected areas.

<table>
<thead>
<tr>
<th>Fee</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entrance Fee General Use Zone *</td>
<td>$5.0 per day</td>
</tr>
<tr>
<td>Whale Shark Zone - GSSCMR</td>
<td>$7.5 per day</td>
</tr>
<tr>
<td>Belizean and Foreign Children under 12 years</td>
<td>NO FEES</td>
</tr>
<tr>
<td>Research License</td>
<td>$250 per year</td>
</tr>
<tr>
<td>Sport Fishing **</td>
<td>$50 per year</td>
</tr>
<tr>
<td>Dive Boat</td>
<td>$50 per day</td>
</tr>
<tr>
<td>Fishing License (Fishermen)</td>
<td>$12.5 per year</td>
</tr>
<tr>
<td>Boat License (fishing vessels)</td>
<td>$7.5 under 20ft / $12.5 over 20ft per year</td>
</tr>
</tbody>
</table>

* Except for Hol Chan Marine Reserve $10 per day, Gladden Spit & Silk Cayes Marine Reserve (GSSCMR) $7.50 per day, Sapodilla Cayes Marine Reserve $10 per day.

** This is collected by the Coastal Zone Management Authority except Golvers Reef Marine reserve where it is collected by Fisheries

Source: Fisheries Act (revised 2000)

5.2.4 Grant Support

Though difficult to quantify there is a significant contribution from grants received by different stakeholders to protect the resources within the Protected Areas System of Belize. Some of it is from development aid organization like UNDP, some from NGOs and their foreign counterparts, such as the Nature Conservancy, the Oak Foundation, WWF and others.

SEA reports over US$500,000 and BAS US$122,000 in 2010; and FCD in US$175,000 in 2008, UNDP (2010) on the other hand estimates that at least US$2.5 million a year is generated through grants within the Protected Area System by the different organizations. That seems to be an appropriate estimation, given conversations with NGOs, government agencies, and results from the workshop.

Recently, the GEF provided a US$1 million grant for the four-year project entitled “Strengthening National Capacities for the Consolidation, Operationalization and
Sustainability of Belize's Protected Areas System”. In total, during the GEF 4 allocation, Belize was assigned US$1,590,000 for the biodiversity focal area. However, for the new GEF 5 project cycle Belize this amount will increase to US$2,440,000. This will allow for further consolidation of the protected area system and may well finance the implementation of the Financial Strategy. Additionally, there is a PIF for GEF-5 allocation in which a concept for $6.08 Million was approved by the GEF for "protection and management of key biodiversity areas in Belize." It is expected that this project will commence in June 2012.

There are many additional efforts, some done at the site level by co-managers. Thus the US$2.6 million figure estimated by UNDP seems to be conservative. Indeed, the UNDP report indicates that this probably an underestimation.

5.3 Opportunities for new sources of revenue

There are opportunities and mechanisms that may allow for increased revenues for the PA System. The obvious and faster way is to improve the existing sources of revenue and extract more of the consumer or producer surpluses to increase revenues. However, this option will only take the system so far, since these improvements are likely to be insufficient and vulnerable to fluctuations in the economic environment and in particular of the tourism market.

Nonetheless, and since tourism mechanism prices are quite low and have not been increased for a long time and collection is inefficient, improvements in the existing system should be able to generate significant additional revenues.

5.3.1 Diversification of Tourism Revenue Mechanisms

Currently tourism concessions are largely allocated to providers of services such as food and beverage and equipment at sites offering tubing and to handicraft stands.

There may be scope for increasing equipment hire and food and beverage concessions, as they appear to be low. Handicraft stand concessions appear to be collected erratically and there may be scope for increasing the efficiency of collection.

As we saw in a previous section, there is an over-dependence on tourism for revenue. In addition to this, there is a particular over-dependence on entrance fees as a mechanism. However, there is considerable opportunity for additional revenue to be generated from tourism businesses that use protected areas:

5.3.1.1 Tour Operator Licenses

In most countries tour operators pay an annual operating license fee, which can be based on their level of use. Currently, with perhaps one minor exception at Hol Chan where a very low fee is charged, private tourism businesses in Belize
do not pay for their commercial use of public protected areas. Consequently a situation exists whereby protected area managers are subsidizing private businesses by picking up the tab for impact management and provision of infrastructure.

It is recommended as a priority that new fee mechanisms for tour operators, guides and other commercial users of protected areas, be introduced, e.g. annual operating licenses which will facilitate improved management and control as well as increase revenues. License prices should be based on volume of use (visitor numbers per company) or scale of operation (e.g. small, medium, large) as determined by previous year’s numbers.

There are over 1,000 guides and over 200 tour operators registered at BTB. A first step would be to seek collaboration with BTB to require all tour operators and guides to indicate which protected areas they use as part of their registration requirements. Each protected area should also register the names of tour operators and guides bringing visitors to their sites.

5.3.1.2 New Tourism Concessions

At several protected areas there are opportunities to develop tourism businesses that can benefit protected areas, local communities and the private sector that have not yet been developed, often because of a lack of management capacity at the site. Establishing the threshold of sustainability creates the enabling environment for these opportunities to be properly evaluated and developed. These may be opportunities for activities such as biking, hiking, boating, and others, which can be managed through permits or through concessions.

In other countries, tourism facilities such as hotels, eco-lodges, restaurants, shops and other businesses have developed within park boundaries as concessions. In many cases, these facilities have become problems for under-capacity protected area management by exerting pressure on conservation objectives, by limiting the types of actions protected area managers can take, and by creating a financial dependency on the tourism facilities. In some cases, short-term interests of tourism businesses are allowed to prevail over the long-term interests of conservation.

While tourism concessions within protected areas can be excellent opportunities for visitors, local communities, tourism businesses and protected areas, it is important that they are guided by a long-term vision of conservation management interests, and are subject to planning and administrative procedures that result in concessions complementing protected area budgets rather than replacing them or becoming integral to them.

In order to establish the necessary level of planning and management capacity and administrative authority that entering into concession development would require, it is essential that the threshold of sustainability for tourism be attained. Once the ToS has been established, protected area managers will be more
adequately prepared to evaluate proposals for e.g. high-end eco lodge concessions and to participate in the subsequent business planning necessary to assess these opportunities in detail.

5.3.1.3 Tourist Donations

Another complementary opportunity for generating revenues from tourism for protected areas is the creation of mechanisms and funds to capture donations from visitors who wish to contribute more than the entrance fee. In Mexico, for example, dive tour operators collect donations from their clients for investment in the conservation of the areas they have visited (Drumm, 2003). This money is channeled through a fund managed by a local NGO and a board made up of park managers, a local and an international conservation NGO and local tour operators. There is ample opportunity for similar mechanisms to be established and applied systematically across the protected area system.

Similarly, a small number of cruise ship companies in the Galapagos have generated millions of dollars in the space of a few years by actively soliciting donations from their clients for protected area conservation. It is recommended that cruise lines be engaged to implement similar donation systems for their clients whilst on board. The mechanism would also serve the dual purpose of increasing cruise passengers’ understanding of Belize’s natural and cultural attractions and increasing their appreciation of Belize as a destination.

In Belize there does not currently exist a similar mechanism for seeking and collecting voluntary visitor contributions for protected area conservation in a systematic fashion. Although, the international experience described above suggests this is an important opportunity for complimenting protected area management budgets. However there is a private Belizean initiative under development that seeks to address this opportunity and which merits serious consideration: Nurture Belize\(^\text{17}\) aims to be a charitable mechanism that provides funding or grants for environmental projects within Belize.

A range of mechanisms including corporate membership, visitor donations and volunteerism would generate funds. A committee selected by the board of Nurture Belize will award project funding or grants based on a bi-yearly evaluation of applications.

Donations would be collected in various ways including through an opt-in or opt-out system at hotels whereby a small donation is automatically added to guests bills. This amount can vary from business to business starting as little as $1 US. The guest has the option to opt-out at check out if they do not want to contribute to Nurture Belize. The hope is that many guests will choose to give more than the minimum opt-in donation. Each guest would be given a leaflet on Nurture Belize that lists web links to encourage further interaction with environmental projects and conservation in Belize once they return home.

\(^\text{17}\) http://belizebiodiversity.com/nurture-belize/
Another opportunity involves the collection of unwanted Belizean currency (coins). At reception desks guests will find small attractive envelopes and encouraged to donate any unwanted coins they may have, as these coins cannot be exchanged for their own currency once they leave Belize. This scheme has worked very successfully for British Airways on their international flights. This could also take place at the airport collection points as is used successfully at the international airport in Bogota on behalf of a charity.

Additionally, “Conservation Corners” can be located within resorts and other locations featuring information on protected areas as well as donation boxes. Each hotel, resort or tourism related business can also be encouraged to have a ‘conservation corner’ where they can display information on local or national conservation projects of their choice. Such “Conservation Corners” could also be located at places where protected area entrance tickets are proposed elsewhere to be sold such as close to the BTB stand at the airport and at the National Museum.

Tour operators themselves can be encouraged to establish a culture of philanthropy, in keeping with their own self interest in seeing strengthened protected area system and an improved quality of visitor experience.

Nurture Belize envisions funding coming from experience providers and tour operators via a small levy on their pricing that goes to maintaining or developing infrastructure in the places their clients visit.

5.3.2 Watershed Conservation Fee for PA Management

The PA system of Belize provides important benefits in terms of water services for domestic, industrial and agricultural uses, as well as for the generation of hydroelectricity. These include benefits that are derived from a set of ecosystem functions that regulate the water quality and quantity over time. These functions are geologic, hydraulic, Chemicals, biological and ecological (Hammond).

Water is a key target for revenue generation for the Protected Areas System in Belize because of its close and irrefutable links with protected areas. Better PA management would certainly result in benefits for the water sector. In other countries in the region, water-use fees are levied upon water users, and used to pay for the management of protected areas, both at the national and local level. El Salvador has many interesting cases at the very local level where water utilities charge their users a fee to reinvest in protecting water sources and infiltration areas. In Costa Rica a water use fee is charged to all water users, including utilities, agricultural users, hydroelectricity generation and it is generating close to US$5 million a year for public and private forest protection areas. Benefits are provided to users through a Payment for Environmental Services (PES) scheme that also gets money from a gasoline tax.
Bottlers, of water, sodas and beer, are a very good example, given the enormous interest and relation that they have with water resources. There are cases in Honduras and Costa Rica where bottlers are paying for the environmental services that they receive from forested areas in the watersheds where they extract the water. Bottlers get goodwill from consumers, stockowners and government institutions and are usually part of larger regional conglomerates that are interested in environmental issues. For instance, FEMSA, bottler for Coca Cola has engaged with organizations such as the WWF and TNC to fund watershed protection activities in the region. Florida Bebidas, producer of beer, water and fruit juices in Costa Rica provides close to US$50,000 a year to protect forests in the watershed where it operates; this on top of what it already pays as a “green water” fee to the government of the right to extract water from the aquifers.

Industrial water users should be very interested in teaming up with the government to fund the system of PAs of Belize.

At the same time hydroelectric producers could also be an important source of revenue for protected areas since they use enormous amounts of water. Furthermore, they could be able to pass on to consumers the increases in price (for example from a water use tax or fee). The amount per customer could be low, and since the base is wide (all the population served with electricity from this source). Belize buys electricity from Mexico and it would be important to quantify how much is generated with water that flows from Belize’s protected areas.

**Figure 17. Potential buyers for water-related ecosystem services.**

5.3.3 Carbon

The capture or storage of carbon dioxide in forests generates revenues from two main markets: mandatory and voluntary.
5.3.3.1 Mandatory Markets

As a result of the mandatory commitments under the Kyoto Protocol (which unfortunately expire in 2012) a carbon-offsets market developed. And even though negotiations are under way it is very hard to predict what will transpire in the end. It is likely that some type of market mechanism will emerge. Currently, the mechanism where developing countries can participate in is referred to as the clean development mechanism (CDM). Buyers of offsets include regulated businesses, governments, carbon funds and investors among others. The CDM has been the main financial instrument. Certificates of emissions reductions (or CERs) are credits or standardized quotas of greenhouse gases that represent a product and are bought and sold in the global market. Some of the main intermediaries include the Deutsche Bank and the Carbon Fund.

The value of carbon “equivalents” emission rights traded in 2010 increased 10% to EUROS 92 million. Most of it was traded through the European Trading Scheme, which accounted for 87% of the value (see Table).

Table 13. World Carbon Market

<table>
<thead>
<tr>
<th></th>
<th>2009</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Volume EU ETS</td>
<td>5509</td>
<td>5505</td>
</tr>
<tr>
<td>Volume CER</td>
<td>1144</td>
<td>1153</td>
</tr>
<tr>
<td>Value EU ETS</td>
<td>74</td>
<td>80</td>
</tr>
<tr>
<td>Value CER</td>
<td>11</td>
<td>12</td>
</tr>
</tbody>
</table>

Source: Bloomberg New Energy Finance, 2011

However, recent trends in these markets have shifted the focus from forests and land use to energy projects in Asia, where reductions in emissions are much cheaper. CDM projects could be an alternative for Belize in the medium term, however there are barriers that need to be considered:

- Trends. Forestation and reforestation projects account for less than 1% of the registered CDM projects (0.74%) (UNFCCC, 2011). On the other hand energy-related projects account for almost 70% while solid waste management for nearly 15%. Elements such as CFC-12, that have almost 10,000 times the warming potential of CO2, have driven the demand away from forestry, since capturing them is much more cost effective. The same happens with energy projects.

- Transaction costs. Transaction costs might be high, unless large quantities of offsets are pooled together, as a result of initial baseline studies. This includes the development of a base line, the use or development of an accepted methodology and others. It is also required that the interested party elaborates, adopts or modifies a methodology to quantify the reductions in emissions and that a baseline is estimated, a difficult task.
since it means making many assumptions about the future, including land
use changes with and without the proposed intervention.

- The mandatory carbon market looks bleak as summarized recently by the
Economist: “NEVER has the UN’s Kyoto protocol looked sorrier. In 2012
the five-year “commitment period” it brought into being—in which
developed countries took on legally binding responsibilities to cut their
industrial greenhouse-gas emissions against 1990 levels—will end. Already
Japan, Russia and Canada have refused to repeat the exercise. America
was never part of it. Of the important rich countries, only the
Europeans, responsible for around 13% of global emissions, will consider
a second go. If cutting global carbon emissions was its aim, the UN
scheme has failed.”

In summary, CDM projects are complicated and expensive. They need a high
initial investment to determine a baseline and a methodology. Belize should
strengthen the required skills and develop a better understanding of these
markets, but not focus its financial strategy there. Also, by bundling small-scale
projects it could generate economies of scale and reduce the transaction costs.

Another option is the REDD, which has been slow taking off and funding for it at
the needed world scale is still uncertain. Currently there are funds available to
prepare the countries, carry out pilot project experiences and improve upon
methodologies and conceptual framework.

Recognition of forest-based climate change mitigation proved contentious in the
Kyoto Protocol. As a result, eligibility for forest carbon credits under the Clean
Development Mechanism was limited to afforestation and reforestation,
specifically excluding any recognition of reductions in deforestation.

Later at the Montreal Conference of the Parties in 2005 a formal process was
launched to consider mechanisms for compensating developing countries for
reducing emissions from deforestation (RED), later expanded to include forest
degradation (REDD). Later calls to include “policy approaches and positive
incentives on issues relating to reducing emissions from deforestation and forest
degradation in developing countries; and the role of conservation, sustainable
management of forests and enhancement of forest carbon stocks in developing
countries” were put forward. Significant progress was achieved by this expanded
approach, labelled REDD+, being included as an important element in both the
2009 Copenhagen Accord and the 2010 Cancun Agreement. It is expected to be
an important feature of the 2011 climate change negotiations in Durban, South
Africa.

The voluntary market is currently a significant driver of REDD+ activity. And while
international negotiations on REDD will continue, there is still no guarantee that
an agreement will be reached. However, flows of money are already taking place.
Many governments have joined efforts in the Interim REDD+ Partnership, which serves as an interim platform.

As mentioned above, Belize should be prepared to participate in initiatives part of the REDD worldwide efforts. Increasing its capacities and being part of future negotiations while at the same time participating in specific activities related to REDD.

Nonetheless, there are important bilateral results already. On February 3, 2009, the President of Guyana and the Prime Minister of Norway issued a Joint Statement on cooperation on climate and forest issues which commits the two countries to work to ensure the establishment of a REDD mechanism under UNFCCC post-2012 climate change agreement.

On November 9th, 2009 both governments signed a Memorandum of Understanding (MOU) where Norway committed to providing financial support of up to US$250 million by 2015 for results achieved by Guyana in limiting emissions from deforestation and forest degradation.

5.3.3.2 Voluntary Markets

However, the voluntary carbon market is very much alive, and presents many opportunities for Belize. This market has been characterized by innovation and creativity, where those that have moved first with a viable product have been able to sell it. There are many organizations in the region that have been able to capitalize on their ability to sell carbon to different markets with different goals.

For example, several regional airlines (Aeroperlas, SANSA and Nature Air) have all developed some sort of carbon emissions mitigation scheme. Aeroperlas works with ANCON, a Panamanian NGO by protecting a Private Nature Preserve in Darien. In Costa Rica, both SANSA and Nature Air work with the National Forestry Fund to mitigate their emissions, providing funds for the protection and growth of forests. Other examples include the FIA, an organization that promotes car racing, and electric companies who burn coal. Both want to mitigate its emissions by planting trees in Mexico and other countries.

In addition at the site level there could be opportunities for carbon finance taking into consideration the particular characteristics of each. Features such as important biodiversity, archaeological sites, and the opportunity for poverty reduction need to be highlighted and combined with the carbon sequestration and storage ability of forests. Co-managers need to take an active role in developing these initiatives.
5.3.4 Other sources of revenue

Other sources of revenue include the imposition of green taxes on activities such as oil exploration and mining that might have a negative impact upon the environment. For example, the Costa Rican system of Payment of Environmental Services (PES) relies on a gasoline tax that is used to pay forest owners for the benefits they provide. However, these schemes require enough political will to push these measures through, since in the end someone would have to pay for them.

In the United States the Land and Water Conservation Fund (LWCF) was established in 1964 to provide funds for the acquisition of land and water, and easements on land and water, for the benefit of all Americans. The LWCF has a broad-based coalition of support and oversight, including the National Parks Conservation Association, The Wilderness Society, and the Land Trust Alliance. The primary source of income to the fund is fees paid by companies drilling offshore for oil and gas, with other sources including the sale of surplus federal real estate and taxes on motorboat fuel.

5.3.5 Protected Area Rationalization and Consolidation

The system is very fragmented, which results in clusters of small areas and increased fixed costs. It would be possible to share some of the costs if a more coherent system was developed, taking advantage of any possible economies of scale.

For example Hol Chan and Caye Caulker are two small, vulnerable, nearby MPAs. It would make ecological and financial sense to incorporate a marine...
corridor along the reef between the sites to merge them into a single protected area. This would facilitate economies of scale for management, improve management effectiveness and strengthen ecological processes.

There has been effort already to amalgamate the protected areas in the Maya Mountain Massif (14 protected areas managed by many different entities). Similarly, South Water Caye Marine Reserve, the small Laughing Bird Caye National Park and Gladden Spit and Silk Cayes Marine Reserve would likely benefit from reduced overheads and strengthened functionality if they were consolidated into a single MPA.

Additionally, it would appear logical to change the designation of Laughing Bird Caye National Park and other protected areas such as Blue Hole and Half Moon Caye to Marine Reserve and to transfer management from Forestry to Fisheries.

Among terrestrial sites, some archaeological reserves such as Caracol have considerable forest areas within them. These areas receive no apparent management from NICH and would more logically be best managed under Forestry, while NICH retained management of the archaeological monuments and excavation sites themselves.

Rationalization is currently being addressed by another consultancy (Wildtracks), but the authors share these observations with the objective of contributing to their more focused analysis.
6 Enabling Conditions

The broader enabling environment, including legal, regulatory, administrative and institutional frameworks, has a bearing on the effectiveness of management and financial sustainability of the protected area system. Legal and regulatory changes will be needed in regard to how revenues are raised, managed and reinvested. New laws may be required to allow such arrangements. Early consultation with legal consulting team will be necessary to align emerging recommendations from this consultancy with opportunities identified in the legal one.

6.1 Legal

It is clear from the analysis that the legal enabling conditions need significant improvement. There are positive aspects that include the current ad hoc situation in which co managers cooperate with government and the ability to collect taxes from visitors leaving the airport and from cruise ship passengers to be directed towards protected area management. Those are considerable positive aspects of the current system that need to be strengthened further.

However the legal system could be improved to recognize the role that protected areas have in the water cycle and include part of the cost of water shed management as part of the water users’ costs.

There is a current uncertainty that resulted from the Finance and Audit Act that states that co-managers are not legally allowed to collect fees. The “co-manager” figure is not very well defined legally, yet they help to collect a large share of revenues and guarantee the active participation of a wide network of organizations that bring additional benefits.

Furthermore, stakeholders interviewed frequently mentioned that the National Park System Act is very restrictive in its vision. As a result in many cases, existing policies both within the protected areas and across various sectors may need to be revised. For example, policies related to forestry and tourism concessions have direct impacts on the ability of protected area to generate revenue and provide services. Policies related to protected area staffing can affect whether the protected area has the capacity to reduce threats and impacts to acceptable levels. Policies related to other sectors, such as forestry practices on adjacent lands, can also have an impact on protected area integrity.

The legal system has few provisions to account for any new “productive” projects in protected areas. Concepts such as royalties are being used for example for the exploitation of wood in protected areas. The same principle should be applied to other extractive or non-extractive activities that may arise in the future. It is much easier to go ahead and define charges, royalties, fees and so on before any project is developed, or contracts signed. This affects things such as oil
exploration, mining, energy generation and other uses within protected areas. Currently there seems to be a void regarding those possibilities.

The legal framework needs to be strengthened in terms of the capacity, or ability to develop other funding mechanisms, both at the national or central level, and at the site level.

6.2 Institutional and Administrative

The current protected area system is largely a system ‘in theory’, rather than a system ‘in practice’. More than 90 protected areas are administered between three government institutions acting independently, with independent financial and management systems. Further complexity results from the fact that most Forestry and Fisheries protected areas are co-managed with an NGO or CBO who in turn each have their own financial and management procedures with varying levels of effectiveness.

Fortunately, the responsibilities of the institutions involved in the financial management are clearly defined, usually by law or executive decrees. Taxes on visitors, concessions and other sources of income are well regulated. However, some aspects have not been implemented including the collection and depositing of 20% of all concessions in the PACT Trust Fund.

There needs to be a clear relationship between the revenues that are generated by an area and the reinvestment in bolstering management budgets and capacity, without this direct relationship, as is the situation currently, the incentive for park staff to generate the revenue is lost.

Conversely, a problem exists where protected area managers are overly, or in many cases, exclusively dependent on tourism entrance fees as a source of revenue. Where this is the case (eg Hol Chan, Blue Hole, most or all archaeological sites and others), then protected area resources show signs of being pulled toward that activity possibly to the detriment of other management priorities. In some cases area managers and co-managers have a perverse incentive to promote visitation to the detriment of their conservation objectives in order to have funding to exist. It is critical that revenue sources be diversified away from such an exclusive source that promotes dependence on increasing visitor numbers, which in the face of gross under-investment in public use management is leading to the degradation of natural capital in many protected areas. A clear expression of commitment to high quality, educational visitor experiences should underlie a system–wide policy on tourism in PAs. A commitment to and dependence on quality rather than quantity should be a characteristic that distinguishes protected areas from elsewhere.

New administrative mechanisms are needed in order to improve transparency and accountability in how funds are distributed— particularly in order to facilitate
reinvestment of adequate funds to cover at a minimum, the core costs in each protected area.

The Belize Fisheries Department has been managing its marine reserves as a network. PACT’s funding of MPAs is designed to enhance the infrastructure and management of the MPA network to the point that it will be ready to be integrated into the National Protected Areas System. One example of the network approach is the creation of administrative “nodes” based on region (North, Central, South). This facilitates more strategic multi-site management, economies of scale and the sharing of resources and lessons learned between areas. This Fisheries Department strategy could be used as model for the National Protected Areas System as a whole, similarly improving management effectiveness at Forestry Department and Archaeology Institute-managed sites.

Staffing requirements in terms of people with expertise in financial planning, cost effectiveness, and revenue generation need to improve. Also it is required that site manager responsibilities include financial management, cost effectiveness and revenue generation.

6.3 Economic & Financial

There are very positive economic and financial enabling conditions for the sustainable financing of protected areas in Belize. First of all there is a magnificent natural resource base of global importance. This is combined with a well-developed tourism industry that has developed a solid and valuable brand for Belize and appealed to an international upscale market. However to take advantage of all these assets it needs to invest in better management and better infrastructure in its system of protected areas.

There are significant environmental services being produced by protected areas, however most are not being accounted for, or publicized to a wider audience. Most studies are partial and are not being streamed up to decision makers. Recently, Hammond et al (2011) listed the environmental services that are provided by protected areas in Belize. These include but are not limited to benefits in terms of carbon storage and sequestration, regulation of water flows, the protection of biodiversity and the provision of scenic beauty.

However, more is needed in terms of financial strategies (which this work is trying to address) and the standardization and coordination of cost accounting systems. And while there is revenue generation across the sites, a good element, the allocation of budgets is not based on established criteria. There are no allocations to provide funding to important, but not as visited, protected areas and to use a solidarity principle.

6.4 Barriers to revenue Collection

After a discussion of these results during the Financial Scorecard workshop held in August, several barriers to revenue generation were identified, that will be
addressed in the Strategy and Financial Plan. There are a few common themes that were identified and include:

1. Capacities need to be increased in many relevant areas of importance to the financial sustainability of the PA system. These include economics and financial training for relevant Government agencies and co-managers. Also, the creation of networks amongst organizations and people that allow for the exchange of knowledge and information regarding financial management of protected areas.

2. Economic situation. Recent economic recession at the global level has translated to the local economy. There is a general sentiment that the economy is still growing very slow. This may result in unwillingness to pay for environmental services and a reduction in philanthropy.

3. Political will. Even though in the Ministry of Natural Resources and the Environment there is ample support for financing the Protected Areas System, that is not the case in other cabinet offices in charge of assigning and planning the use of public financial resources. In part this is because the economic argument has not been presented to them and there is lack of awareness and appreciation of the value of PA's. In part as a result of ineffective communication to stakeholders, and a message that is too conservation focused.

4. Finally, there is also lack of funding to take some of the steps that are needed and small organizations have a difficult time complying with matching funds requirements. This includes funds to conduct feasibility studies for ecosystem services.

Additionally, well-known Belizean experts on legal aspects of revenue generation in PAs were contacted to identify additional barriers that are hindering revenue generation mechanisms for and from the protected areas. There was consensus that a high priority is reaching a definitive resolution to settle current uncertainties around co-management, particularly with regard to financial management roles and responsibilities.

Concerns were raised about the PACT trust fund utilizing a strategy requiring competitive bidding amongst NGOs and CBOs for available funding. This process is a barrier for the smaller NGOs and CBOs in particular, who lack personnel and capacities to invest in preparation of proposals.

While there is collaboration on some enforcement activities, between regulating agencies and co-managers the lack of clarity with regard to co-management agreements and revenue retention policy is creating a management vacuum on the ground (or water) at many protected areas.

Many co-managers who have mobilized and invested funds in the sites they manage over a number of years are fearful that they will lose control of their self-
generated revenue streams and this has contributed to a sense of distrust and a lack of transparency between institutions that is detrimental to the well being of the PA system. There is a need for coordination between system managers and co-managers to establish clear criteria for the allocation of financial resources. If co-managers are to continue to collect fees they must have a financial incentive to do so.

6.5 Core Costs

In consultations with numerous conservation management and protected area experts in Belize and internationally, it was found that the term “core costs” is understood to mean different things to different people.

The term has two broad meanings:

a. One commonly understood meaning of the term refers to the minimum budget expenses required to maintain a basic level of protected area system operation to achieve the implementation of the management plan.

This includes both capital and operating, direct and indirect costs. This can be seen as synonymous with the Basic scenario defined in the UNDP Financial Scorecard and which we have used for this strategy.

b. The other interpretation of the term is understood by some financial and accounting experts to relate to indirect costs or overhead. It is used as part of a budgeting procedure for NGOs in order to properly cover overhead/indirect costs/also known as core costs.

Finance specialists agreed that elements to be included in this category of a budget are notoriously difficult and tend to vary from organization to organization and protected area to protected area according to their characteristics, their need and also the organizational structure of the manager and co-manager, legal requirements and institutional preferences and guidelines.

Indirect cost rate is how NGOs recover from government sources and other partners the cost of the organization's support services that are not covered as direct costs in a contract or grant agreement. This includes the NGOs necessary legal, TIS, human resources, fundraising, finance capacity, which supports the NGOs overall work. In the USA this 'government approved rate' is negotiated with the federal government and is based on the NGOs audit. In each individual contract between NGO and government entity, there is a line item in the budget for indirect costs - this is the product of the approved indirect rate (say 30%) times the direct costs of the contract.

Examples of cost categories commonly considered a part of this definition of core costs include all general and administrative costs for an organization, fundraising, HR, finance, payroll, rent, utilities, office supplies, postage, internet fees and IT. In short it can be considered as anything that supports conservation without
directly working on conservation strategies. Additional discussion and definitions can be found in Appendix 5.

For the purposes of this financial strategy, we recognize that both the above concepts are essential elements of determining financial needs of the PA system, but in order to maintain clarity we will use the term basic throughout when referring to the minimum level of programmatic activities and administration required for the minimum functioning of the system. The term core costs will refer to system level administration or overhead - the costs incurred by an organisation managing protected areas in order to support all the projects that it runs.

6.6 Standardization Of Accounting

The Standardization of accounting across the PA system should be a priority of the NPAS. Currently there are different formats, ways of assigning expenses to line items, and accounting standards and procedures. This is understandable given the existing diversity of organizations, Management Systems and revenue sources. Some organizations, for instance need to report with formats provided by the funders.

However, a successful system will need to keep track of more than 90 protected areas, and standardization is very beneficial.

UNDP’s Financial Scorecard gives importance to the existence of comprehensive financial data and plans for a standardized and coordinated cost accounting systems. Unified systems will allow managers to have a better grasp on current events and also to be able to draw comparisons between PAs and consolidate the information into integrated reports. It is useful for monitoring and benchmarking, and to evaluate the cost efficiency of the system.

In the case of Belize, NGOs are required by law to present annual reports to keep their status. However, there is no standard reporting and each co-manager has its own reporting rules. An integrated system, with similar and comparable categories would contribute to the financial sustainability of the system in many different ways.

There is no standard unified approach to register revenues and expenditures of protected areas. However, a best practice in the region is the case of the Costa Rican System of Protected Areas (or SINAC) that organizes its budgets according to the type of expenditure, and the functional area. In the SINAC case these areas are also used to organize their PAs management plans. The type of expenditure is an accounting concept and typically includes categories such as: personnel; training; operating expenses; equipment; infrastructure and maintenance. This is similar to the way in which governments usually keep track of their costs.

18 Defined by the Costa Rican PA system as “essential operating capacity”
Functional areas on the other hand, are more useful for managing PAs and in the SINAC case include things such as: administration; security and control; financing; resource management; tourism; and community outreach. In Belize several organizations, including for example BAS uses the functional areas presented above (see Table 6).

Functional areas may be useful also in terms of a Protected Area Management Plan. It would be desirable that the same categories in which a management plan is organized are used for accounting purposes. In that way the cost effectiveness of management may be measured and financial results measured by component, or functional area. In those cases, if the activities and the way these are grouped were consistent it would be easier to monitor and evaluate the results. Furthermore, it could allow comparison with other tools, such as the management effectiveness-tracking tool (METT). This would provide facilitate for a consistent toolkit consistency across protected areas and the central system level.

The Management Effectiveness Tracking Tool (METT or Tracking Tool) has been developed to help track and monitor progress in the achievement of the World Bank/WWF Alliance worldwide protected area management effectiveness target.

The World Commission on Protected Areas (WCPA) developed a ‘framework’ for assessment (Hockings, M. et al 2006) that aims to provide overall guidance in the development of assessment systems and to encourage standards for assessment and reporting. Good protected area Management, according to this Framework, has six distinct stages, or elements: understanding the context of existing values and threats, progresses through planning and allocation of resources (inputs), and as a result of management actions (processes), eventually produces products and services (outputs), that result in impacts or outcomes.

In the case of Belize, this additional tool could be part, along with the Financial Scorecard Used at System level, and capable of providing a harmonized reporting system for protected area integrated assessment.

All of the above is not suggesting that NPAS embarks on the development of a complicated cost accounting system. It means the establishment of basic and simple rules, and common categories and ways of consolidating sparse information. In that way it would be possible, among other things, to know exactly how much is being invested in the Belizean System of Protected Areas, what is being spent on and by whom.
7 Prefeasibility of Revenue Generating Options

There is scope in Belize for new mechanisms such as Payment for Environmental Services, which has worked very well to fund protected areas in Costa Rica, Bogota, Colombia and Ecuador and now provides significant funding for protected areas. Funds could be generated by levies on water users, including hydroelectricity generation, urban dwellers and agriculture. Charges need not be very high per unit of water, however given the large volume, the potential to generate revenues is significant.

IUCNs global review of challenges and options for the sustainable financing of PAs provides a good typology of instruments and financing mechanisms (IUCN, 2006). It is useful to organize the different revenue generating options being considered here in three classes:

1. Attracting and administering external inflows
2. Generate funding to encourage conservation activities
3. Market-based charges for PA goods and services

7.1 Attracting and administering external flows

This category includes government and donor budgets, NGO grants and private and voluntary donations, from both international and domestic sources. In the Belize case, most of these sources are in use right now. However, present opportunities for increasing budget allocations would depend upon the existence of political will. The Government budget and foreign assistance are likely to remain an important component of PA funding in to Belize

7.1.1 Government budget and foreign assistance

As mentioned above government budget allocation to PAs has remained flat during the last few years at close to US$1.9 million per year. Clearly the state of the government’s finances in the near future will have an impact on the amount of government expenditures in the protected areas. But maybe even more importantly the political will to support PAs in Belize will be needed if Government is to increase its allocations to the PA system.

However, to get the Government to increase its financial support for the Protected Areas several steps need to be taken before as proposed in the Financial Plan. These include intense lobbying with the financial authorities to demonstrate to them the value PAs have for the Belizean economy. It is expected that Government’s allocation will at least stay in line with expected economic growth. Awareness about the role of PAs in achieving sustainable
development should be raised across sectors; from conservationist organizations to economic planners and development specialists.

In terms of multilateral aid, the Government’s ability to attract more foreign assistance, like for example from UNDP, will also depend upon the capacities that are developed during the next years. However, if the GEF’s RAF\textsuperscript{19} allocations are any indication, there could easily be an increase in foreign agency funding for PAs. The GEF has allocated, as mentioned above, US$2,440,000 for the GEF-5\textsuperscript{20} cycle, an increase of close to 53% over the previous cycle, when Belize received US$1,590,000 for the biodiversity focal area.

This might be linked to increased global funding for climate change adaptation activities, given Belize’s vulnerability. These funds could complement PA System resources and strengthen their importance in terms of adaptation to climate threats, food security and the national economy. For example, current resources available for GEF-5 as part of the RAF for climate change amount to US$2 million.

Furthermore, there is an opportunity to link other sources of aid that are more development oriented but that might have links with biodiversity conservation. For example, the PMIIE Program, a World Bank and Interamerican Development Bank joint initiative has shown that forests and production of products such as cocoa are compatible. Thus an effort should be made to align with those initiatives with for example broader efforts in the context of sustainable development and poverty reduction.

\subsection*{7.1.2 Private voluntary donations}

These include philanthropic foundations, corporate funding and personal donations. There is very little information regarding the magnitude of private voluntary donations, either by individuals or corporations in Belize. And even though there is potential to develop this source, as of now it is not one of the main pillars of PA financing in Belize. Nonetheless, it could be a useful source to finance some of the programs that co-managers have in Belize. Organizations like BAS for example have a membership base that supports these kinds of activities.

In Belize, there need to be an effort in all three types. Corporate support for environmental causes is growing and many companies have interest in protected areas for different reasons. Also, consumers of those products are every time more interested in the protection of the environment.

However, these sources will probably support only very localized conservation efforts. Compared to fundraising from governments and aid agencies, securing private voluntary donations requires much more effort and the quantities are

\begin{itemize}
  \item \textsuperscript{19} Resource Allocation Framework
  \item \textsuperscript{20} www.gefonline.org
\end{itemize}
significantly smaller. At the site level managers lack the skills needed to generate revenue from these sources. They have good potential to contribute at the local level and to the conservation of specific PAs.

Belize has advantages since it already has developed a very appealing “brand”, so to speak. International recognition of Belize as a world-class diving destination provides a platform to increase the recognition of the National Protected Areas System of Belize. Biodiversity marine resources are also well known and part of that national brand.

### 7.1.3 Environmental Funds and Debt for Nature Swaps

A very good “best practice” in the region is the PACT. As mentioned above it is a statutory body, mandated by law to collect fees for managing the country’s protected areas. It receives money from users and non-users alike, and is able to generate close to US$2 million per year. Its funds now stand at about US$3.5 million\(^{21}\), having received a US$112 thousand transfer in 2010. These funds may very well grow, just by virtue of an increase the number of visitors and the effect of additional interest income. However, it may also develop new sources of revenue, like some of the ones mentioned here. For example, it could very well be the recipient of new “water funds” or of other green fees levied on different industries (See Section 5.3.2)

These actions have been complemented also by debt for nature swaps and as mentioned in Section 4.5 have generated a constant flow of resources. The last swap was completed in 2001, but the potential exists to develop new initiatives in this area.

There is positive experience and technical knowhow in Belize with both environmental funds and debt for nature swaps that are helping to improve management of protected areas. An expansion of PACT by adding new sources of revenue, and new debt for nature swaps must be therefore part of the financial strategy in the short term.

However the challenge remains for Belize to get the legislation upgraded to facilitate the establishment of new funds, and funds that are specific for a particular protected area (such as the Hol Chan case).

Regarding debt for nature swaps the mechanism has very good potential in the Belizean case for many reasons.

- Belize is part of a growing debt crisis in the Caribbean that includes also countries like Antigua & Barbuda, Barbados, Grenada and Jamaica. Current public debt to GDP equals 80%\(^{22}\) and has been a persistent burden on public finances.

\(^{21}\) Including endowment and general funds.
\(^{22}\) Eurostat, April 2011.
There is experience with debt-swaps. Recently a successful experience was implemented (see Section 4.6) that allowed financing of multiple expenditures related to management of PAs that could not be funded by other sources.

There are different organizations, both public and private with significant know-how on debt-swaps.

Fits with government policies to reduce debt and alleviate poverty.

Globally debt-swaps have gained momentum. Recently the United States and Indonesia signed a debt-for-nature swap agreement under the U.S. Tropical Forest Conservation Act (TFCA) that will reduce Indonesia’s debt payments to the U.S. Government over the next eight years by nearly $28.5 million. Also Costa Rica, negotiated the forgiveness of US$26 million of the country’s debt in exchange for conservation activities.

In Belize there may be important links with climate change. Having significant marine resources it could be affected disproportionately by climate change. However, at the same time has a very good potential for sequestering carbon in its marine environments (sea grass bed for example).

Previous debt swap in Belize generated US$309,000 per year from 2001 to 2011 providing funds to a) purchase land (TIDE), b) capitalize endowment accounts of TIDE, PfB, BAS and PACT and c) land management activities.

7.2 Generate funding to encourage conservation activities

These mechanisms seek to encourage individuals, communities and the private sector to modify behavior so as to promote the conservation of biodiversity and protected areas. Also to raise the funds needed to carry out this task among the different beneficiaries.

In Belize there is a combination of this type of mechanisms being used in the present. There are taxes (for example on the tourism sector) and there is a combination of benefit and revenue sharing and sharing the cost of managing PAs (with PA co-managers). Both mechanisms are currently providing a very significant share (close to 50%) of the total revenues of protected areas.

7.2.1 Fiscal Instruments (taxes and subsidies)

These instruments look to generate revenues and at the same time generate a pro-environmental behavior on the part of producers and consumers. Environmental, or “green”, taxes on activities carried out within or outside protected areas (e.g. mining, generation of geothermal energy, oil exploration and extraction) look like a feasible option in Belize.

There is experience in Belize with this sort of “green fee”, where charges are levied upon an industry even when there are no direct uses associated with the
Protected Areas (for example the airport tax (conservation fee)). And, while the unitary tax is low, given the size of the tax base, the result is large flows of revenue.

7.2.1.1 Conservation Fee

Belize was a pioneer, winning international renown in 1995 when it was the first country to introduce a “Conservation Fee” as a component of the international airport departure tax. The revenue generated was designed to finance PACT and be a dedicated source of support for the Belizean PA system. This was very much in keeping with the successful “Eco” positioning and profile Belize was establishing in the international tourism market at that time.

However the US$3.75 that was designated at that time has not been increased since, even though in 16 years, the costs of running a PA system have increased considerably as well as the knowledge of what is required in terms of management capacities and investment.

Given the size of the financial gap faced by the PA system and the diminished value of the original US$3.75 fee it is proposed that this fee be increased to at least US$7.50. This is included in a financial projection for a Closing the Gap scenario below.

7.2.1.2 Commissions on the Cruise Passenger Tax

Since 1997, PACT has received a commission equivalent to the value of 20% of the Cruise Passenger Tax – currently US$7. As PAs are still so important to Belize’s image as an attractive destination that in part drives the cruise industry demand for Belize, it is recommended that PACT’s commission be increased to 25%. This is included in a financial projection for a Closing the Gap Scenario below.

7.2.1.3 Other green taxes

International experience has shown that it is feasible to implement fiscal reform in order to protect natural resources. Of prominence in those reforms is the introduction of taxes on natural resource extraction. An advantage of these instruments is the capacity to target groups or industries.

Candidates for green taxes, or levies, in Belize include the oil industry, the mining industry (though to a minor extent). And even though these industries make no direct use of the natural resources there are several arguments to justify their collaboration to the management of PAs. First, in terms of carbon the oil industry is directly related to CO2 emissions. Second, there are potential environmental impacts that could harm protected areas or the environment in general in Belize.

For example, exports of oil reached more than US$ 95 million in 2008. A user fee of 1.5% on revenues could generate up to US$1,425,000 per year.
A tax on gasoline, which for example is the main source of revenue for Costa Rica’s payment for environmental services program, is not considered feasible in Belize at this time, given that the cost is already considered to be very high.

Nonetheless, it is very important to pass legislation, with specific language laying the ground for charging green fees to new oil exploration and extraction projects and other future economic activities, clearly outside of protected areas. Of course taking into consideration all environmental safeguards required by the legislation, it is much easier to install the principle for future projects to follow, than to have the idea after the project is working already. The US Land and Water Conservation Fund (mentioned above) is a good example and an important precedent that transfers funds from oil drilling to nature conservation.

7.2.2 Benefit sharing and revenue sharing / Sharing the costs of managing PAs and their facilities

In Belize an important number of PAs are co-managed by NGOs and CBOs. The arrangement usually involves both: sharing in the revenues and sharing the costs of managing. The existing arrangement has given the government some relief, since the co-managers not only collect revenues, but actually incur in all necessary costs to keep the PAs running.

However, there is room for more collaboration with local communities and sharing benefits from activities related to the protect areas. In Belize the co-management agreements, even though not formally embedded in the legislation, have proven a very good strategy for the Government, which has secured the protection and care of PAs at virtually no cost.

As a result, these arrangements need to be part of any future financial strategy since these are likely to continue to provide important revenues for PA management. It is therefore necessary that the proper incentives be provided to co-managers while at the same time guaranteeing a management level that is in line with the goals and objectives of each type of protected area.

Since these agreements are very related with entrance fees for tourism, the discussion is expanded below in Section 7.3.1.

7.2.3 Investment, credit and enterprise funds

Investment credit and enterprise funds provide long term capital for initiatives that result in the conservation or sustainable use of biological resources. This could be applicable to Private Reserves in the Belizean case; however, their use is very limited.

The threshold of sustainability analysis revealed that there is lack of investment in infrastructure to deal with a growing tourism demand. At a future point, when the threshold of sustainability for tourism is established, it will be feasible to explore opportunities for private investment in tourism facilities within PAs.
7.3 Market based charges

Tourism charges, resource extraction fees and payment for environmental services are mechanisms which try to utilize the demand for the multiple goods and services derived from PAs into a financial flow that helps pay for the cost of operating it. There are many economic benefits that are derived from the existence of PAs. Examples include recreational values for tourism, carbon capture and storage, regulation of the water cycle and many more.

7.3.1 Tourism charges

7.3.1.1 Increase Entrance Fees

Fees at many protected areas tend to be lower or considerably lower than might be expected given the quality of the attraction and the experience and when compared to entrance fees in other countries (See Table 11). It is anticipated that the market would be prepared to pay significantly higher fees in some protected areas than they are currently asked to, such that the entrance fees portion of the budget, assuming current fee reinvestment levels from the three government departments, could probably increase by around 30% with little impact on demand\textsuperscript{23}. This would account for around \textbf{US$0.6 million towards the current gap}. The financial impact of a variety of adjustments to existing as well as new tourism based mechanisms can be seen in the Scenario Projections in Annex 1: The Threshold of Sustainability for Tourism.

The AHA/PACT team of consultants currently working on the Fee Framework will determine more precise recommendations on adjustments to fees.

Hol Chan Marine Reserve followed an exemplary process in addressing the perceived loss of consumer surplus through their low entrance fee and commissioned a Contingent Valuation Study. The results demonstrated that visitors were prepared to pay significantly higher entrance fees with no loss in demand. The new fee established by the Reserve has significantly increased revenues, which in the case of Hol Chan, exclusively, they are able to reinvest entirely in site management.

Resistance to entrance fees and increases in entrance fees is frequently an almost “knee jerk” reaction from tour operators everywhere. The tourism industry fears loss of demand will result from increased fees. However, there is a growing body of evidence from places as diverse as Bolivia (Drumm and Lindberg 2004; Canada, (Eagles, 2007) Tanzania (Drumm, 2008) that shows the exact opposite. Visitor numbers will very often \textit{increase} as a result of park conditions and facilities improving as a result of the greater investment following entrance fee price increases. This is a critical element of the communications strategy which should accompany the decision to increase fees. Lindberg (2007) reviews a

\textsuperscript{23} Using the same assumption used elsewhere, of an increase of US$5 in Archaeology Reserves to US$10 and a 20\% increase in average fees for Forestry and Fisheries sites to US$12.
number of price inelasticity studies that show similar findings for protected areas in the USA, Australia, Kenya, Costa Rica and elsewhere. At Bonaire Marine Park, the introduction of a dive fee is believed to have increased visitation rather than decreased it principally because divers have been attracted by the well-managed reefs resulting from the increased investment of fee revenue in improved management capacity.

It is however, necessary to give tour operators at least nine months notice of the introduction date of new entrance fees in order for them to make adjustments in their own pricing and to update information in their brochures and on their web sites. It is also very important to ensure that the entrance fee revenues are utilized for specific, known protected area purposes. In the first instance to improve the quality of tourism management capacities and through those that increase the quality of the visitor experience at the site generating the revenues. For example by investing them in interpretation programmes, trail maintenance and safety improvements. It is also necessary to provide abundant information to the public about the income earned and the activities funded by it.

### 7.3.1.2 Re-investment of Entrance Fees

An adjustment to Entrance Fee revenue distribution and reinvestment would have an even more significant impact on closing the gap than would raising the prices and it is necessary that both should be done if the funding gap is to be closed. For example if Fisheries and Archaeology were to reinvest a modest 66% of entrance fee revenues they generate from their PAs rather than the current 33% and, 25% they currently do, then around US$1 million in additional funding would be available at current prices and over US$2 million assuming price increases in line with the assumptions made previously.

### 7.3.1.3 Tour Operator Operating Licenses

Currently and unusually in the international context, tour operators do not pay for their commercial use of protected areas through the purchase of annual operating licenses in Belize. It is proposed that each tour operator will apply for an annual operating license for each protected area they would like to operate in. Fees fore the licenses should be priced low at start up of the mechanism. We have used a low figure of US$500 per tour operator per annual license in the Scenario Projection in the ToS study in Annex 1 below. There are currently more than 200 tour operators in Belize. The number currently using PAs for business needs to be determined.

The creation of this programme will also establish greater control by PA managers over tourism businesses operating in their area.

### 7.3.1.4 Guide Licenses

Similar to the case of tour operators, but PA licensed to be priced lower than for tour operators. A price of US$50 per guide license per PA per year is used in the
Scenario Projection below. There are over 1,000 BTB licensed guides currently (BTB, 2011). It is likely that a large percentage of these use PAs for business.

7.3.1.5 Hotel Tax

No revenues from the existing Hotel Tax flow to the PA system. It is recommended that a commission equivalent to US$1 per hotel guest flow to the PA system via PACT.

7.3.2 Resource extraction fees

Currently several PA categories allow for the sustainable extraction of products from PAs (see Section 5.2) and there are important flows of revenue derived from them. Most of it is related to the use of forests and fisheries and the payment of licenses.

7.3.2.1 Forest and Fisheries Resources

Currently forestry, fishing and other licenses and concessions to use natural resources on public and private lands generate US$633,000 per year. As shown above, in relative terms it seems that forestry concessions already contribute about 3% of the total value of the annual revenues generated by the industry to the management of PAs. On the other hand fishing licenses are still at less than one half of one percent (0.5%) of total revenues from fisheries.

These sources are likely to continue to provide funding to carry out the management of PAs, and especially for the Forestry Department. There is room for improvement though and for example there could be programs to increase the value added of timber and at the same time provide additional funding to PAs.

With fisheries, a preliminary look at fees currently charged leaves the impression that all of them are very low, and there should be an evaluation of those fees. Clearly the initial reaction of cooperatives could be negative but if these changes were accompanied by improvements in the management of the stocks and better marketing strategies, they would be willing partners.

In both cases the sustainability of resource use must be guaranteed, using the same logic as in the tourism case. If the resource base is deteriorated long term revenues would be compromised and the conservation goals not reached. Any revenue generating strategy must have environmental guidelines and safeguards to make sure the natural capital is maintained.

7.3.3 Payment for ecosystem services (water, carbon)

Protected areas provide and maintain “ecosystem services” for society. In the case of Belize these services are of great value, and sustain complete sectors of the economy. There is no discussion that the value of these services is enormous. Few attempts have been made to value them, however in this section
we focus not on the economic value but the revenue generating potential of each option.

Usually throughout the world the main environmental services are related to water, carbon, biodiversity and scenic beauty. That is the case for example in the Costa Rica Forestry Law 7575 that explicitly recognizes those services. In the Belizean case there is potential to recover revenues to invest in protected areas.

### 7.3.3.1 Water for Hydroelectricity

Belize Electricity Limited is the primary distributor of energy in Belize, with a customer base of about 77,000 accounts. Total revenues from the sale of electricity in Belize amounted to US$90 million in 2010. And even though the precise quantification of the benefits associated with the National Protected Area System of Belize is complicated and uncertain, these are clear: better distribution of water over time, reduced water pollution and many more. Furthermore, this industry depends in large part upon water resources providing the required energy resources.

A 1.5% green fee on total revenues is considered very feasible, given adequate political support, and would mean an additional US$1,350,000.

### 7.3.3.2 Water for Domestic consumption

Since most PAs favor the provision of water it would be logical to argue that the protection, or at least part of the costs of protection, should be added to the cost of providing the service. In Belize there are about 44,000 customers that receive close to 150 million gallons per month (Hammond). Rivers are the main source of water, which highlights the importance of protected areas.

Water fees in Belize only barely cover the costs of delivering it from the source to the final consumer. A typical water bill for a family of 5 could amount to US$20/month, or US$240 per family per year, or a total of US$10 million per year. A 2.5% water fee on revenues would generate US$250,000 per year and would mean only about $0.50 cents/connection/month, a very feasible amount to collect. For argument’s sake even a US$1/month/connection seems feasible, and could generate up to US$528,000 per year.

This flow of funds is somehow limited by Belize having a small population and large protected areas. For example, in El Salvador, a country with high population densities the capacity to recover a flow of funds that would allow for meaningful interventions is much higher. Costa Rica for example has more than 10 times as much population.

A water fee used to close the financial gap of the NPAS is feasible because it would represent a minor increase in a typical water bill. However it needs political support to push it through.
7.3.3.3 Beverages Industry

This includes producers of **pop sodas** as well as **bottled water** and **beer**. As mentioned above, beer producers in the region have supported payment for environmental services in the water sector for different reasons.

Not only are there technical and environmental reasons to protect water resources, there are important market drivers as well. It could be a way to differentiate a product and even get a premium price, or to show concern for the environment and its natural resources. This is important not only to customers but to regulatory bodies and even environmentally sensitive major stockholders.

At this time it would be difficult to quantify the size of this flow.

7.3.3.4 Carbon (in the Voluntary Market)

Belize has much strength to develop carbon projects in the voluntary markets. A wide network of NGOs with links to the United States and Europe, very important biodiversity and archaeological values that give added value to carbon stored and sequestered in Belize are some of the country’s strengths. It has also been at the forefront of tropical high-value timber production and trade. It could easily link the capacities developed in an economic activity that defined the country to take reap additional benefits from carbon capture and storage.

As mentioned above the mandatory carbon markets are going through a period of uncertainty, as a result of the ending of the “commitment period” in 2012. Nevertheless, there are interesting possibilities in the voluntary carbon markets. For example, local aviation companies that cater to sophisticated Europeans might find it appealing to provide funding for the PA System and being able to claim that they are “carbon neutral airlines”, for example.

Hammond (2011) estimated that the net present value of the carbon benefits derived at the Maya Mountain Massif and the Maya Mountain Marine Corridor in the next 30 years was close to US$165 million. On the other hand FCD, a Belizean NGO calculates that it could generate as much as US$500 thousand per year for the Chiquibul forests if a market for carbon credits develop.

The market could include other local companies and corporations interested in mitigating their carbon footprint. However, this process requires a parallel effort on the part of academia, the private sector, and environmental authorities. Carbon could become another source of revenues for co-managers to invest in protected areas.

It is very important that the potential to sequester carbon that exists in Belize’s vast sea grass beds and mangroves is taken into consideration.
8 Closing the Gap

Protected areas are central to Belize’s economic development model but are not necessarily considered as such by important political stakeholders such as the ministers of finance and planning who are central in allocating funds to agencies that manage protected areas. Resource use fees are outdated, too low or nonexistent. Furthermore, fee collection mechanisms are also outdated, inefficient and understaffed. With a coordinated strategy among stakeholders to protect the resource base on which tourism, fresh water and other critical economic sectors depend, there are excellent and proven opportunities to close the financing gap which was estimated at US$10.2 million for the Basic Scenario and US$19.4 million for the Optimal Scenario.

Difficult choices are needed if the system is to eliminate the financial gap that exists today between current levels of funding and the minimum amount required to ensure the survival of the PA system. Some options are very cost-effective but may entail a significant political commitment. Thus, it is of the utmost importance that the political will is behind any strategy to improve the system’s finances.

8.1 Revenue Scenarios

Revenues have been relatively stable during the last few years. And while past trends cannot always predict the future, we can estimate revenues in 5 and 10 years’ time. Using two scenarios (Current Trend and Moderate Change) revenues are calculated using a standard growth rate for illustrative purposes. Clearly there exists a chance for a failure, or negative scenario, where the financial sustainability of the system is not reached but we consider this an unacceptable option.

To close the estimated gap for the most achievable target (basic management of the PAs) revenues need to at least double. The system must rely on a combination of revenue sources and especially the contribution of those sectors that receive more benefits from PAs and can afford to cover those expenses. In a country like Belize, where tourism in protected areas is critical to economic growth, it is clear that its protected areas must be managed well as a national strategic economic issue. Additional scenarios focusing on alternative tourism-based revenue generation mechanisms are included in Annex 1 as part of the Threshold of Sustainability analysis.

Each scenario has a simplified story line (see Table 14) that highlights and presents the assumptions that were used in the calculations.
Table 14. Scenarios for Future Revenues

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Story Line</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current Trend</td>
<td>• Recent trends in terms of tourism increases, government expenditures, economic growth are maintained</td>
</tr>
<tr>
<td></td>
<td>• Political support for increasing revenues for protected areas is moderate.</td>
</tr>
<tr>
<td></td>
<td>• There are marginal improvements in the way taxes are collected.</td>
</tr>
<tr>
<td></td>
<td>• New sources of revenue are slow to take off. Water “green fee” US$0.5 connection/month starting in year 3.</td>
</tr>
<tr>
<td></td>
<td>• Hydroelectricity pays 0.5% of total revenues for PA Management.</td>
</tr>
<tr>
<td></td>
<td>• No tax on oil exploration or extraction.</td>
</tr>
<tr>
<td></td>
<td>• Government budget grows at 2%</td>
</tr>
<tr>
<td></td>
<td>• Tourism demand grows at 4%</td>
</tr>
<tr>
<td>Moderate Change</td>
<td>• This scenario is characterized by increased political support for the PA as well as continued support from multilateral agencies, and continued tourism growth. There is willingness to impose “green fees” on water, and on oil extraction outside protected areas.</td>
</tr>
<tr>
<td></td>
<td>• Government budget grows at 4%</td>
</tr>
<tr>
<td></td>
<td>• New sources of revenue are approved.</td>
</tr>
<tr>
<td></td>
<td>• Oil export 1.5% tax.</td>
</tr>
<tr>
<td></td>
<td>• Water “green fee” US$1/month/connection starting in 2 years.</td>
</tr>
<tr>
<td></td>
<td>• Hydroelectricity pays 1.5% of revenue for PA Management.</td>
</tr>
<tr>
<td></td>
<td>• Tourism demand grows at 4%, hotel tax, licenses for tour operators and PA guides, are implemented</td>
</tr>
</tbody>
</table>

8.2 Future Projections

We project two alternative scenarios in the future in terms of revenue generation and using the assumptions highlighted above, illustrative projections were made taking into consideration the prior market analysis of the different revenue generating options.

8.2.1 Current Trend Scenarios

In Section 3 of this study, the financial gap for the basic management case was estimated at about US$10.3 million per year. If there is only an organic increase in revenues, assuming increases in tourism, and even foreign aid resources, the Basic gap is not going to be closed (See Figure 19). This means that basic needs of the protected areas will not be met, and the likelihood exists of continued deterioration of the resource base. It is important to note that even with increases in all of the current revenue sources, even after many years, the gap is still
significant (more than US$5 million), and that does not take into consideration the fact that the size of the gap will almost certainly increase over time as remedial and restoration costs get added to budgets. Even more so if ecological representation is increased and new protected areas are added to the system. Closing the “biodiversity gap” will require additional investments.

**Figure 19. Current Trend Revenues and Expenditures/Basic Management Target**

When we project this same Current Trend Scenario against Optimal management needs (Figure 20), it shows a considerable shortfall with a situation likely whereby the gap is probably not even closed in any meaningful way. The Current Trend Scenario, then, is one of certain deterioration and loss of critical natural capital and ecosystem services, including recreational and tourism opportunities. This includes the loss of carbon stocks and decreasing revenue opportunities in the future. The economic consequences of maintaining the status quo are likely very serious for Belize.
8.2.2 Moderate Change Scenarios

The Moderate Change Scenario projected in Figure 21, shows the Basic gap being closed, theoretically, in Year 9. However, this result is contingent upon several and important and politically sensitive decisions that must be taken now. That outcome would be contingent upon establishing green taxes, water levies, and increases in existing fees as well as for increased government spending on PAs.

Additionally, it should be understood that all the time the system persists without a basic level of management, that remedial and restoration costs will increase, such that the gap increases every year. That said, it should also be understood, that it would take sometime to reach the required level of even Basic management capacity. For these reasons, intervention and making changes now will save money for the economy in the medium term.
The Moderate Change scenario (figure 22) will fall far short of achieving an optimal management level.

Although it is expected that when Basic level capacities are achieved at both site and system level, a more precise determination of Optimal funding levels can be more easily determined, it will still be necessary to implement a series of new measures in the short term to begin to approach the optimal need as we understand it to be today.

In reality, what is called for is a third, more positive scenario whereby to varying degrees, further funding mechanisms are identified and implemented, price increases for existing mechanisms are increased further than in the Moderate Scenario and these are accompanied by greater central government allocations.
8.3 Summary

The projections clearly show the urgency of adopting significant measures in terms of new revenue generating options and optimizing and consolidating the ones that already exist. Short of increased allocations from central government, or the realization of as of now unidentified opportunities, even under the most positive revenues' scenario the system will still be short of reaching an optimal level of management.

There needs to be a sense of urgency to convey the message that given the contribution of the PA system to the nation’s economic well being, new investment must be made in bringing on stream new sustainable sources of revenue to protect the nation's natural capital. The challenge is serious and the need, essential.

Even achieving a basic management scenario will be a great improvement over the current situation. That would still require a doubling of current investment. In order to reach that level, there is a need for significant efficiency improvements with existing sources; price increases as well as the adoption an implementation of new revenue sources.
9 Outline Financial Plan/Strategy

The strategy outlined here focuses on addressing necessary improvements to the legal enabling conditions and will provide an important input to the legal consultancy team, strengthening PA financial management reporting, consolidating and optimizing existing finance mechanisms, identifying new revenue sources, and building capacity of co-managers in financial monitoring and management.

The strategy is organized in three strategic areas, the legal, regulatory and institutional framework; business planning and tools for cost-effective management; and tools for revenue generation by PAs. This is consistent with UNDP’s financial scorecard (Part 2), which provided the structure for this analysis. In addition to identifying revenue sources, the plan includes a set of actions intended to strengthen the financial capacities of the PA System of Belize.

There are several principles that guide the creation of this plan:

1. To maximize the diversity of sources of income. Greater diversity and reduced dependence on few sources e.g. tourism, will create greater financial stability.

2. To create solidarity amongst Protected Areas. Some PAs of great ecological importance are not capable of generating enough funds to pay for their management. Thus, other areas that are in surplus must collaborate to fund those.

3. To embrace a business-oriented model. Cost-efficiency, standardize accounting, sustainable use of resources and development of financing capabilities must be part of the model.

4. To remain respectful of the Evolution of the PA System of Belize concept. Belize’s system has evolved organically with the help of many organizations and stakeholders. This must be recognized and sudden and abrupt change avoided.

5. To ensure the ecological integrity of the Protected Areas, according to their management category. The conservation objectives of each PA must be respected, even if that means foregoing revenues.

Challenges to Implementation

- Different organizations with different agendas (and even corporate cultures) are involved.
• Changing the allocation of financial resources is always difficult. The status quo has inertia going for it. Touching already agreed upon distribution of resources is hard and will require good marshalling of financial and economic data and strong communications strategy.

• Startup resources are needed to implement the strategy.

• Political issues and rivalries unknown or not always perceived or understood by the consultants.

• It will be necessary to address “turf” issues between government departments and NGOs.

• Lack of transparency needs to be overcome.

• Tourism sector needs to understand and assume responsibility for the costs it imposes on the PA system.

• Curent lack of formal forums for dialogue between PA managers and communities, and PA system and managers and tourism sector.

9.1 Strategic Components and Objectives

The Strategy consists of three components, which conform to the structure of the Financial Scorecard (UNDP, 2010) utilized in the analysis. Each component has several “strategic lines”, which in turn include activities or recommendations. First, we present each of the Components with its major objective and strategic lines of work. Then, the activities required in each strategic line are presented. There is some overlap between strategic lines and objectives, but in general this structure helps to organize the proposed interventions.

9.1.1 Legal, Regulatory and Institutional

Table 15. Strategic Component: Legal, Regulatory and Institutional

<table>
<thead>
<tr>
<th>Strategic Component</th>
<th>Objective</th>
</tr>
</thead>
<tbody>
<tr>
<td>Legal, regulatory and institutional</td>
<td>Enact policies and legislation that support the financial sustainability of a PA system that is capable of providing an optimal level of protection and conservation according to the requirements of each category of PA.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Strategic Lines</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>LRI1.</td>
<td>Policies support revenue generation, retention and sharing. Opportunities to increase revenues are increased and a higher proportion is actually invested in the PA Systems.</td>
</tr>
</tbody>
</table>
The PAs and related legislation constitute a coherent set that facilitates and is conducive to improved financial conditions. Inconsistencies are removed from the legislation.

Improved financial strategies promote the development of capacities of co-managers, government and all stakeholders for improved financial performance of the system.

Decision makers recognize the economic importance of PAs and are willing to budget more resources.

Support for alternative arrangements to reduce PA management cost to government.

9.1.2 Business Planning and Tools

Table 16. Strategic Component: Business Planning and Tools

<table>
<thead>
<tr>
<th>Strategic Component</th>
<th>Objective</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business Planning and Tools</td>
<td>A business oriented planning process takes place and the cost effectiveness of the system increases. The capacities of stakeholders, protected areas personnel and co-managers are strengthened to be able to better operate protected areas.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Strategic Lines</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>BP1.</td>
<td>Management and system planning are effective and drive the system to financial sustainability.</td>
</tr>
<tr>
<td>BP2.</td>
<td>Accounting and auditing system allow good decision-making at the system level and facilitates efficient future financial planning.</td>
</tr>
<tr>
<td>BP3.</td>
<td>Protected area managers operate more cost effectively.</td>
</tr>
<tr>
<td>BP4.</td>
<td>Allocation of funds to PAs is based on agreed upon criteria.</td>
</tr>
<tr>
<td>BP5.</td>
<td>Identify and implement cost saving opportunities.</td>
</tr>
</tbody>
</table>

9.1.3 Tools for Revenue Generation

Table 17. Strategic Component: Tools for Revenue Generation

| Strategic | Objective |
### Sustainable Financing Strategy for Belize’s National Protected Areas System

#### Component

<table>
<thead>
<tr>
<th>Tools for Revenue Generation</th>
<th>Current Revenues are increased 100% and invested in managing the System of Protected Areas of Belize</th>
</tr>
</thead>
</table>

#### Strategic Lines

<table>
<thead>
<tr>
<th>RG1.</th>
<th>Existing revenue sources are optimized and revenues increased in total value. Tourism entrance fee system is improved</th>
</tr>
</thead>
<tbody>
<tr>
<td>RG2.</td>
<td>Revenue sources are diversified and generate multiple financial streams. Revenues increase and “Non-tourism” funding strategies are developed to reduce over-dependency on tourism and increase stability of funding.</td>
</tr>
<tr>
<td>RG4.</td>
<td>PES System for PAs Developed and operating</td>
</tr>
</tbody>
</table>

#### 9.2 Recommended Actions

**Table 18. Activities and Recommendations by Strategic Line.**

<table>
<thead>
<tr>
<th>Strategic Line</th>
<th>Activities / Recommendations</th>
</tr>
</thead>
</table>
| LRI1           | • Bring Belize PA system category designations into line with international standards/IUCN definitions.  
                  • Fully Implement Protected Areas Conservation Trust Act Chapter 218 to collect 20% commission on all concessions and deposit in PACT Trust Fund.  
                  • Establish a central fund to receive site-generated revenue. The fund would be administered by PACT, and have a board that includes managers and co-managers. The fund would have PA-specific sub-accounts to facilitate appropriate reinvestment of funds generated. This activity should not be implemented on its own as it would add another layer of bureaucracy that would effectively penalize co-managers. To be implemented concurrently with other proposed strategies.  
                  • Clearly Define Legal Standing of Co-Managers.  
                  • Revise Belize National Park System Act Chapter 215 to increase PA entrance fees and provide a technical basis for the determination of prices based on the threshold of sustainability. In accordance with this analysis, increase price for Archaeological Reserves to US$10 for foreign adults and an average of US$12 for Forestry and Fisheries sites. No prices should be reduced from... |
### Sustainable Financing Strategy for Belize’s National Protected Areas System

<table>
<thead>
<tr>
<th>Strategic Line</th>
<th>Activities / Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>current levels; many prices should be increased and made more consistent across the system.</td>
</tr>
<tr>
<td></td>
<td>• Revise PACT Act and define strategy to Increase Cruise Passenger tax Commission and Conservation Fee. These must include an analysis of the competitiveness of the industry and a review of responses to cruise industry negotiating strategy.</td>
</tr>
<tr>
<td></td>
<td>• Eliminate overlap between The Environmental Protection Amendment Act and the PACT Act. Reconsider article requiring PACT funds to flow to the DOE’s Environmental Management Fund (EMF).</td>
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<td></td>
<td>• Include specific language in the National Water Policy and draft Water Act that recognizes that the cost of watershed conservation is a legitimate component of water user fees.</td>
</tr>
<tr>
<td></td>
<td>• Propose a watershed conservation fee for inclusion in the Water Act to be channeled through PACT to Protected Areas management.</td>
</tr>
<tr>
<td></td>
<td>• Seek recognition of Environmental goods and services in the law.</td>
</tr>
</tbody>
</table>

<p>| LRI2          | • Align definition and permitted uses and sizes of Belize PA categories with IUCN system. |
|---------------| • Review conformity of PA legislation with commitments made to fulfillment of International Conventions and regional Agreements including the Convention on Biodiversity, particularly the Programme of Work on Protected Areas. |
|               | • Improve consistency and conformity across Government Departments with regard to PA declaration, definitions and permitted use. Address for example the oft-used phrase in Belizean protected Area Regulations “except with the authorization of the Administrator” with regard to permitted uses in restrictive categories of PA. Although a degree of autonomy in management decision-making is desirable, this may leave PA managers exposed to external pressures. |
|               | • Bring marine sites under common management authority (e.g. Laughing Bird Caye to Fisheries). Bring terrestrial sites under common management authority. |
|               | • Revise the Protected Areas Act to clarify the roles and responsibilities of co-managing organizations. |</p>
<table>
<thead>
<tr>
<th>Strategic Line</th>
<th>Activities / Recommendations</th>
</tr>
</thead>
</table>
| LRI3           | • Establish policy for the use of standardized and coordinated cost accounting. Develop system-wide budgets using standard template consistent between site and system level and between sub-systems.  
• Develop system wide policy for budget allocation to PA Sites. This should include sufficient for the development of management capacities, investments in facilities, staff and whatever else is required to implement the management plan. The first step would be to establish those criteria for determining the allocation, which will probably include distance to markets, size, revenue generating options and others.  
• Develop allocation system to PAs according to agreed upon criteria. This includes reviewing PACT competitive bidding approach to providing grants to PAs. It must include also the recognition of core costs.  
• Mandate standardization of cost accounting in co-management agreements.  
• Allow PA entrance fees to be determined by NPAS or no higher than Minister level to facilitate agility of adjustment.  
• Define staffing needs at site and system level.  
• Define legislation to facilitate NGO collection of tourist donations for PA conservation |
| LRI4           | • Update and compile Economic Valuation Studies into 10-12 page reports to show the added economic value of the PA System and widespread distribution. The lack of understanding amongst key audiences as to the contribution of Belize’s protected area system to the economy nationally and locally, and to the well being of Belizeans is a major barrier to gaining the required political support for the necessary budget allocations. It is therefore necessary to commission new economic valuation studies of the protected area system as a whole, sub systems of protected areas and strategic sites such as Half Moon and Blue Hole.  
• Design and implement a concerted communications campaign targeting key audiences at both the national and local levels. Too often, excellent technical proposals fail to be implemented because of inadequate communications and marketing of important strategies to key internal and external audiences. It is crucial to make the case for funding protected area conservation as an economic strategy. To that end it is important to develop and implement a strategy to communicate key messages emerging from economic valuation studies to target audiences, particularly policy makers and the tourism industry |
<table>
<thead>
<tr>
<th>Strategic Line</th>
<th>Activities / Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>as well as the general public.</td>
</tr>
<tr>
<td></td>
<td>• At the site level it is important to inspire confidence and a sense of transparency around the collection of fees. It is important to communicate to visitors and other users how fees collected and used for site and system management.</td>
</tr>
<tr>
<td></td>
<td>• Design a component of the communication strategy specifically to target decision makers. Promote periodic briefings with policy makers from the finance, planning, agriculture and economics ministries, including specifically, target integration and recognition of PA values into the ongoing development of a National Land Use Policy and associated Integrated Planning Framework for Land Resource Development.</td>
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<td></td>
<td>• Organize a financial sustainability study tour to countries (for example Mexico, Costa Rica) that have invested significantly in their protected areas and have experience with Payment for Environmental Services schemes.</td>
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<tr>
<td>LRI5</td>
<td>• Strengthen coordination between Forestry PAs by use of regional subdivisions similar to that adopted by Fisheries.</td>
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<td></td>
<td>• Establish institutional accords to facilitate appropriate co-management of biodiversity resources in Archaeological Reserves by Forestry Department and/or NGOs.</td>
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<td>• Establish a specialist protected area guide category for each of the three subsystems: Forestry, Fisheries/Marine and Archaeology. The current BTB license will qualify holders as candidates for training to become specialist PA guides who will be certified by the PA administration. Require a specialist PA license for all guides working in PAs. Trained PA guides will serve as auxiliary park guards responsible for visitor management, thus reducing costs for the PA system while improving interpretation and the quality of the visitor experience and reducing visitor impacts..</td>
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<td></td>
<td>• Establish a mechanism to collect royalties for the use of PA logos on clothing and souvenirs e.g. caps, t-shirts, stuffed animals etc.</td>
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<td></td>
<td>• Lay the legal ground needed for PACT to be able to receive additional resources from new sources. This includes green taxes, water fees, carbon revenues and others.</td>
</tr>
<tr>
<td>BP1</td>
<td>• Update/Develop Management Plans that include business plans where appropriate and organize by functional areas. Each will have cost breakdown using standard categorization of expenses and a baseline as well as projected</td>
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<tr>
<td>Strategic Line</td>
<td>Activities / Recommendations</td>
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<td></td>
<td>expenditure profiles.</td>
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<td>• Link PA management plans and conservation objectives to Financial Management accounts.</td>
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<td>• Hire economist, financial planner and tourism management specialist at system level</td>
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<td>• Define additional staffing needs at site and system level</td>
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<td>• Apply more effective monitoring of logging concessions and increase efficiency of fee collection and reinvestment. Determine the ecological sustainability of current forest management practices.</td>
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<tr>
<td>BP2</td>
<td>• Designate official cost accounting categories and specifications for financial reporting by managers and co-managers’</td>
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<td>• Standardize accounting systems by type of expense and management plan functional area.</td>
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<td></td>
<td>• Mandate use of standard accounting system across the PA system. Develop a low cost, low-tech but effective solution that can be implemented by all partners and stakeholders. Many CBOs lack the infrastructure and the human resources needed to use complicated systems.</td>
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<tr>
<td></td>
<td>• Create system-wide budgets and budgeting procedures.</td>
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<td>• Explore the possibility of using an activity based accounting</td>
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<tr>
<td>BP3</td>
<td>• Build PA managers capacity on financial management and cost-effectiveness</td>
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<tr>
<td></td>
<td>• Build PA managers capacity in tourism management. See Drumm et al 2004 for draft syllabus.</td>
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<td></td>
<td>• Establish network for the exchange of information on costs, practices and impacts amongst sites</td>
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<td>• Ensure that revenue generation activities do not adversely affect conservation objectives.</td>
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<tr>
<td>BP4</td>
<td>• Develop criteria agreed at system level to allocate funds amongst protected areas using criteria such as size, threats, needs, threshold of sustainability for tourism and performance. Sites should receive at least enough to cover the Basic scenario, especially for the Tourism/Public Use Programme in order to</td>
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<td>Activities / Recommendations</td>
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<td></td>
<td>mitigate tourism-related threats and sustain revenue flows.</td>
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<td></td>
<td>• Develop the “solidarity” mechanism for funding PAs that do not self-generate revenues or whose capacity to generate is limited or insufficient.</td>
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<td></td>
<td>• Define appropriate level of core costs for all PAs.</td>
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<td></td>
<td>• Create a committee with members of PACT and stakeholders to propose a system to assign PACT monies to PAs improving the existing competitive process and evaluate alternatives.</td>
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<td></td>
<td>• Study, and propose concrete options for improving the process by which PACT allocates funds to Protected Areas. PACT and its partners dedicate a significant amount of effort in a bidding process and calls for proposals to distribute the funds that it collects to administer a competitive process. The bidding process, although a necessity in the absence of a global, system-level financial plan, consumes resources intensively. Both PACT and co-managers invest scarce resources in reviewing and writing proposals. This situation is hard for smaller NGOs and CBOs that lack the staffing needed for this scheme. PACT’s Strategic Plan calls specifically for improving “… the allocation, management and impact of PACT’s grants” (strategic objective 3). Thus, and as part of the Trust’s own mandate PACT must look for options to improve the way in which it funnels resources to the PAs.</td>
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<td>• Create a 5-year, multi-site financial plan, with agreed upon criteria for the selection of investments. The grants application, selection and approval process involves several procedures including reviews by officers, technical evaluation, board evaluation, call for proposals, submissions, screening. This is in part a result of the legislation (the PACT Act), and part a result of the approach taken so far. With this proposal more resources would reach site level, reducing PACT administration costs for managing ongoing grant review processes, and the inefficient use of co-managers resources which are spent responding to requests for proposals.</td>
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<td>• Strengthen community outreach programmes in order to reduce threats and improve community benefits of PAs.</td>
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<tr>
<td>BP5</td>
<td>• Rationalize and Consolidate Protected Area System. Eliminate or amalgamate smaller areas to achieve conservation priorities and economies of scale.</td>
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<td>• Develop a mechanism by which all revenues from the sale of any “de-protected” areas, should that happen, are re-directed to the Protected Area System. Use it to capitalize existing funds.</td>
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<td>Activities / Recommendations</td>
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<tr>
<td>• Carry out cost benchmarking exercises to compare costs between PAs.</td>
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<tr>
<td><strong>RG1</strong></td>
<td>• Government commits to increasing allocations. Clearly, as results showed closing the gap would need an immense effort from different players. One is the government who should increase its financial contributions to the system, or at least mandate that revenues generated by the system are reinvested in the system.</td>
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<td></td>
<td>• Increase average entrance fees significantly. Research has shown that entrance fees are still low by international standards and that it is possible to increase them without negatively affecting demand.</td>
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<td>• Develop a feasibility study and an action plan for a fee revision both increase existing fees and develop new ones.</td>
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<td>• Increase Commissions on the Cruise Passenger Tax to 25%</td>
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<td>• Increase Conservation Fee to between US$7.50-US$10</td>
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<td>• Register the names of tour operators and guides bringing visitors to their sites. (There are over 1,000 guides and over 200 tour operators registered at BTB). Seek collaboration with BTB to require all tour operators and guides to indicate which protected areas they use as part of their registration requirements.</td>
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<td></td>
<td>• Introduce a Tour Operator Annual Operating License for each protected area.</td>
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<td>• Determine three price categories based on the number of tourists each operator brings to a PA and review each tour operator’s volumes and compliance with established norms on an annual basis prior to renewal.</td>
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<td>• Introduce a guide licensing system and determine price per PA. Maintain the right to withdraw licenses for non-compliance with PA norms.</td>
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<td>• Standardize and simplify entrance fee collection, administration and purchase. This will have the additional benefit of reducing leakage from fraud.</td>
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<td>• Establish central entrance fee ticket-vending points at BTB airport booth and Belize City office, National Museum, House of Culture, hotels and resorts, also through tour operators. Consider a small commission for vendor per ticket sold.</td>
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<td></td>
<td>• Accept credit card payments / Make it easier and safer to pay, to collect and to administer (increase collection, reduce admin. costs),</td>
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<td>• Accept bulk purchase by tour operators.</td>
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<td>• Develop web-based payment.</td>
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<td>Activities / Recommendations</td>
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<tr>
<td>• Multi-site passes. Evaluate the possibility of introducing multi-site passes. These may be for protected areas within a particular sub-system e.g. MPAs or Archaeological Reserves or system wide. Reduced prices may be offered for purchasing entrance fees to several sites in advance. This would encourage sales and reduce administration costs.</td>
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<td>• Extended validity. Create extended validity at discounted rate to facilitate option of multiple use e.g. for 6 months, multi-year or lifetime.</td>
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<td>• Standardize and simplify pricing systems and fee levels across sub-systems and the system as a whole.</td>
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<tr>
<td>• Outsource fee collection. Consider designating a specific, professional agency to be responsible for all tourism fee collection across the country. This would improve efficiency of collection and access control, relieve managers and co-managers of the administration costs of collecting fees, and allow conservation staff to focus on conservation activities.</td>
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<td>• Review visiting time preferences of market segments. Extend opening times at some sites to allow collection of fees from early and late visitors e.g. birders.</td>
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<tr>
<td>• Establish the technical basis for determining the price of fishing licenses and forestry licenses, concessions and royalties. Increase fees paid by fishermen. These fees have currently a very small contribution but at the same time are very low (as mentioned above in some cases close to US$1/month). Clearly these are sensitive sectors and efforts need to be made so that the increase is moderate and that increased funds are used to improve the health of the fisheries.</td>
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<td>• Carry out a study of opportunities that could be created as Belize works on &quot;managed access&quot; fisheries systems. Special fees for special fishing areas, expansion of no-take zones with special ecological features.</td>
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<tr>
<td>• Study the feasibility of increasing fishing licenses and forestry concessions. The fee structure of forestry concessions and tools such as forest certification should be examined for restoring and/or ensuring health of the matrix forests. In this way, long term income might be realized in forestry concession fees, water resources and carbon sequestration while adding resilience to individual protected areas and marketing Belize’s conservation ethic to the world. The same applies to marine ecosystems.</td>
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<tr>
<td>• Establish international cooperation unit at NPAS; Hire new and reassign existing staff.</td>
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<td>• Postpone consideration of creating concessions for accommodation inside</td>
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### Sustainable Financing Strategy for Belize’s National Protected Areas System

<table>
<thead>
<tr>
<th>Strategic Line</th>
<th>Activities / Recommendations</th>
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<tbody>
<tr>
<td>PAs until threshold of sustainability is established.</td>
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</table>

**RG2**

- Establish watershed protection water fee for hydroelectricity production, and for domestic consumption of water. Protected areas provide enormous benefits in terms of the hydrologic cycle to many industries and businesses in Belize. Echeverria (2009) provides a detailed guide for implementation of this type of instrument. There are three main steps that need to be followed: situation appraisal; program design; negotiation and establishment of agreements; and implementation. These include:

**Situation appraisal** includes activities such as:

- Gather existing information about water uses (quantities by type of user; amounts paid; water treatment costs), land use (forest cover, watersheds, protected areas), existing watershed management plans.

- Apply “check list” (from Echeverria 2009).

- Define scope. It would be possible to focus at the watershed level, regional level or even national. Therefore the scope in the Belizean case should be defined. We recommend the Protected Areas System as the adequate scale.

- What is currently being done by water uses with regards to environmental management? Are there ongoing programs? Are there any environmental management systems in place?

In terms of **Program Design** several aspects need to be considered:

- Model or estimation of environmental services. Develop a clear understanding of the physical relationships involved. Use quantitative models to project the expected “with” and “without” future situations, in terms of water flow or pollution.

- Calculate the demand. Who is going to pay for the service? How many users or buyers are there?

- Carry out economic valuation and willingness to pay analysis. Using available information from the many different valuation studies.

- Consider socioeconomic characteristics of users and estimate the impact of additional payments.

- Define payment mechanisms. Would it be included in water bills as a separate line item? Or as a component in the water tariff.
### Sustainable Financing Strategy for Belize’s National Protected Areas System

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<tr>
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<tr>
<td></td>
<td>• Detail legal and institutional aspects, including national legislation and international agreements.</td>
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<td></td>
<td>• Define project/program organizational structure, including all relevant institutions.</td>
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<td></td>
<td>• Develop economic studies that measure the value of PAs in terms of the water cycle (NOTE: these studies require careful interpretation since there is a risk that studies result in small values; much less than willingness to pay). Thus studies must emphasize benefits related to public image, goodwill, and others.</td>
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<tr>
<td></td>
<td>• The establishment of agreements entails:</td>
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<td></td>
<td>• Reaching out. NPAS needs to reach out to prospective strategic partners (water utilities, electric companies) to “test the waters” and gather support for the initiative. This should occur both at the highest levels of government and at a technical level involving relevant personal from all organizations.</td>
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<td></td>
<td>• Formalizing agreements with relevant stakeholders, especially with the buyers (a buyer could be a water company or group of users).</td>
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<td></td>
<td>• Definition of roles for the different institutions (PACT, NPAS, water and electric utilities, price regulators).</td>
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<td></td>
<td>• Inform decision makers.</td>
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<td></td>
<td>• Legislation. Laws and regulations that specifically recognize the concept of watershed protection. Promote dialogue with users.</td>
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<td>• Include the concept of watershed protection as an integral part of any water strategy or policy and the Water Act.</td>
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<td></td>
<td>• Regulators recognize watershed protection as a legitimate cost of delivering the service.</td>
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</table>

**Implementation** includes starting the program, staffing, the development of an annual work plan and program execution. As seen above, there are many activities that need to be undertaken. Throughout the process there will be issues that stand out that deserve consideration, and operational details could be defined with more detail according to the existing opportunities.
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<tr>
<th>Strategic Line</th>
<th>Activities / Recommendations</th>
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<tbody>
<tr>
<td></td>
<td>• Promote REDD+ activities with friendly governments. Seek advise from the Guyana case, where they received more than US$200 million for REDD+ related activities.</td>
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<td>• Establish oil drilling and exploration green fee.</td>
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<td></td>
<td>• Study the feasibility of including text in present and future oil exploration and drilling contracts that specifically generates funding for PAs as a mitigation measurement.</td>
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<td></td>
<td>• Study examples in other countries. See how the oil industry is collaborating with the environment in other countries and disseminate.</td>
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<td></td>
<td>• Lobby policy-makers; develop incentives for the oil industry (in terms of public relations, green image).</td>
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<td></td>
<td>• Approach different stakeholders and propose mechanisms to translate funds.</td>
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<td>• Investigate the use of BNE funds and promote the redirection of part of those to PA Management activities.</td>
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<td></td>
<td>• Establish a pollution tax (sewage, industrial)</td>
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<td></td>
<td>o Estimate pollution amounts by industry.</td>
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<td></td>
<td>o Carry out economic analysis of water treatment options.</td>
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<td></td>
<td>o Study the feasibility of using economic instruments to reduce pollution to water bodies and to generate revenues for PA management.</td>
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<td></td>
<td>• Provide support and collaboration to one or more NGOs to create a “friends of PAs” – type fund to collect donations. Encourage BTB and tourism industry support and participation</td>
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<tr>
<td>RG3</td>
<td>• Make efforts to align and join other development aid projects or programs with other objectives (such as poverty reduction) with activities that are relevant for the PA system and that may increase its effectiveness. This includes organizations such as FAO that work in agriculture, food security and poverty reduction.</td>
</tr>
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</table>
|               | • Accumulate intelligence on foreign aid opportunities in carbon from organizations that seek other goals beyond protected areas (for example
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<tr>
<td></td>
<td>poverty reduction initiatives and agriculture, the land degradation convention and other initiatives. Act accordingly.</td>
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<td></td>
<td>• Scope efforts being currently being made in climate change adaptation, especially regarding marine environments by other organizations and determine opportunities for collaboration.</td>
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<td>• Quantify the benefits generated by the PA system in terms of climate adaptation for the Belizean economy.</td>
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<td></td>
<td>• Establish links, and explore joint programming, with climate change adaptation activities.</td>
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<td></td>
<td>• Establish links, and explore joint programming, with land degradation and desertification programmes.</td>
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<td></td>
<td>• Quantify the economic value of protected areas for agricultural production and poverty reduction strategies.</td>
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<tr>
<td>RG4</td>
<td>• Develop National Climate Change Strategy focusing on carbon sequestration and storage.</td>
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<td>• Estimate precisely the carbon supply both in terms of capture and storage</td>
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<td></td>
<td>• Economic Valuation of EGS. Start new valuation studies that are practical and useable. Disseminate existing and new ones.</td>
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<td>• Identify markets (local and international). List export products that would benefit from having a “green” image.</td>
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</table>
|               | • Negotiation and establishment of agreements  
|               |   o Hydroelectricity  
|               |   o Domestic users of water |
|               | • Develop PES Pilot Projects. |
|               | • Develop ideas to add value to Belize’s carbon. This includes the combination of carbon sequestration with other “attractions” or features. For example poverty reduction, the protection of archaeological monuments, marine resources (coral reefs, sea grasses, mangroves). Create a “Blue Carbon” or “Carbon +” product with these added characteristics. |
|               | • Carry business planning and feasibility studies, including SWOT analysis of the voluntary carbon market, REDD and mandatory markets). |
Sustainable Financing Strategy for Belize’s National Protected Areas System

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<tr>
<td></td>
<td>• Develop potential benefit sharing frameworks for carbon including forests located in PAs and non-PAs.</td>
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<td>• Approach Beverages industry. The beverage industry (including alcoholic beverages such as beer) has traditionally supported environmental causes for many different reasons. With regards to water issues the link is more obvious and many firms have become interested, and willing to fund, watershed protection activities. This industry will be affected anyways if a water fee is implemented. In this section we mention a few issues to deal specifically with the beverages industry. This could be done in parallel with a watershed protection water fee or as a standalone initiative. Steps that need to be taken include:</td>
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<td>• Identify persons with decision-making authority that might be interested in voluntarily participating in a bold initiative to support the Protected Areas of Belize. Find official in charge of environmental issues or member of the board known for environmental activism.</td>
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<td></td>
<td>• Inform and document the possible benefits of collaborating with the PA system of Belize would bring for the industry. For example, by measuring the ecological preferences of tourists for PES-supporting products.</td>
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<td></td>
<td>• Develop outline of collaboration. Define areas of possible collaboration, such as a pilot project. Support for a particular product or protected area might be of interest to one firm in particular for commercial interests.</td>
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<td></td>
<td>• Explore broader collaboration (for instance in integrated water resources management).</td>
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9.3 Timeline
## Sustainable Financing Strategy for Belize's National Protected Areas System

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<tr>
<th>#</th>
<th>Name</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
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<tbody>
<tr>
<td>31</td>
<td>PES system is operational</td>
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<tr>
<td>32</td>
<td>Develop climate change strategy</td>
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<tr>
<td>33</td>
<td>Estimate carbon supply</td>
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<tr>
<td>34</td>
<td>EGS Valuation</td>
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<tr>
<td>35</td>
<td>Identify markets</td>
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<tr>
<td>36</td>
<td>Negotiation and establishment of agreements</td>
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<td>37</td>
<td>Implement pilot projects</td>
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<td>38</td>
<td>Add value to Belize's carbon supply</td>
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<td>39</td>
<td>Evaluate mandatory, REDD and voluntary carbon markets</td>
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<td>40</td>
<td>Develop benefit-sharing framework</td>
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<tr>
<td>41</td>
<td>Approach beverages industry</td>
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<td>42</td>
<td>Legal, regulatory, institutional</td>
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<td>43</td>
<td>Policies support revenue generation, retention and sharing</td>
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<td>44</td>
<td>Fully implement PACT Act Chapter 218</td>
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<td>45</td>
<td>Revise PACT Act</td>
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<td>46</td>
<td>Revise PAs Act Ch215</td>
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<td>47</td>
<td>Include the concept of a green water fee in the Water Act</td>
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<td>48</td>
<td>Establish PA-revenue central fund.</td>
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<td>Clearly define legal standing of co-managers</td>
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<td>50</td>
<td>Include watershed protection in Water Act and Policy</td>
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<tr>
<td>51</td>
<td>Propose watershed conservation fee channelled through PACT.</td>
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<td>52</td>
<td>Seek legal recognition of PAs environmental goods and services</td>
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<td>53</td>
<td>Remove inconsistencies from legislation</td>
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<td>54</td>
<td>Align definition and permitted uses</td>
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<tr>
<td>55</td>
<td>Review conformity with International Conventions</td>
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<tr>
<td>56</td>
<td>Improve consistency and conformity</td>
<td></td>
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<tr>
<td>57</td>
<td>Bring marine sites under common management authority</td>
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<tr>
<td>58</td>
<td>Clarify roles and responsibilities of co-managers</td>
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</table>
## Sustainable Financing Strategy for Belize’s National Protected Areas System

<table>
<thead>
<tr>
<th>#</th>
<th>Name</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
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</thead>
<tbody>
<tr>
<td>59</td>
<td>Improved financial strategies</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>60</td>
<td>Policy for standard cost accounting</td>
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<td>61</td>
<td>Policy for budget allocation</td>
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<tr>
<td>62</td>
<td>Allocation system developed</td>
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<tr>
<td>63</td>
<td>Simpler process to increase fees</td>
<td></td>
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</tr>
<tr>
<td>64</td>
<td>Define staffing needs at site and system level</td>
<td></td>
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<tr>
<td>65</td>
<td>Facilitate NGO collection of tourist donations</td>
<td></td>
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<tr>
<td>66</td>
<td>Decision makers recognize the economic importance of PAs</td>
<td></td>
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<tr>
<td>67</td>
<td>Update and compile EV studies</td>
<td></td>
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<tr>
<td>68</td>
<td>Design and implement communications campaign</td>
<td></td>
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<tr>
<td>69</td>
<td>Site level campaign about the importance of user fees</td>
<td></td>
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<tr>
<td>70</td>
<td>Promote periodic briefings with key decision makers</td>
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<tr>
<td>71</td>
<td>Organize study tour</td>
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<tr>
<td>72</td>
<td>Support for alternative arrangements to reduce cost to government</td>
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<tr>
<td>73</td>
<td>Establish specialist protected area guide</td>
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<tr>
<td>74</td>
<td>Collect royalties from PA logos</td>
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<tr>
<td>75</td>
<td>Lay legal ground for PACT to receive revenues from other sources.</td>
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<tr>
<td>76</td>
<td>Business planning</td>
<td></td>
<td></td>
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<tr>
<td>77</td>
<td>Effective management and system planning</td>
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<tr>
<td>78</td>
<td>Update management plans</td>
<td></td>
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<tr>
<td>79</td>
<td>Link management plans to accounting systems</td>
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<tr>
<td>80</td>
<td>Hire economist, financial and tourism expert at system level</td>
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<tr>
<td>81</td>
<td>Define additional staffing needs</td>
<td></td>
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<tr>
<td>82</td>
<td>Improve monitoring of logging concessions</td>
<td></td>
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<tr>
<td>83</td>
<td>Accounting and auditing systems</td>
<td></td>
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<tr>
<td>84</td>
<td>Designate official cost categories</td>
<td></td>
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<tr>
<td>85</td>
<td>Standardize PA accounting system</td>
<td></td>
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<tr>
<td>86</td>
<td>Mandate use of standard accounting system</td>
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<tr>
<td>87</td>
<td>Create system-wide budgets and procedures</td>
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<tr>
<td>88</td>
<td>Explore using activity based costing</td>
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</table>
# Sustainable Financing Strategy for Belize’s National Protected Areas System

<table>
<thead>
<tr>
<th>#</th>
<th>Name</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
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<tbody>
<tr>
<td>69</td>
<td>Protected area managers operate more cost effectively.</td>
<td></td>
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<tr>
<td>90</td>
<td>Build PA managers capacity</td>
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<td>91</td>
<td>Increase tourism management skills</td>
<td></td>
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<td>92</td>
<td>Establish knowledge network</td>
<td></td>
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<tr>
<td>93</td>
<td>Maintain conservation objectives</td>
<td></td>
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<tr>
<td>94</td>
<td>Allocation of funds to PAs</td>
<td></td>
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<tr>
<td>95</td>
<td>Develop criteria to allocate funds</td>
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<tr>
<td>96</td>
<td>Implement solidarity mechanism</td>
<td></td>
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<tr>
<td>97</td>
<td>Define core costs levels for all PAs</td>
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<tr>
<td>98</td>
<td>Create committee to propose system to improve distribution of PACT monies.</td>
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<tr>
<td>99</td>
<td>Strengthen community outreach programmes</td>
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<tr>
<td>100</td>
<td>Identify cost saving opportunities</td>
<td></td>
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<tr>
<td>101</td>
<td>Rationalize and consolidate</td>
<td></td>
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<tr>
<td>102</td>
<td>Establish mechanism in case of de-protection of areas</td>
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<td></td>
</tr>
<tr>
<td>103</td>
<td>Cost benchmarking between PAs</td>
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</tbody>
</table>
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11 Appendices

11.1 Appendix 1: The Threshold of Sustainability for Tourism in Protected Areas

11.1.1 Introduction

The protected area system faces a critical situation because of the financial gap of more than US$10 million per year. This figure represents more than double the funding currently being spent merely to meet what is needed for a basic scenario.

At the same time there is pressure from several fronts, to open access for high impact purposes. For example the tourism industry increasingly promotes tourism within protected areas even while managers lack the basic capacity to manage the impacts of current visitor numbers. At the core of the solution to this dilemma is the concept of a “threshold of sustainability.” This is the point at which the management capacity of a protected area is sufficient to mitigate the most critical tourism-related threats, such that public use is limited to the parameters of sustainability of the natural capital within the site, which in turn will be a function of management capacity.

Because tourism is so central to both the current and future financial sustainability of the protected area system, it is necessarily given greater emphasis in the scope of the preparation of this strategy than other sectors. A study to determine the Threshold of Sustainability for tourism in the protected areas system was carried out as part of the analysis.

This assessment included field visits to 18 representative protected areas across all three subsystems: Forestry, Fisheries and Archaeology and included co-managed and non co-managed sites. This was complemented with interviews with protected area managers and co-managers and other staff at each site and included identification of critical threats and management weaknesses and identified tourism management strategies to address them. Cost estimates were

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made for the minimum needed tourism management capacities including both operational costs and capital investments. System wide results were extrapolated based on the analysis of the needs of 12 representative protected areas.

Examples of operational costs are staff salaries, printing, training, travel etc. Examples of capital costs are: boats, computers, construction materials for boardwalks and signposts, and other equipment. Capital costs were calculated as investments to be made approximately every five years. These costs were averaged per site and then extrapolated to the 27 protected areas for which visitation is currently being registered. (See Table 1).

Table A1. Tourism Program - Basic Scenario

<table>
<thead>
<tr>
<th>Sub-Program</th>
<th>Annual Operational Costs</th>
<th>Capital Costs (every 5 years)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information &amp; Interpretation</td>
<td>$395,181.82</td>
<td>$390,272.73</td>
</tr>
<tr>
<td>Visitor Impact Monitoring</td>
<td>$289,636.36</td>
<td>$564,545.45</td>
</tr>
<tr>
<td>Security</td>
<td>$263,863.64</td>
<td>$159,545.45</td>
</tr>
<tr>
<td>Basic Infrastructure</td>
<td>$110,454.55</td>
<td>$737,590.91</td>
</tr>
<tr>
<td>Staff</td>
<td>$1,173,272.73</td>
<td>$135,000.00</td>
</tr>
<tr>
<td>Total</td>
<td>$2,232,409.09</td>
<td>$1,986,954.55</td>
</tr>
</tbody>
</table>

Basic needs are defined as sufficient to furnish the bare minimum management capacity needed to mitigate the most critical tourism related threats and to facilitate a positive, safe and secure visitor experience. This is synonymous with the threshold of sustainability.

An estimated average of approximately US$100,000 per year per protected area is calculated to establish this basic level for tourism management in protected areas.

Table A2. Tourism Program - Optimal Scenario

<table>
<thead>
<tr>
<th>Sub-Program</th>
<th>Annual Operational Costs</th>
<th>Capital Costs (every 5 years)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information &amp; Interpretation</td>
<td>$727,772.73</td>
<td>$1,892,454.55</td>
</tr>
<tr>
<td>Visitor Impact Monitoring</td>
<td>$434,454.55</td>
<td>$846,818.18</td>
</tr>
<tr>
<td>Security</td>
<td>$400,090.91</td>
<td>$240,545.45</td>
</tr>
<tr>
<td>Basic Infrastructure</td>
<td>$165,681.82</td>
<td>$1,106,386.36</td>
</tr>
<tr>
<td>Staff</td>
<td>$1,401,545.45</td>
<td>$270,000.00</td>
</tr>
<tr>
<td>Total</td>
<td>$3,129,545.44</td>
<td>$4,356,204.54</td>
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</tbody>
</table>

Optimal needs are defined as an adequate funding level to cover the tourism component of the management plan of a protected area. A significant cost element of the Optimal scenario for tourism is the capital cost for the installation of visitor centers at each of the sites which falls within the Information & Interpretation sub-programme.
This analysis demonstrates that current spending falls far below what is required in order to reach a minimum or basic level of funding to mitigate the threats that tourism currently exert on the natural and cultural attractions within protected areas and to raise the quality of the visitor experience.

The ToS also identified both capital investment costs and annual operating costs. It should be noted that initial capital investments should be made prior to introducing new pricing scenarios. This investment will establish the core management capacities to halt current and potential tourism related threats, and improve and guarantee the quality of the visitor experience, and will thus address legitimate concerns that commercial users of protected areas, particularly tourism operators, will likely have.

**Figure A1. Current, Basic and Optimal Tourism Programme budgets for the Protected Area System**

![Budget Graph]

**11.1.2 Methodology**

This approach can be applied in situations where a long-term tourism management plan does not exist, where a plan exists but fails to address tourism adequately, or where a plan exists, but is not implemented.
This approach provides protected area managers with a framework for responding rapidly to crises originating from tourism and visitation. They will do this by shifting existing resources to facilitate short-term interventions that establish specific tourism management capacities, and through short- to medium-term actions that optimize the flow of tourism spending in protected areas.

The framework is designed to help managers identify and characterize the threats that place natural capital at risk, develop strategies for investment in tourism management, monitor their effectiveness, and estimate their financial costs and requirements for implementation. This approach is not intended to replace long-term tourism management planning, but rather to help initiate it. It is intended to enable rapid action to address critical existing threats in the short term, while also allowing protected area managers to develop the skills, experience and financial capacity needed to make longer term planning more effective.

The threshold of sustainability is about putting in motion a feedback loop for tourism, visitor satisfaction, investment and management capacity that creates a “virtuous cycle.” An appropriate initial investment in basic tourism management capacity leads to effective management practices that will sustain the natural capital that visitors come to see, creating a more robust and viable tourism sector, as well as generating revenues that are reinvested into protected area management.

This threshold is reached by ensuring that protected area managers have a minimum annual operating budget to maintain a critical level of specific tourism management activities. A central idea to the concept of the threshold of sustainability is that in order to address the growing threats from tourism, managers must identify these threats and develop effective ways to address them, while policy makers must create an enabling environment in which tourism generates the necessary level of funding for effective management. Once the threshold of sustainability is reached, tourism can begin to realize its enormous potential benefits to communities, to local economies, and to the protected areas themselves.
Higher levels of visitor satisfaction promote demand and allow park managers to charge adequate park entrance fees, and to continue to investment in management capacity.

When there is inadequate investment in visitor management, a ‘vicious cycle’ is set into motion. In this scenario, tourism-related activities degrade natural capital, leading to decreased visitor satisfaction. This leads to either lower prices or fewer visitors. As a result, revenues are likely to decrease, as well as investment in management, which in turn will lead to even more degradation and further decline in visitor satisfaction.

The threshold of sustainability approach to addressing tourism-related threats within protected areas is about identifying the minimum level of investment required to achieve the management capacity sufficient to set in motion the “virtuous cycle,” and to reverse the “vicious cycle” in protected area-based tourism.
The *threshold of sustainability* framework enables protected area managers to define the minimum amount of investment in tourism management capacity that is needed in order to ensure the health and viability of biodiversity and other natural capital, and to maintain high quality tourism experiences within a protected area. While tourism and public use management are generally included in most PA management plans, less than a third of all protected areas globally even have a management plan (Ervin et al., 2010). Even when there is a tourism or public use component in the management plan, it is frequently underfunded and impractical. Park managers and staff often lack the appropriate skills and experience to implement visitor management plans. Consequently, tourism is increasingly identified as a key threat in a large majority of protected areas worldwide (Leverington and Hockings, 2008; Drumm, 2008). The *threshold of sustainability* framework provides a fast and relatively simple approach that enables planners to halt the erosion of natural capital and facilitate the long-term sustainability of nature tourism in protected areas, even in the absence of a full management plan.

The *threshold of sustainability* framework is derived from a set of actions that are widely adopted by NGOs and governments alike, called the “Open Standards for the Practice of Conservation.” This cycle includes defining key threats, identifying appropriate strategies, implementing these strategies, using the results to adapt and improve, and learning from the process (CMP, 2007). It is also an approach that integrates a financial rationale at the outset, enabling decision makers to better understand the financial implications of the existing management practices, and to contrast these with the financial potential of establishing a model based on sustainable ecosystem management (UNDP, 2010).

The basic components of the *threshold of sustainability* framework include both conservation management and financial analysis. Protected area managers rarely address these two components in an integrated fashion. They often come from a forestry or biology background and do not necessarily have the skills for financial analysis, while financial managers and accountants rarely comprehend the realities of conservation management. The lack of integration of management and finance lies at the heart of the problem of tourism-based degradation within protected areas. Depending on the resources and time available to a protected area manager, the *threshold of sustainability* can be applied in either a streamlined rapid assessment and response mode, or in a longer two-year timeframe that will include a greater level of financial analysis and stakeholder engagement.

### 11.1.3 Tourism Management

Through application of the *Threshold of Sustainability (See Appendix 1)* approach it has been possible to identify essential needs and opportunities for improving tourism management and better utilizing the opportunity that tourism demand creates for contributing significantly to financial sustainability of the protected
area system. By developing sustainable finance mechanisms, protected area planners will simultaneously achieve many of the actions included in the Convention on Biological Diversity’s Programme of Work on Protected Areas, including preventing and mitigating protected area threats, using protected area benefits to reduce poverty, strengthening management capacity, and improving overall management effectiveness.

While the detail of proposed new tourism fee mechanism structure and pricing will be determined in a parallel consultancy being undertaken by AHA & PACT, there are a number of suggested improvements which logically emerge from this study, and which will be shared with that team. There is ample opportunity to improve the efficiency of revenue collection and reduce the cost, as well as to significantly increase it.

11.1.4 Visitor Management

The dependence on entrance fees as a source of revenue has lead in many cases to inefficient use of limited financial resources. Two examples below are illustrative of the manifestation of the pressure experienced by managers to devote resources disproportionately or perhaps in a manner inconsistent with the conservation objectives of management plans.

Hol Chan Marine Reserve: Currently two staff and two boats are located full time at the principal (and nearby) visitor sites to check all visitors have paid their entrance fee. This is unnecessary and impractical. An improved visitor management system would include spot checks for the same purpose, thus freeing boats and rangers for other tasks.

Laughing Bird Caye – Currently significant co-manager resources are assigned to maintaining infrastructure for tour operator use at no cost to the tour operator and at the expense of resource management priorities.

11.1.5 Investments in Tourism

Currently, it is estimated that about 8% of total PAs expenditures is dedicated to tourism related activities at the site level (US$470,000\textsuperscript{25}). This contrasts with the fact that 44% of revenues area generated by tourism (airport and cruise taxes and entrance fees). If it were the case that this 8% was sufficient to ensure the sustainability of the tourism activities and revenues so important to the system, then it might be said that tourism is a significant net benefit and that it generates a significant surplus for other management needs across the PA system.

However the results of the Threshold of Sustainability assessment indicate tourism is currently threatening biodiversity health and undermining conservation objectives directly and indirectly at most protected areas receiving visitors. Investment in tourism and recreation management capacity then, is grossly

\textsuperscript{25} Source: 8% of site level expenditure from Table 5
underfunded, such that it is highly unlikely that current revenue levels can be maintained in the longterm.

### 11.1.6 Tourism Market Profile

In many ways, Belize’s position - straddling the Caribbean Sea marine and coastal zones and Central America tropical pine and broadleaf forests is unique, and the country is able to offer a nearly pristine visitor experience to a variety of habitats that would normally require far more travel. The reef is the second longest in the world and mountain ravines in the west likely hold species unknown to science.

However, one wonders how many potential tourists think ‘Belize’ with the mention of tropical rainforests coral reef or Maya ruins - perhaps tourists are more likely to think of other Central American destinations. Before visiting Belize, how many Mayan site names are on the tips of the tourist tongue? Therer is considerable opportunity for marketing its diverse and healthy resources and improving basic but attractive infrastructure that would make it easier to visit some extraordinary sites, and also make those sites more attractive to potential visitors.

A significant challenge for Belize is how best to position itself in the market? What profile to present? Since arriving on the global tourism scene as a prime destination for nature-focused tourism, Belize’s profile has undergone a loss of focus. This may have contributed to the relative stagnation in demand of overnight visitors.

Other contributing factors to lagging demand and also to altering market perceptions of Belize as a nature-focused destination may include:

- The move to become a cruise ship destination with high volumes of low spending visitors, critically altering the quality of the visitor experience at some protected areas.

- The Barrier Reef is very largely not NOT protected – only small areas within MPA’s are secure. Activity in other parts of the reef are not policed. Independent reports show the quality of reef health to be in serious decline (Healthy Reefs, 2010).

- Mangrove clearance and coastal development is common. Indeed this contributed to UNESCO In Danger listing which has also contributed to altering market perceptions of Belize as a nature-focused destination.

- The country is entertaining offshore oil drilling - sends a confusing message to tourists wanting a pristine reef adventure in an ecotourism destination.

- Perceptions of insecurity in border areas and Belize City - The permeable western border, results in penetration by armed criminals and poachers and the necessity for armed guards to accompany tourist groups organized into convoys in the Caracol area.
• Transportation infrastructure is rudimentary, access to Mountain Pine Ridge Area is restricted by poor roads;
• Co manager NGO’s are spending their privately raised funds to manage for the tourism experience, rather than the resources their donors have charged them with protecting.
## 11.2 Appendix 2: Scenario Projections of Tourism Revenues

### Scenario 1: Conservative: 4% annual tourism growth

<table>
<thead>
<tr>
<th>Activity</th>
<th>Baseline 2010</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
<th>Year 5</th>
<th>Year 6</th>
<th>Year 7</th>
<th>Year 8</th>
<th>Year 9</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conservation Fee @ US$3.75</td>
<td>567.770</td>
<td>523.260.50</td>
<td>950.212.03</td>
<td>990.620.51</td>
<td>1,038.565.33</td>
<td>1,060.107.25</td>
<td>1,123.312.27</td>
<td>1,155.244.75</td>
<td>1,214.974.55</td>
<td>1,253.573.53</td>
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<td>Cruise Passenger Tax 20% of US$7</td>
<td>1,073.220</td>
<td>1,116.166.48</td>
<td>1,140.804.49</td>
<td>1,207.236.67</td>
<td>1,256.626.18</td>
<td>1,305.747.18</td>
<td>1,367.077.08</td>
<td>1,412.206.16</td>
<td>1,468.787.00</td>
<td>1,527.639.61</td>
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<td><strong>Average Room Rates</strong></td>
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<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Archaeological Reserves (ave = $5)</td>
<td>293.390</td>
<td>305.125.50</td>
<td>317.330.62</td>
<td>330.023.89</td>
<td>343.224.80</td>
<td>356.953.80</td>
<td>371.231.95</td>
<td>386.081.22</td>
<td>401.524.47</td>
<td>417.355.49</td>
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<td>Forestry P&amp;L (ave = $10)</td>
<td>654.300</td>
<td>682.662.00</td>
<td>700.854.08</td>
<td>728.245.24</td>
<td>757.778.17</td>
<td>799.429.36</td>
<td>830.428.37</td>
<td>863.646.60</td>
<td>896.101.87</td>
<td>934.119.54</td>
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<td>Marine P&amp;L (ave = $15)</td>
<td>1,068.127</td>
<td>1,088.177.89</td>
<td>1,111.809.71</td>
<td>1,172.007.71</td>
<td>1,234.612.80</td>
<td>1,297.606.92</td>
<td>1,359.045.68</td>
<td>1,425.988.74</td>
<td>1,493.981.17</td>
<td>1,563.748.62</td>
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<td><strong>TOTAL</strong></td>
<td><strong>3,957,009.00</strong></td>
<td><strong>4,115,288.30</strong></td>
<td><strong>4,278,900.93</strong></td>
<td><strong>4,451,060.97</strong></td>
<td><strong>4,624,140.85</strong></td>
<td><strong>4,814,350.48</strong></td>
<td><strong>5,000,978.74</strong></td>
<td><strong>5,207,753.89</strong></td>
<td><strong>5,410,440.52</strong></td>
<td><strong>5,632,057.50</strong></td>
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### Scenario 2: Conservative tourism growth 4% above increases of fees, taxes and 2 new mechanisms

<table>
<thead>
<tr>
<th>Activity</th>
<th>Baseline 2010</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
<th>Year 5</th>
<th>Year 6</th>
<th>Year 7</th>
<th>Year 8</th>
<th>Year 9</th>
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<tr>
<td>Increase Conservation I-we @ US$7/</td>
<td>88.71/10.00</td>
<td>1.085.71/0.87</td>
<td>1.123.45/0.49</td>
<td>1,162.935.78</td>
<td>1,193.656.29</td>
<td>2,016.396.50</td>
<td>2,236.949.36</td>
<td>2,180.726.54</td>
<td>2,267.362.49</td>
<td>2,258.870.59</td>
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<td>Increase Cruise Passenger Tax Commission to 25% of current amount</td>
<td>1,073.220</td>
<td>1,341.854</td>
<td>1,305.197.70</td>
<td>1,451.056.41</td>
<td>1,600.436.83</td>
<td>1,660.407.87</td>
<td>1,832.183.07</td>
<td>1,697.471.33</td>
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<td>Hotel Tax*</td>
<td>0</td>
<td>236.877.00</td>
<td>248.432.05</td>
<td>256.385.98</td>
<td>268.704.14</td>
<td>279.452.30</td>
<td>290.630.40</td>
<td>302.255.61</td>
<td>314.345.84</td>
<td>326.914.67</td>
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<tr>
<td>Tour Operator Licenses*</td>
<td>0</td>
<td>125.000.00</td>
<td>130.000.00</td>
<td>135.200.00</td>
<td>140.698.00</td>
<td>146.292.00</td>
<td>152.062.00</td>
<td>158.165.00</td>
<td>164.491.00</td>
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<tr>
<td>PIC Quido Licences**</td>
<td>0</td>
<td>50.000.00</td>
<td>62.000.00</td>
<td>64.080.00</td>
<td>66.245.24</td>
<td>68.693.00</td>
<td>80.383.00</td>
<td>83.288.00</td>
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<td>Archaeological Reserves (ave = $10)</td>
<td>293.390</td>
<td>306.200.00</td>
<td>310.231.00</td>
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<td>318.403.00</td>
<td>322.556.00</td>
<td>326.750.00</td>
<td>331.084.00</td>
<td>335.548.00</td>
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<td>Ministry P&amp;L (ave = $12)</td>
<td>196.291.00</td>
<td>207.001.00</td>
<td>218.294.01</td>
<td>229.724.01</td>
<td>241.097.01</td>
<td>252.401.01</td>
<td>263.754.01</td>
<td>275.165.01</td>
<td>286.641.01</td>
<td>298.207.01</td>
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<tr>
<td>Marine P&amp;L (ave = $15)</td>
<td>1,046.320.00</td>
<td>1,256.561.00</td>
<td>1,305.307.36</td>
<td>1,355.038.65</td>
<td>1,412.361.24</td>
<td>1,468.855.69</td>
<td>1,527.606.92</td>
<td>1,588.714.31</td>
<td>1,652.262.89</td>
<td>1,718.353.40</td>
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<td><strong>TOTAL</strong></td>
<td><strong>5,057,009.00</strong></td>
<td><strong>5,442,507.02</strong></td>
<td><strong>5,604,200.20</strong></td>
<td><strong>5,636,579.50</strong></td>
<td><strong>5,750,699.53</strong></td>
<td><strong>5,860,679.61</strong></td>
<td><strong>5,951,604.76</strong></td>
<td><strong>6,045,790.19</strong></td>
<td><strong>6,151,626.19</strong></td>
<td><strong>6,209,509.02</strong></td>
</tr>
</tbody>
</table>
11.3 Appendix 3. List of Interviewees

Sharon Ramclam, PACT
Natalie Rosado, PACT
Dr. Jaime Awe, Director, Institute of Archaeology
Jan Meerman, GIS Specialist, Team Leader, National Land Use Policy
Dr. David Hammond, NWFS Consultancy
Imani Fairweather-Morrison - Director, Oak Foundation Belize
Dr. Wil Heyman, Texas A&M Univ.
Beverly Castillo, CEO, Ministry of Natural Resources & the Environment
Kevin Gonzalez, Director of Destination Planning, Belize Tourism Board
Michael Arana, Belize Tourism Board
Osmany Salas, Principal Consultant, BelNaRM Strategies
Jim Barborak, Colorado State University
Alejandro Martinez, The Nature Conservancy
Dr. Elma Kay, Environmental Research Institute; University of Belize
Rafael Manzanero, Director Friends for Conservation and Development
Amanda Acosta, Director, Belize Audubon Society
James Azueta, Belize Fisheries Department
Isaias Majil, Belize Fisheries Department
Celia Mahung, Director, Toledo Institute for Development and the Environment
Yvette Alonzo, Association of Protected Areas Manager
Shalini Cawich, Southern Environmental Association
Dominique Lizama, Belize Audubon Society
Diane Wade, United Nations Development Programme
Miguel Alamilla, Hol Chan Marine Reserve
Sustainable Financing Strategy for Belize’s National Protected Areas System

Anne-Marie McNeil; Avadon Divers, Placencia

Jesse Young, Community Baboon Sanctuary

Dr. William Heyman, Texas A&M university

Roni Martinez, Conservation Officer, Blancaneaux Lodge, Mountain Pine Ridge Forest Reserve

Neil Rogers, Director of Marketing, Coppola Resorts

Raul Chun, Forestry Department

Leon Westby, Forestry Department

Brian Woodye, Institute of Archaeology

George Thompson, Institute of Archaeology

Dawn Lee, The Nature Conservancy of Massachusetts

Alex Quintero, TNC, Arlington, VA

Stephanie Cooper, Executive Office of Energy and Environmental Affairs, MA

John Tschirky, Smithsonian research Station, South Water Caye Marine reserve

11.4 Appendix 4. Financial Scorecard Workshop participants

August 12th, 2011 - Financial Scorecard Workshop
Belmopan Convention Hotel - Belmopan City

<table>
<thead>
<tr>
<th></th>
<th>Name</th>
<th>Organization</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Celia Mahung</td>
<td>TIDE</td>
<td>Toledo Institute for Development &amp; the Environment</td>
</tr>
<tr>
<td>2</td>
<td>Ralna Lamb</td>
<td>APAMO</td>
<td>Association of Protected Areas Management Organizations</td>
</tr>
<tr>
<td>3</td>
<td>Anthony Hislop</td>
<td>STACA</td>
<td>Steadfast Tourism and Conservation Association</td>
</tr>
<tr>
<td>4</td>
<td>Joel Verde</td>
<td>SACD</td>
<td>Sarteneja Alliance for Conservation and Development</td>
</tr>
<tr>
<td>5</td>
<td>Yvette Alonzo</td>
<td>APAMO</td>
<td>Association of Protected Areas Management Organizations</td>
</tr>
<tr>
<td>6</td>
<td>Nayari Diaz</td>
<td>PACT</td>
<td>Protected Areas Conservation Trust</td>
</tr>
<tr>
<td>7</td>
<td>Christine Valerio</td>
<td>PACT</td>
<td>Protected Areas Conservation Trust</td>
</tr>
<tr>
<td>8</td>
<td>Lynelle Williams</td>
<td>TNC</td>
<td>The Nature Conservancy</td>
</tr>
<tr>
<td>9</td>
<td>Shonnon White</td>
<td>CBS</td>
<td>Community Baboon Sanctuary</td>
</tr>
</tbody>
</table>
11.5 Appendix 5. Definitions of Core Costs

- [http://www.philanthropyuk.org/resources/core-costs](http://www.philanthropyuk.org/resources/core-costs): The overhead costs of an organization, as opposed to those specific to a project. Whilst these costs do not directly produce outputs of charitable activity, they are necessary to deliver these activities. Examples include general management staff, IT equipment and training, fundraising and governance.

- From Ortiz, 2001:
Core Costs. These are the general, central costs involved in running an organisation, such as rent, heating, lighting, administration and management cost, the costs needed to run the central administration and develop the organisation. They are usually looked at as separate from project costs, which are the costs directly linked to a particular project. But all projects need to use some of the central services which are considered as 'core costs'.

One more from the UK (see attached file): “Core Costs or Overheads are the costs incurred by an organisation in order to support all the projects that it runs. They are needed to support and administer projects or activities. They relate to the whole organisation since they cover all projects and generally do not relate specifically to one project. These costs, often called indirect, ‘core’, central or support costs, are often shared or split among various people or activities in an organization”.

11.6 Appendix 6. Budget Assumptions

Because so many institutions generate and manage revenue from PAs, and receive revenue from government allocations, grants and other sources, and invest in different activities using different accounting procedures, following the flow of money and quantifying values is very complex. In this section we have included information, additional to what is in the narrative, regarding what determined our criteria.

The Fisheries Department initially indicated that some data was available but that it needed further extrapolation, unfortunately as both members of the finance team were out on leave and the Department Director unavailable to meet with us, we used a ball park estimate provided by other Fisheries Department staff of US$157,500 for each of seven MPAs. Hol Chan Marine Reserve had much better and more precise information as it is established as an independent body in that it is able to retain its self-generated revenue, therefore Hol Chan Marine

---

3 Core costs, overhead, and indirect costs mean the same thing and will be used interchangeably throughout this report.

- [http://www.doncastercsep.org.uk/glossary.htm](http://www.doncastercsep.org.uk/glossary.htm). Core Costs. These are common or joint costs—core costs—which are not readily identifiable with a final cost objective. Indirect costs still benefit—although indirectly—the organization and the donors that fund the organization. Indirect costs are institution level costs.

Unrelated/Unallowable costs are sometimes treated as direct, indirect, or sometimes excluded. Generally speaking they are either:

- Unrelated (directly or indirectly) to a final cost objective, or,
- Related somehow but specifically not permitted per donor rules.

Unrelated/Unallowable costs are classified as such not necessarily because they are improper or abnormal expenses. Rather, they are unrelated either directly or indirectly to the donors’ projects. Examples of each will be given further below.
Sustainable Financing Strategy for Belize’s National Protected Areas System

Reserve is not reflected in calculating the annual central Government available allocation.

In this second phase of the analysis, we attempted to ascertain the PA management costs for the Fisheries Department. Using the 33% of entrance fee revenue reported by MS. Beverly Wade, Fisheries Department Director in a September meeting of the NPAS technical sub-committee as the baseline, we attempted to verify this scenario. While Hol Chan Marine Reserve retains a 100% of its entrance fee, in 2008 amounting to over US$480,000, the remaining US$194,910 reported in entrance fee revenues of the seven marine sites would translate to less than US$65,000. The annual report for the Ministry of Agriculture and Fisheries suggest that the percentage retained by the Fisheries Department from the entrance fees collected at the marine reserves was used as part of the central government CAPII budget allocation which has been reduced significantly over the last five years from US$175,000 to US$75,000. This would clarify the 33% assumption on entrance fee revenue.

While, with the data available it was not possible to determine the exact rate of administrative costs for individual institutions, a 25% rate is a practical scenario. In the case of PACT however it was possible to estimate this amounted to more than 35% in 2009. In 2010, PACT System level costs were calculated at 58%.

For Archaeology early discussions with the Director indicated that 30% of its overall budget was used for PA management. This has since been updated (feedback from NPAS technical sub-committee) to show that only 25% of its entrance fee revenue generated at Archaeological Reserves is invested in site management. Therefore the annual central Government allocation does not have any direct contribution to PA costs. While Government provides a yearly allocation of approximately US$1 million dollars in 2010 to the NICH, this according to NICH does not have any direct impact on the management of PAs therefore adjusting/reducing the score card revenue available by US$294,601.50.
11.7 Appendix 7. Co-Management Agreement between GOB and Co-managers

THE NATIONAL PARKS SYSTEM ACT
(Chapter 215)

CO-MANAGEMENT AGREEMENT

between

THE GOVERNMENT OF BELIZE AS REPRESENTED BY THE FOREST DEPARTMENT
hereafter referred as:

[THE REGULATORY AGENCY]

AND [NGO/CBO]
A body corporate pursuant to the Laws of Belize hereafter referred as:

[The MANAGER]
1. In these Articles, unless the subject or context otherwise requires, the words standing in the first column of the table next hereinafter contained shall bear the meanings set opposite to them respectively in the second column thereof:

<table>
<thead>
<tr>
<th>WORDS</th>
<th>MEANINGS</th>
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</thead>
<tbody>
<tr>
<td>“The Act” or “the National Parks System Act/Forests Act/Fisheries Act/NICH Act”</td>
<td>The National Parks System Act (Chapter 215) or other Act as amended</td>
</tr>
<tr>
<td>“Protected Area(s)”</td>
<td>The protected area(s) that form(s) part of this Agreement and is (are) described in the Schedule appended hereto</td>
</tr>
<tr>
<td>“The National Protected Areas Co-Management Framework”</td>
<td>A document [approved by the National Protected Areas Technical Committee (NPATC)] that sets out technical guidelines for co-management agreements, as called for by the National Protected Areas System Plan (see Action 2.1.1 in NPASP, 2005)</td>
</tr>
<tr>
<td>“The Association”</td>
<td>[Name of the NGO/CBO]</td>
</tr>
<tr>
<td>“The Regulatory Agency”</td>
<td>In respect of any [protected area], the Government agency under section [#] of the Act to be the Administrator of the protected area</td>
</tr>
</tbody>
</table>
“The Manager”

The NGO or CBO appointed by the Regulatory Agency under section 10 of the Act to be the Manager of the protected area

“Buffer communities”

Communities or villages adjacent to a protected area

“Management Plan”

A plan guiding overall management of a protected area administered by a regulatory agency or a manager. The plan includes goals, objectives, standards, guidelines and management actions

“Recreation-related services” or “Concessions”

Visitor and recreation services such as equipment rental, camping, guiding services, accommodations, and sale of food, beverages and souvenirs

“Concessionaire”

Person(s) or company operating a concession

“The Seal”

The Common seal of the Association

Save as aforesaid, any words or expressions defined in the Act shall, except where the subject or context forbids, bear the same meaning in these Articles.

THIS CO-MANAGEMENT AGREEMENT is made the --- day of [Month] [Year] between the GOVERNMENT OF BELIZE acting through the [Minister responsible for protected areas] (hereinafter called “the Regulatory Agency”) of the one part and the [NGO/CBO], a non-profit, non-governmental organization duly formed and existing under the Laws of Belize with registered office at No --- Street, [Village/Town/City] (hereinafter called “the Association”) of the other part.
WHEREAS the National Parks System Act [or other Act] Chapter [#] of the Laws of Belize Revised Edition 2000 provides for the designation of any specified area of land or sea in Belize as a [category of protected area];

WHEREAS the NPSA [or other Act] expressly empowers the Regulatory Agency to administer the national park, nature reserve, wildlife sanctuary or natural monument or other protected area, and to delegate management duties to a third party.

AND WHEREAS the Government is desirous of entering into a contractual arrangement with the [NGO/CBO] in order that the parties may continue the work of cooperating in the development and management of areas declared under the National Parks System Act [or other Act];

NOW THEREFORE IT IS HEREBY AGREED as follows:

2. The Regulatory Agency hereby appoints [the NGO or CBO] as the Manager of the [protected area(s)] described in Schedule 1 of this Agreement.

3. This Agreement shall endure for a period of seven (7) years commencing on the Date of the execution hereof.

4. The Manager shall be responsible for the day-to-day management and administration of the protected area(s), preparation and implementation of management and operational plans for the protected area(s), and the management and development of the finances of the protected area(s), as detailed in the National Protected Areas Co-Management Framework.

a) Day-to-day management and administration of the protected area(s) shall include, but not be limited to, the following: staff recruitment and retention, staff supervision and development, expenditures and
accounting, equipment and procurement, and management and financial audits with oversight provided by the Regulatory Agency.

b) The management and operational plans shall be developed as per the Management Plan template in conjunction with the Regulatory Agency.

c) The management and development of finances of the protected area(s) shall include, but not be limited to, the following: identifying and securing grant funding, and working to diversify financing mechanisms jointly with the Regulatory Agency.

5. The Regulatory Agency shall be responsible for ensuring that it provides management oversight with respect to the management of the protected area(s), and patrolling and law enforcement support, and to request the Minister responsible for Finance to approve financing support for the protected area(s).

a) Management oversight shall include, but not be limited to, the following: technical input in the development of protected area management and development plans, approval of management plans, training in legal proceedings and monitoring and evaluation of protected area management activities.

b) Patrolling and law enforcement support in collaboration with the national law enforcement agencies shall include the following: participation in protection patrols when requested by the Manager, including leading search, seizure and arrest operations when necessary; and the necessary support for the prosecution of offenses.

c) Financing support shall include to the extent possible, but not be limited to, the following: budget appropriations, project funding, and fiscal incentives such as tax exemptions.

6. The Minister or the Regulatory Agency [reference the relevant statutory provision] may grant licenses to third persons for the operation of recreation-related services within the protected area(s) after consultation with and the prior approval of the Manager.
7. Nothing in this agreement shall affect the rights and privileges of the Government of Belize in relation to natural resources; including any and all rights to and ownership of minerals found on or beneath the surface and any genetic resources peculiar to any protected area.

8. The Manager shall provide the Regulatory Agency with bi-annual financial and technical reports and reports on approved major revision(s) in the management and operational plans of the protected area(s). The financial and technical reports shall follow the format set out and shall include inter alia, funding sources (local and international) and amounts, costs of operations (office and field based), outreach and education, research, infrastructure investments (office, field and stakeholders).

9. For its part, the Regulatory Agency shall provide the Manager with relevant financial and technical information pertaining to the Protected Area(s).

10. For its part, the Regulatory Agency shall undertake monitoring and evaluation activities to determine compliance with the conditions set out herein. The monitoring and evaluation shall assess the Manager’s Technical Compliance with the Objectives and Activities set out in the Management Plan; The Management Effectiveness of the Manager within the Protected Areas and Financial Reporting requirements as set out in Sections 8 and 9 of this agreement.

11. The Manager shall be required to organize annual stakeholder meetings for each protected area. Such community meetings are to be open to all residents of the surrounding communities and other relevant stakeholders. The purpose of the meeting is listed in Schedule II of this agreement.

12. Neither party shall be liable for any indirect, special, incidental, punitive or consequential damages arising out of the execution of this Agreement.

13. The Regulatory Agency shall be responsible for supervising the Manager’s provision of the services listed in Section 4 above via annual technical meetings with the Manager and field visits by Regulatory Agency officials to the protected area(s).
14. Field visits mentioned in 13 above shall be conducted no less than once every six months.

15. The Regulatory Agency shall give at least two weeks’ written notice to the Manager prior to convening the technical meeting.

16. The Regulatory Agency may conduct field visits to the protected area(s) without giving any notice whatsoever.

17. In the event that either party ascertains that the other materially has breached any obligations under this Agreement, or if the Regulatory Agency ascertains that the Manager has exceeded the scope of the Agreement, such party shall so notify the breaching party in writing. The breaching party shall have 6 months from the receipt of notice to cure the alleged breach and to notify the non-breaching party in writing that cure has been effected. If the breach is not cured within the 6 months, the non-breaching party shall have the right to terminate the Agreement without further notice.

18. In the event of termination of this Agreement, the Manager and the Regulatory Agency shall begin the consultation on the process of handing over the management of the protected area(s) to the Regulatory Agency.

19. The parties to the Agreement hereby agree to negotiate a separate Agreement that stipulates the terms pertaining to the ownership, protection and recovery of investments made by either party within the protected area(s) under this Agreement.

20. This agreement shall be renewable at the end of the current term for successive terms unless either party gives written notice of its intention not to renew 6 months before expiration of the current term or the Manager continuously fails to comply with the objectives and activities outlines in the Management Plan.
21. Neither party shall have the right to terminate this Agreement for any delay or default in performing hereunder if such delay or default is caused by conditions beyond its control including, but not limited to natural disasters, wars, insurrections, riots or other major upheaval; and/or any other cause beyond the reasonable control of the party whose performance is affected.

22. The Regulatory Agency shall indemnify and hold the Manager harmless for any losses, claims, damages, awards, penalties, or injuries incurred, including reasonable attorney's fees, which arise from any claim by any third party except those claims due to breach of any contractual or tortuous duty owing to such third party by way of this Agreement. This indemnity shall survive the termination of this agreement. No limitation of liability set forth elsewhere in this Agreement is applicable to this indemnification.

23. Each party shall indemnify and hold the other harmless for any losses, claims, damages, awards, penalties, or injuries incurred by any third party, including reasonable attorney's fees, which arise from any alleged breach of such indemnifying party's representations and warranties made under this Agreement, provided that the indemnifying party is promptly notified of any such claims. The indemnifying party shall have the sole right to defend such claims at its own expense. The other party shall provide, at the indemnifying party's expense, such assistance in investigating and defending such claims as the indemnifying party may reasonably request. This indemnity shall survive the termination of this Agreement.

24. Waiver of any provision herein shall not be deemed a waiver of any other provision herein, nor shall waiver of any breach of this Agreement be construed as a continuing waiver of other breaches of the same or other provisions of this Agreement.

25. All notices given pursuant to this Agreement shall be in writing and may be hand delivered, or shall be deemed received within two weeks of the date of receipt after mailing if sent by registered or certified mail, return receipt requested. If any notice is sent by facsimile or by electronic mail, confirmation copies must be sent by mail or hand delivery to the specified address. Either party may from time to time change its Notice Address by written notice to the
other party.

26. Invalidity or unenforceability of one or more provisions of this Agreement shall not affect any other provision of this Agreement.

27. No modification or claimed waiver of any provision of this agreement shall be valid except by written amendment signed by authorized representatives of the Regulatory Agency and the Manager.

28. Any Successor to the Manager herein requires a new agreement created with Regulatory Agency.

29. Neither party may assign, directly or indirectly, all or part of its rights or obligations under this Agreement without the prior written consent of the other party, which consent shall not be unreasonably withheld or delayed.

30. This Agreement shall be governed by and construed in accordance with the laws of Belize.

31. In the event of any dispute or controversy arising out of or relating to this Agreement, the parties agree to exercise their best efforts to resolve the dispute as soon as possible. The parties shall, without delay, continue to perform their respective obligations under this Agreement which is not affected by the dispute.

32. This Agreement constitutes the entire agreement of the parties and supersedes all prior communications, understandings and agreements relating to the subject matter hereof, whether oral or written.

`IN WITNESS WHEREOF`, the parties have executed this Agreement by their respective, duly authorized representatives as of the date first above written.
DATE this day of 2011.

Witness to the above Signatures –

SCHEDULE I

[Legal description of the protected area(s) covered under this Agreement]

SCHEDULE II

The purpose of the Community Meeting shall be to:

a) Provide advice to the [NGO/CBO] in the management of the protected area(s);

b) Provide advice and input on the development and implementation of the management and operational plans for the protected area(s); and

c) Recommend subject areas for research activities within the protected area(s).