Sustainable Financing Plan

for

Jamaica's System of Protected Areas (JPAS)

2010–2020

This document has been developed from the product of a consultancy contract executed by *Mentefactura* with lead Consultant, José Galindo, completed February 2009.

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ABBREVIATIONS AND ACRONYMS

BP:	Business Plan
BJM:	Blue and John Crow Mountains
CBD:	Convention on Biological Diversity
CIDA:	Canadian International Development Agency
DFID:	UK Department For International Development
CSR:	Corporate Social Responsibility
EAG:	Early Action Grant
FNA:	Financial Needs Assessment
GEF:	Global Environmental Facility
GOJ:	Government of Jamaica
IUCN:	International Union for the Conservation of Nature
JCDT:	Jamaica Conservation Development Trust
JNHT:	Jamaica National Heritage Trust
JNPTF:	The Jamaica National Parks Trust Fund
JPAS:	Jamaican Protected Areas System
NEPA:	National Environment and Planning Agency
NRCA:	Natural Resources Conservation Authority
PA:	Protected Area
PAC:	Protected Areas Committee
PASMP:	Protected Areas System Master Plan
PES:	Payment for Environmental Services
RAF:	Resource Allocation Framework
SGP:	Small Grants Programme
TEF:	Tourism Enhancement Fund
UNDP:	United Nations Development Programme
UNEP:	United Nations Environment Programme
USAID:	United States Agency for International Development

1. INTRODUCTION

The Financial Sustainability Plan for the Protected Areas System of Jamaica intends to guide an integrated process to ensure long-term and stable funding for the Jamaican Protected Areas System (JPAS). It will be integrated into the Protected Areas System Master Plan (PASMP).

The plan is based on a comprehensive view of costs and benefits, ensuring that those who bear protected area costs are recognised and adequately compensated, and that those who benefit from protected areas (PAs) make a fair contribution to their maintenance. In Jamaica more than 90% of the tourists are concentrated within and around some of the most important PAs. Tourism alone contributes to 50% of the country's exports, almost 22% of the GDP and 32% of the labour force. Considering that this economic activity depends directly on the quality, attributes and features of PAs, it can be affirmed that according to the financial analysis presented in this plan every dollar (United States Dollar – USD) invested in the PA system would generate an additional one hundred dollars (USD 100) to the Jamaican economy.[i] This is certainly an extraordinary investment opportunity not only from a private or public sector perspective, but also mostly from a social perspective considering its enormous contribution to job creation.

Current funding for PAs worldwide is mostly public and philanthropic. The latter is not stable and long-term oriented, and in countries where an important percentage of the population lives in poverty, governments are often forced to cut their environmental budgets in favour of other priorities. Restricted budgets and public sector reforms have resulted in the rapid decline of single-source income from the national Treasury to support protected area management. Competition for scarce financial resources is fierce and the immediate financial future of most protected areas in developing countries is still in doubt. Alternative strategies and innovative approaches to finance conservation are urgently needed to reduce or halt the current rate of biodiversity loss.

Without sufficient stable and long-term oriented resources it is impossible to equitably and effectively manage biodiversity. Sustainable financing strategies for protected area systems are more critical than ever to ensure sustainability from an ecological and social perspective. Furthermore, protected area agencies are often ill-equipped to respond to income generating opportunities that PAs provide through consumptive and non-consumptive uses of biodiversity. Securing adequate funds is a necessary but not sufficient condition, it is also important to consider the quality, form, timing, targeting, uses and sources of funding. This plan intends to help build the capacity required to make the best use of a variety of discrete tools and revenue mechanisms that are responsive to the Jamaican situation.

According to the Global Environmental Facility (GEF), financial sustainability is achieved when a protected area system is able to secure sufficient and stable resources over the long term to meet its total costs. PA financial sustainability can also be defined as the ability to secure sufficient, stable and long-term financial resources, and to allocate them in a timely manner and in an appropriate form, to cover the full costs of PAs and to ensure that PAs are managed effectively and efficiently with respect to conservation and other objectives. In short, financial sustainability is not possible without strong and effective institutions for PA management.[ii]

In the long term, financial sustainability should go beyond ensuring resources to bridge its financial gap, it should seek the possibility to allow and facilitate effective participation of the different stakeholders of PA conservation in Jamaica. With these characteristics in mind the

strategy's approach is to use the enormous opportunities for synergies and learning, based on the existence of such a complex web of institutional memory and broader stakeholder involvement.

The JPAS sustainable finance process also responds to Jamaica's international commitments to the Convention on Biological Diversity (CBD). The 7th meeting of the Conference of the Parties (COP-7) to the CBD adopted a Programme of Work on Protected Areas (PoW) with the overall purpose of supporting the establishment and maintenance of comprehensive, effectively managed, and ecologically representative national and regional systems of PAs. Goal 3.4 of the PoW is to "ensure financial sustainability of Protected Areas and national and regional systems of Protected Areas." It specifies that "by 2008, sufficient resources to meet the costs to effectively implement and manage national and regional systems of Protected Areas are secured." Proposed activities include reviewing national-level PA financing needs and options, establishing national sustainable financing plans, multi-country collaboration in developing sustainable financing programmes for regional and international systems of PAs, reporting on PA financing, and mainstreaming PA into development planning.

The above decisions do not make the finance available, nor do they directly address the problems, but they do express the concerns of the representatives of the Parties to the Convention about priorities. They create the context within which funding agencies' decisions are made and demonstrate that sustainable protected area financing has risen to the top of the global PA agenda.

This document defines a comprehensive approach in two areas: an enabling environment to facilitate financial sustainability, and appropriately addressing both supply and demand aspects of the conservation finance equation. The document is divided into three parts, the first part presents the results of the Financial Needs Assessment (FNA), and the second part presents a strategic diagnosis based on the results of the application of a financial scorecard for PA financial sustainability. Finally, the third part presents the strategic approach, specific objectives and activities to be implemented.

This plan is part of a process that pursues overall institutional strengthening to move towards a systemic PA management approach.

2. BACKGROUND

2.1 General Issues

Protected areas in developing countries receive only a small and unstable fraction of needed funds. In many instances funding is underestimated due to the lack of appropriate mechanisms and planning tools to ascertain the real costs of managing and maintaining natural resources. This leads to PAs sending the wrong message to decision makers; underestimating their real financial needs while managing to survive with the minimum resources available. As a consequence operating costs as well as urgent investments are often neglected, while many PAs receive no funding at all constituting what is recognised as "paper parks". This is certainly the case in Jamaica.

The situation in Jamaica presents a number of interesting characteristics that determine opportunities and potential barriers to financial sustainability. This plan therefore pursues coordinated governance for the PA system that is currently managed by four main governmental agencies,[iii] whose primary objectives, management styles, and conservation approaches differ significantly (Table 1). The agencies have adopted a number of management arrangements amongst themselves, with civil society and with other governmental agencies; including the allowances for overlaps in certain PAs where different agencies share responsibilities.

With these characteristics in mind, the strategic approach is one of capitalising on the enormous opportunities for synergies and learning, based on the existence of such a complex web of institutional memory and broader stakeholder involvement. It provides the unique opportunity to benchmark management effectiveness and best practices out of diverse experience and knowledge of key stakeholders.

Table 1: Characteristics of Current Jamaican PA System

Institution	#PA	Management Style/Approach	Purpose of PA Declaration
National Environment and Planning Agency (NEPA)	9	No particular site level activities. Limited number of technical staff serves these PAs through a centralized structure. Co-management arrangements at a few sites.	○ Biodiversity conservation ○ Sustainable use of resources
Forestry Department	106	Divided into 4 regions, with no specific site level management. Local community management committees in some areas.	○ Forest conservation and development ○ Sustainable use of resources
Fisheries Division	2	Very limited activities. Operate mainly through management arrangements with civil society. Plans are in place to add nine additional fish sanctuaries.	○ Sustainable use of resources ○ Resource regeneration, and ○ No take zones
Jamaica National Heritage Trust	9	More oriented towards the historical buildings rather than the landscape. JNHT has included in the JPAS only those national heritage/cultural sites with important natural features	○ Cultural and natural heritage conservation

However, a very important consideration in regard to the starting point for this financial planning exercise is the fact that Jamaica has not yet developed a culture of PA planning. This is reflected in the fact that not many management plans are in place for PAs, no conservation activities are taking place in the majority of the PAs, and there is an absence of a historic financial data series to understand current trends and sources of funding.

These challenges pose the need for a comprehensive methodological approach, as articulated below, to facilitate a process aimed at developing the foundations for a robust financial process that reflects a link between PA management tools, implementing partners and institutional strengthening for PA management.

2.2 The Methodology for Financial Planning

This sustainable finance plan was developed from June to December 2008. The financial planning process considered three major steps that involved participation from different stakeholders:

Step 1: The Financial Scorecard

Step 2: Assessing Financial Needs

Step 3: Financial Projections and Identifying Sources of Funding

2.2.1 *The Financial Scorecard*

UNDP's Scorecard for Protected Areas Financial Sustainability[iv] was applied in order to assess the starting point to build a sustainable finance strategy for the JPAS. The purpose of this tool is to track progress and support efforts towards system level PA financial sustainability.

The exercise involves a qualitative baseline for the financial plan. The scorecard was developed in a participative manner through a one-day workshop with representatives from the four agencies related to PA conservation in Jamaica (National Environment and Planning Agency, Jamaica National Heritage Trust, the Forestry Department, and the Fisheries Division).

Each of the 21 elements of the scorecard was discussed in depth and scores were provided on a consensus basis. The results were shared with the four agencies via the internet for feedback and suggestions, and were later presented to a wider audience in subsequent workshops.

The quantitative part of the tool was not developed due to the lack of a financial breakdown for each agency. This information was originally requested at the early stages of the process but was later considered not feasible to generate due to the current financial and account systems in place, which do not generate information at the PA level. During a meeting with the Protected Areas Committee a decision was made not to include this information at this point, but it was decided that it is critical that financial systems be put in place to ensure that it can be applied in subsequent years. The scorecard is therefore intended to become an evaluation tracking tool for assessing the overall impact of implementing the financial strategy over time.

The results of this first scorecard evaluation provides the basis of a comprehensive strategy to tackle the most important and pressing issues identified by the exercise.

2.2.2 *Assessing Financial Needs*

The Financial Needs Assessment (FNA) was fully supported and developed in a participative manner involving management staff and key stakeholders from selected PAs and government entities responsible for PAs. The major characteristics of the FNA are the results of consultations with relevant agencies and key stakeholders and the conducting of a specific workshop for discussions, recommendations and decision making and finally, validation by the Protected Areas Committee. Financial analysis was done for both the individual site level and the system level.

Site level expenditure involves costs associated with the management of individual protected areas. Systemic expenditure involves costs related to activities and key responsibilities undertaken at the central level in order to promote the homogenous management of the system as a unit and to pursue economies of scale and other cost effective measures.

An important feature of the FNA is the requirement of setting basic and ideal scenarios for protected areas management. This scenario setting involves a consideration of the types of activities and programmes that are required for effective protected areas management and particularly what are the basic activities/programmes that must be implemented for an area to be considered a *de facto* protected area and not just a 'paper park'. Basic and ideal therefore represent two ends of a spectrum for effective protected areas management.

Another key feature of this step is the development of standards regarding the requirement of resources for protected areas management that can be applied across the JPAS. This step was particularly challenging as it had to be done within the context of the shortage of plans at the site and system levels. A workshop involving the four main governmental agencies was held as a participatory means of defining the set of standards for the JPAS. The criteria for assigning standards covered parameters such as pressure/threat, size, type of location and stakeholder participation. The standards were grouped according to the following five expenditure categories and consisted of 80 different items (Annex 3) used for the FNA at both the site and systemic levels. The categories of expenditure were selected based on their compatibility with current governmental accounting systems:

- Human Resources (Recurrent Costs)
- Operational Costs (Recurrent Costs)
- Basic Equipment (Recurrent Costs)
- Professional Services (Capital Costs)
- Infrastructure, Major Equipment & Vehicles (Capital Costs)

Recurrent costs are expended on a yearly and regular basis and include salaries and operational costs; while capital costs are neither regular nor yearly and include costs for infrastructure, major equipment, vehicles and consultancies.

The standards were then used as a basis for determining the cost of the different needs using financial information from project budgets, accountants, and other knowledgeable persons in protected areas management.

2.2.3 *Financial Projections and Identifying Funding Sources*

In order to make adequate financial projections regarding the requirements of the protected areas system, it is critical that a realistic and strategic approach be taken to protected areas planning, determining when it would be likely to achieve the basic scenario stage and then how, incrementally, through continuous improvement in management and financial achievement, the system will be able to reach the ideal scenario for protected areas management. Consistent with the lifespan of the Protected Areas System Master Plan (PASMP), the financial projections were developed for a ten-year period. The baseline year used was 2007, which was considered a reasonable representative year. Scenario projections therefore consider the period 2010–2020. It is anticipated that the Basic Scenario stage would be reached in Year 4 and the Ideal Scenario reached in Year 9 over the ten-year period.

Current and potential sources of funding were identified by way of workshops, secondary information, national financial aggregates, field trips, and interviews with key stakeholders.

3. APPLYING THE FINANCIAL SCORECARD IN JAMAICA

As stated previously, this tool consists of a number of elements that facilitate the assessment of current conditions of financing the management of protected areas. It assumes that there needs to be a regular flow of resources to promote an enabling environment for PA sustainability. It assesses and records significant aspects of a PA financing system to determine its current health and to indicate if the system has the necessary requirements to holistically move over the long term towards an improved financial situation. This scorecard was applied in October 2008 with the participation of the key agencies involved in PA management.

The qualitative part of the scorecard was developed during a workshop with representatives from agencies; it considers the following three fundamental components for a fully functioning financial system at the site and system level:

Component 1: Legal, regulatory and institutional frameworks;

Component 2: Business planning and tools for cost-effective management; and

Component 3: Tools for revenue generation.

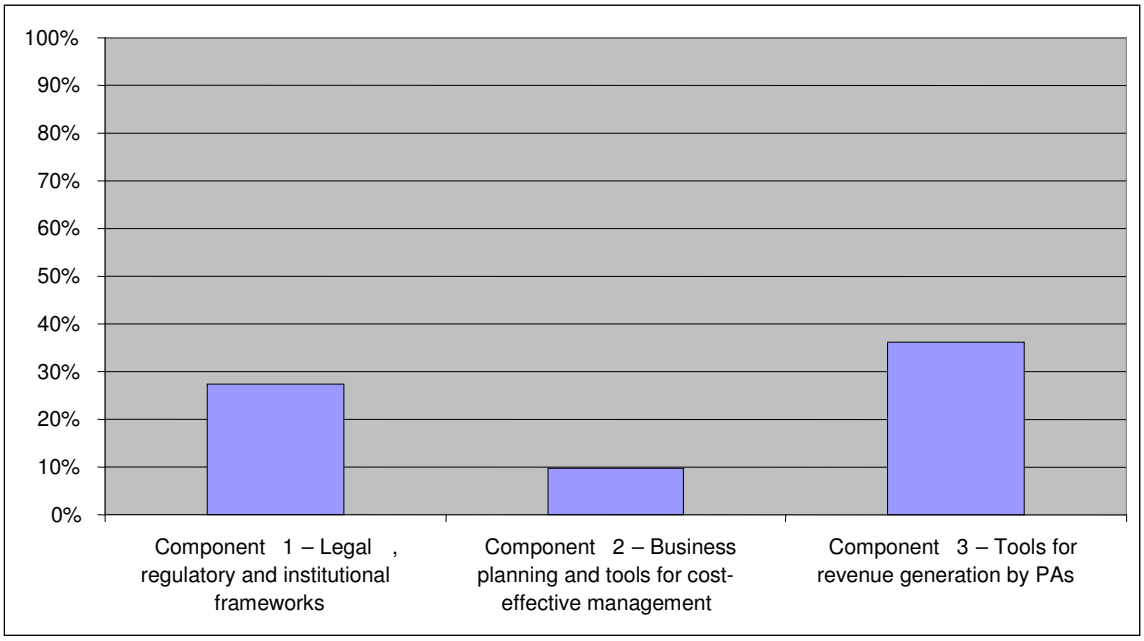
The completed scorecard including comments and scores per element can be seen in Annex 1 while the aggregated results per component and per element are presented in Graphics 1, 2, 3, 4.

Graphic 1 presents the aggregate outcome of the exercise. Out of the three components the best performance, with almost 40% of achievement, is the one related to tools for revenue generation by PA. On the opposite side, the component related to the existence of business planning tools for cost effective management achieved the lowest score (10%). This should not be a surprise considering that only few PAs account for proper site based management, while even less of them possess updated management plans.

This suggests that although a number of mechanisms and tools are applied and implemented at the PA level, these are not necessarily integrated into a broader planning and cost effective approach for PA financial sustainability. This calls for a greater articulation of both institutional framework and conservation planning tools, in order to facilitate the shift from individual PA management into a PA system that is under the leadership of the four different agencies.

A deeper understanding of the structural issues surrounding JPAS financial sustainability would call for a strengthening of the institutional and legal frameworks affecting PA conservation in the country. In the absence of strong institutional capacities as well as clear legal and policy frameworks, it is difficult to envision both planning and revenue generating tools being implemented properly at both system and site levels. For this reason the scorecard's first component should be given greater consideration as a catalyst for other systemic changes.

Graphic 1: Financial Scorecard – Overall Results per Component



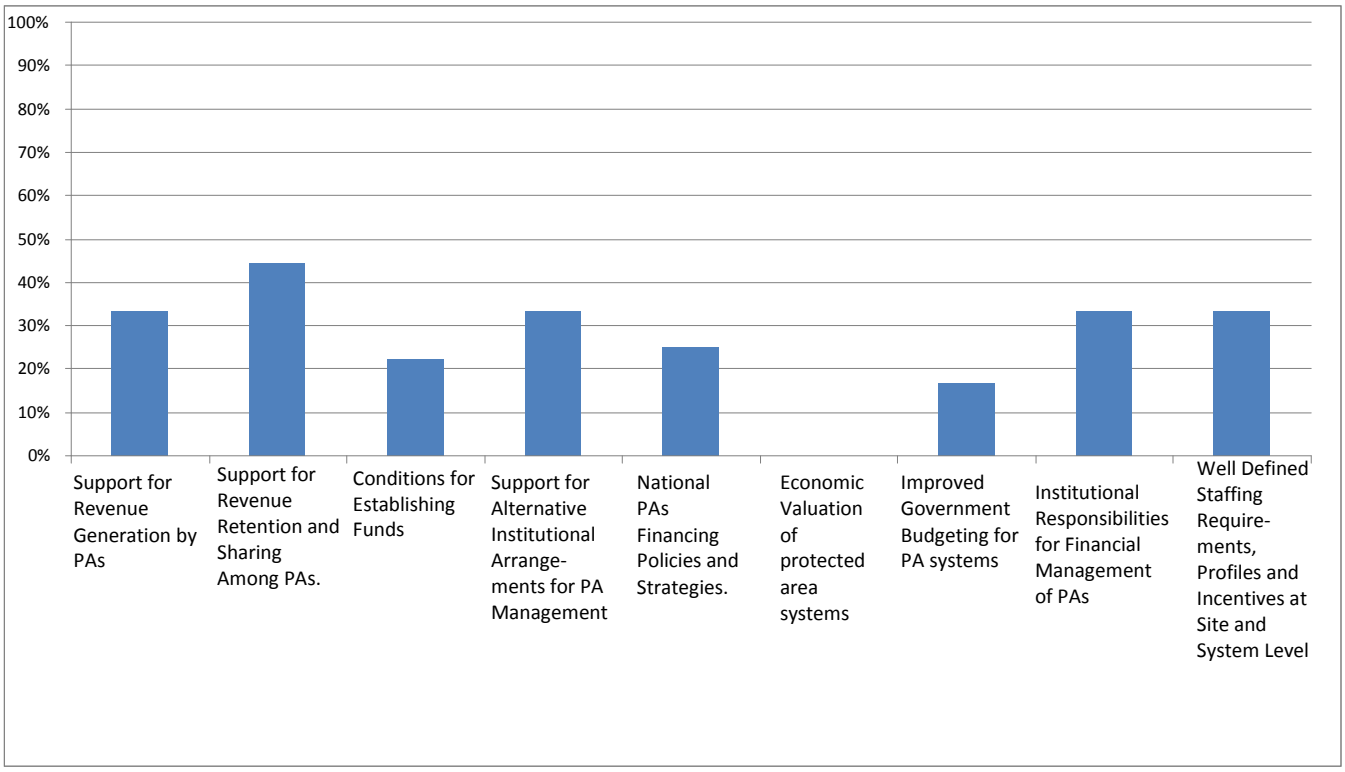
3.1 Component 1 : Legal, Regulatory and Institutional Frameworks

Looking in detail at each of the scorecard's components, the first to be analysed is one that has been identified as a catalyst of systemic change favouring PA financial sustainability. Legal, policy, regulatory and institutional frameworks affecting PA financing systems need to be clearly defined and supportive of effective financial planning, revenue generation and its retention for PA management. This component has achieved 27% of accomplishment (Graphic 2); appropriate measurements and stressing the priority elements should bring the score up to 50% in the coming years.

The first two elements under this component of the scorecard (support for revenue generation and retention) are considered as key success factors for the whole component. They deal with the necessary legal and policy framework to facilitate first, the existence of adequate revenue mechanisms, and second to ensure that the additional resources that are being generated could be reinvested in the system. As shown in Graphic 2 their scores vary from 30% to 45% of achievement. In this regard it was recognised that there is not enough support to facilitate revenue generation, although there is no major problem in retaining self-generated resources within the system for PA conservation.

In some cases there is no legal or policy basis to allow certain economic activities, additional charges, and new mechanisms; but mostly there are not enough policies and regulations that facilitate the overall implementation of the existing financial mechanisms. No specific fiscal instruments were identified to finance PA conservation in Jamaica; one particular fiscal tool that offers opportunities for mutual benefit is designed to feed the Tourism Enhancement Fund (TEF), so far with very limited interaction with PAs.

Graphic 2: Component 1 – Legal, Regulatory and Institutional Frameworks



The Jamaica National Parks Trust Fund (JNPTF) was created to support some types of protected areas; however it is currently not operating to meet its original objectives. The element of conditions for establishing funds has the third lowest score for the component (23%), showing a clear indication for future action and priority. Beyond the purpose of generating an additional channel to leverage financial support for the JPAS, widening the scope of the JNPTF or establishing a new trust fund would serve to complement the capacities of the current agencies and to specialize as the major fundraiser for the JPAS. This element goes in hand with the need to attract, retain and train human resources that will engage in the implementation of this plan as well as the development and implementation of business plans and specific site based new financial mechanisms.

There are participation mechanisms in place for PA co-management in Jamaica, but so far they do not seem to be contributing adequately to solve the financial sustainability problem. This is reflected in the score of 33% for this particular element. While almost all co-managers receive resources from the government to fulfil their duties, this does not work as an incentive and there is inadequate policy tools to allow them to charge fees and generate additional resources for PA conservation. This could be due to a problem of design of the co-management schemes, or lack of implementation of different income generating mechanisms that are available for co-managing partners. In any case, a number of adjustments and some specific incentives should be designed in order to facilitate the funding opportunities that might be available for those PAs.

The worst score out of this component, with no points at all, is related to one of the most important tools to elevate the profile of PAs and communicate its benefits to society. Only a few economic valuation studies related to protected areas have been identified so far and they are not yet being used to influence decision making or to lobby additional resources for PA conservation. In reviewing the objectives of the GOJ it has become very clear that the heavy debt burden carried by the country has made funding for social programmes, including environmental protection, scarce to non-existent. On top of this, the global financial crisis makes it all the more important to begin to build the economic case for protected areas by promoting their importance and contribution to Jamaica's economy.

Another area of priority presenting a low score refers to government budgeting for the PA system. Contributory factors include lack of funds and a need to improve planning and budgeting practices in order to better reflect cost-effective management. A first step in this direction starts with considering the financial needs assessment as guidance for resource allocation for the system. Institutional governance structures must enable and require the use of effective, transparent mechanisms for allocation, management and accounting of revenues and expenditures.

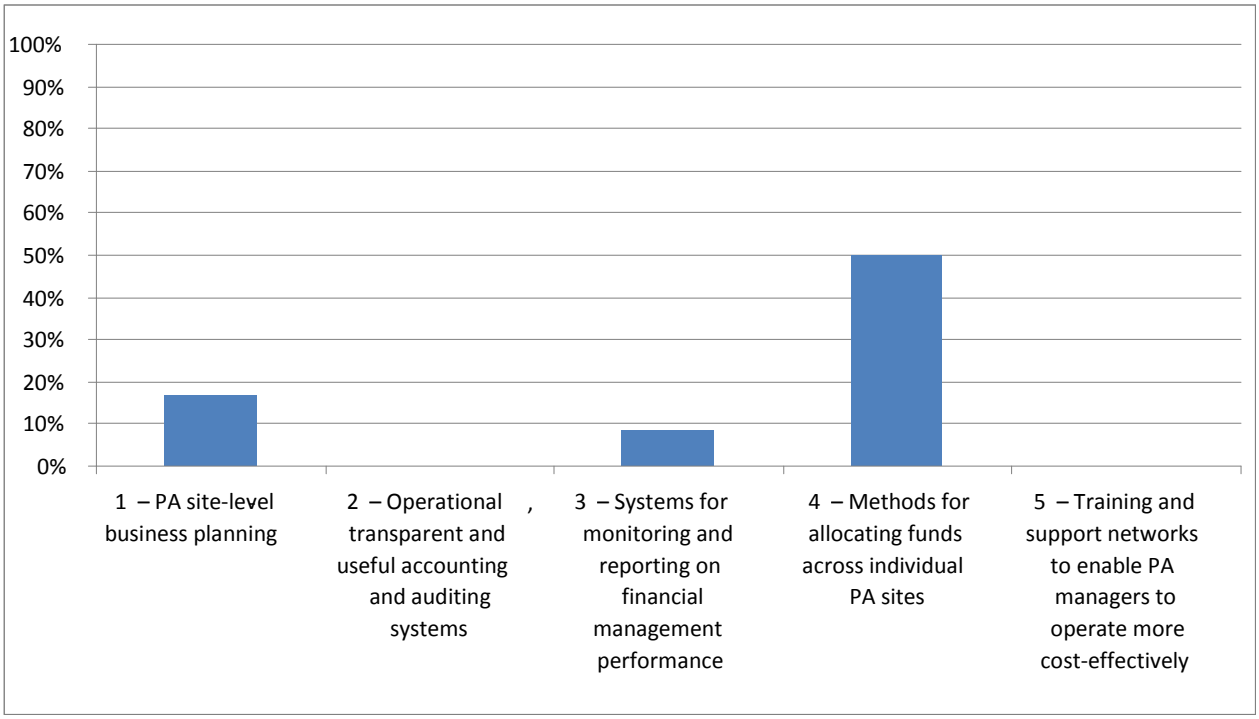
3.2 Component 2: Business Planning and Tools for Cost-Effective Management

Financial planning, accounting and business planning are important tools for cost-effective management when undertaken on a regular and systematic basis. In the case of Jamaica this is particularly difficult to achieve in the absence of basic conservation planning tools, and within a context where there is still limited planning culture, which is reflected in the low 10% of the overall score (Graphic 1). The details of the outcome of the scorecard analysis for this component are shown in Graphic 3.

It is also worth mentioning that management agencies are in the process of moving from an individual PA to a PA system approach, and therefore a certain amount of time should be considered in order to adjust, design, and adopt the most appropriate planning tools to respond to a new management paradigm. The generation of new management plans, business plans and comprehensive management effectiveness assessments are relatively new tools for the conservation sector in Jamaica. Their implementation and further adoption will require some time and an important effort towards capacity building among the agencies in charge of the JPAS.

It should be noted that in Graphic 3 there are two elements without scores which require urgent action and priority attention. The first is related to operational, transparent and useful accounting and auditing systems that could inform decision making and resource allocation across the JPAS. The second refers to the lack of specific training and support networks to enable protected area managers to operate more cost-effectively. No private business manager could expect an enterprise to thrive without beneficial information on costs, cash flow, investment strategies and potential sources of funds. PA managers need a similarly detailed understanding of the financial implications of managing their site or system.[v] Effective financial planning requires accurate knowledge not only of revenues, but also of expenditure levels, patterns and investment requirements. This should also be focused on site level capacity building to improve financial and managerial skills for cost-effective management. It speaks to a shift from technical profiles for PA management into profiles that are closer to management, assuming broader responsibilities in terms of accounting, revenues and expenditures at the site level.

Graphic 3: Component 2 – Business Planning and Tools for Cost-Effective Management



This is a key step in the process of strengthening agencies for system level management, since, so far, the accounting systems in place do not allow a proper financial monitoring, follow-up and control for JPAS. This explains why the score for financial monitoring and reporting systems achieved barely close to 10%. For instance, there is no system in place generating information about the current expenditure in specific PAs; there are only rough estimates based on aggregate information from each agency.

Good financial planning enables PA managers to make strategic financial decisions such as allocating spending to match management priorities, and identifying appropriate cost reductions and potential cash flow problems. Improved planning can also help raise more funds as donors and governments feel more assured that their funds will be more effectively invested in the JPAS.

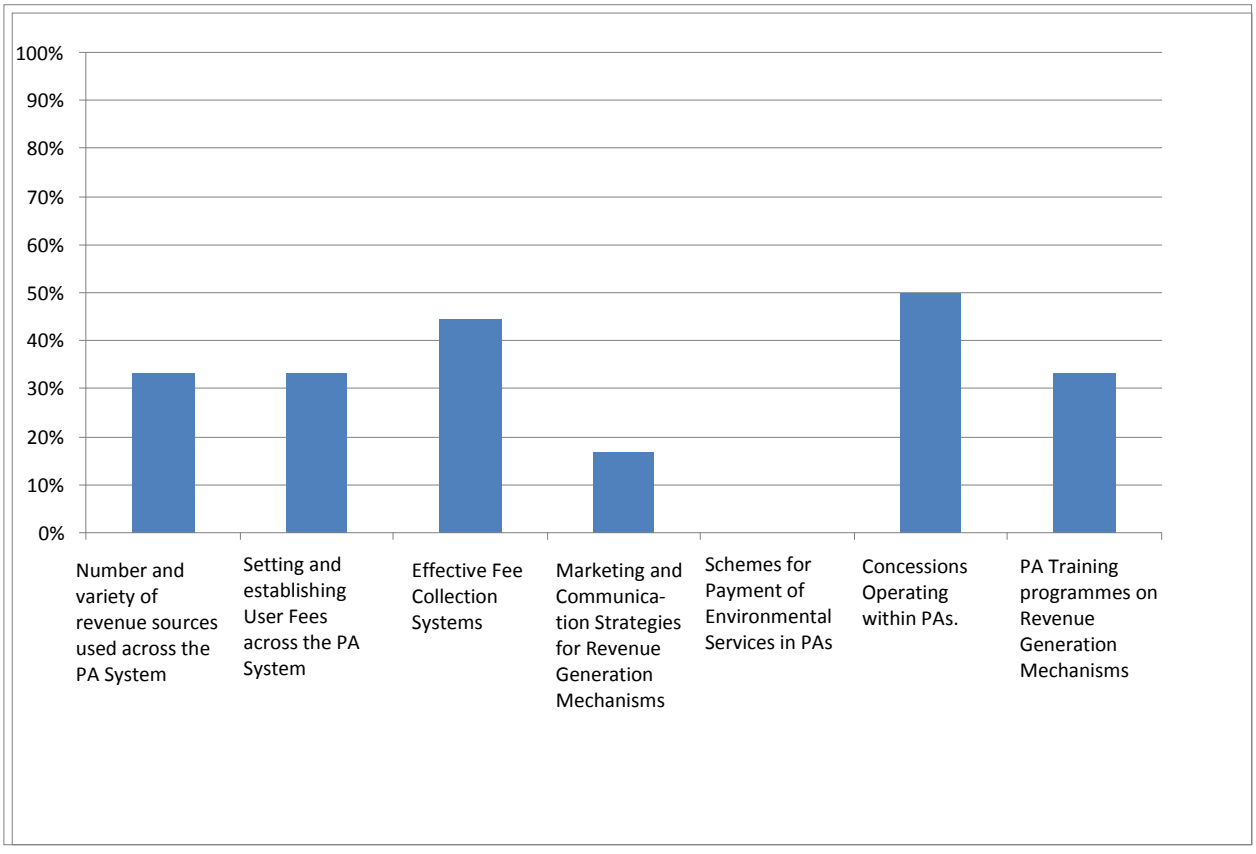
This proves to be particularly important in order to attract and retain new or non-traditional funding partners, especially key stakeholders from the private sector. JPAS must be in a position to have enough capacity to invite potential donors to track their investments at any time; it is a measurement that accounts for excellent cost-effective expenditure reputation and transparency. PA managers are increasingly expected to understand financing issues and tools.

3.3 Component 3: Tools for Revenue Generation

JPAS must be able to attract and take advantage of all existing and potential revenue mechanisms within the context of the overall management priorities of its constituent protected areas. Diversification of revenue sources is a powerful strategy to reduce vulnerability to external shocks and dependency on limited government budgets. This component has achieved the highest score with approximately 36% suggesting the existence of the rudiments of a structured approach towards the supply side of financial sustainability equation (Graphic 1).

The element covering the number and variety of sources of revenue includes traditional funding sources — tourism entrance fees — along with innovative ones such as debt swaps, tourism concession arrangements, payments for water and carbon services and in some cases, carefully controlled levels of resource extraction. This element scored 33% (Graphic 4) because although a number of mechanisms are in place two major problems remain, the first being implementation and the second is that services might be undervalued.

Graphic 4: Component 3 – Tools for Revenue Generation by JPAS



Effective fee collection systems achieved 44%. This result is mostly influenced by the Jamaica National Heritage Trust's (JNHT´s) experience at site level and reflect the difficulties other agencies and especially co-managers face in order to enforce fee collection.

Marketing and communication strategies scored approximately 15%; this suggests an interesting area for future development and priority. Another issue in this regard corresponds to the need to create public awareness and a clear positioning of JPAS as one of the key economic engines of Jamaica.

The element involving concession schemes scored 50%. However, the JNHT is the only agency currently implementing such mechanisms.

The element reflecting payment for environmental services (PES) scored zero; this is recognised by the agencies as a priority for future mechanisms contributing to PA financial sustainability.

Tourism is a key growth sector that has an important impact not only in economic aggregates but also in employment creation and poverty alleviation. While most visitors to Jamaica are attracted to all-inclusive resorts, there is a growing trend for outside excursions to experience Jamaica's culture, rural communities and places of natural beauty. The development of a strong business approach to protected areas management can result in a significant increase in the number of visitors who are searching for a more diverse vacation experience. This could lead to protected area partnerships with private tour operators and the development of a centralised tour system that allows visitors a single outlet for information and tour bookings.[vi]

4. FINANCIAL NEEDS ASSESSMENT OF JPAS

The Financial Needs Assessment (FNA) constitutes the starting point of the financial planning process. It is the first step of an integrated effort to ensure long-term and stable funding to meet PA management objectives of the system of protected areas in Jamaica.

The FNA focuses on the requirements for management programmes and key activities, with an analysis of both current and future needs. The FNA is a dynamic tool that provides for continuous improvement and review, and it is flexible enough to promote PA adaptive management. Therefore it must be compatible with other management tools such as the management plan, management effectiveness assessment, annual operational plans and budget estimates. This is therefore an integral component of the PASMP, and should be used under the Management Effectiveness Assessment.

The following 24 protected areas (Table 2) were included in the FNA.

Table 2: Protected Areas included in FNA

Protected Areas		Agency	Terrestrial/Marine
1	Montego Bay Marine Park	NEPA	Marine
2	Blue and John Crow Mountains National Park	NEPA	Terrestrial
3	Negril Environmental Protection Area	NEPA	Marine/Terrestrial
4	Negril Marine Park	NEPA	Marine
5	Palisados – Port Royal Protected Area	NEPA	Marine/Terrestrial
6	Coral Spring – Mountain Spring Protected Area	NEPA	Terrestrial
7	Portland Bight Protected Area	NEPA	Marine/Terrestrial
8	Ocho Rios Marine Park	NEPA	Marine
9	Mason River Protected Area	NEPA	Terrestrial
10	Bogue Lagoons Fish Sanctuary	Fisheries	Marine
11	St. Thomas	Fisheries	Marine
12	Forestry Department: North East	Forestry Department	Terrestrial
13	Forestry Department: South East	Forestry Department	Marine/Terrestrial
14	Forestry Department: North West (Cockpit)	Forestry Department	Terrestrial
15	Forestry Department: South West	Forestry Department	Marine/Terrestrial
16	Port Royal And Palisados (Kingston)	JNHT	Regulate not owned
17	Black River (St. Elizabeth)	JNHT	Regulate not owned
18	Spanish Town (St. Catherine)	JNHT	Regulate not owned
19	Titchfield Hill (Portland)	JNHT	Regulate not owned
20	Falmouth (Trelawny)	JNHT	Regulate not owned
21	Seville (St. Ann)	JNHT	Owned and managed
22	Rio Nuevo Taino Site (St. Mary)	JNHT	Regulate not owned
23	Mountain River Cave (St. Catherine)	JNHT	Owned and managed
24	Mason River Reserve (Clarendon)	JNHT	Site owned

There are nine protected areas Included under NEPA's responsibility; those for the Fisheries Division include two existing PAs (However, plans are in place for an additional nine fish sanctuaries to be declared and these should be included in future assessments.) In the case of the Forestry Department the decision was made to assess its needs, grouping its PAs in four regions according to its new management approach. JNHT included only nine PAs, which reflect national heritage/cultural sites with important natural features. A significant feature of this list of 24 protected areas is that it also reflects those PAs that were considered priorities by an Ecological Gap Assessment which was recently concluded.

4.1 Different Types of Management Programmes

Site level management plans usually group key protected area activities according to a set of structured programmes that respond to management objectives and priorities. After careful review of the most common management programmes already in place in Jamaica, the following seven programmes were chosen in order to enable a framework for the resource needs assessment, and to differentiate two management scenarios.

1. *Administration and Planning*: Includes general management activities such as accounting and financial management, office and infrastructure maintenance, human resources management, communication with stakeholders, preparation of reports, etc. It also involves participative processes to develop and monitor the implementation of key planning tools such as management plans, annual operational plans, business plans and management effectiveness assessments.

2. *Patrolling and Enforcement*: Considers activities aimed at ensuring the enforcement of law within PA limits, with the objective to prevent threats and negative impacts to the PA integrity. It usually addresses boundary and zoning issues as a mechanism for increased protected area management effectiveness.

3. *Environmental Education*: The involvement of the public as a major stakeholder is very critical to protected area management. This is important in empowering the public to act in a way that protects biological diversity and engages them in planning and management of protected areas.

4. *Research and Monitoring*: Research is critical to informing planning and management for protected areas. Likewise, ongoing monitoring is important to determine changes in threat levels based on new management interventions.

5. *Sustainable Livelihoods*: This programme considers the integral socioeconomic development of people living inside and in the buffer zones of PAs as a fundamental objective of PA management. This involves a wide range of development related projects and activities in areas such as health, economic development, gender, etc.

6. *Mitigation and Restoration*: Activities and projects that prevent or limit major impacts to ecosystems. When environmental impacts take place this programme coordinates activities to repair and restore the damage.

7. *Sustainable Use of Resources* (tourism, etc): Ensures that the PA resources are used in a sustainable way, according to management plans, national regulations, zoning, and impact tools such as the carrying capacity. Promotes a framework for economic use of PA natural features and resources.

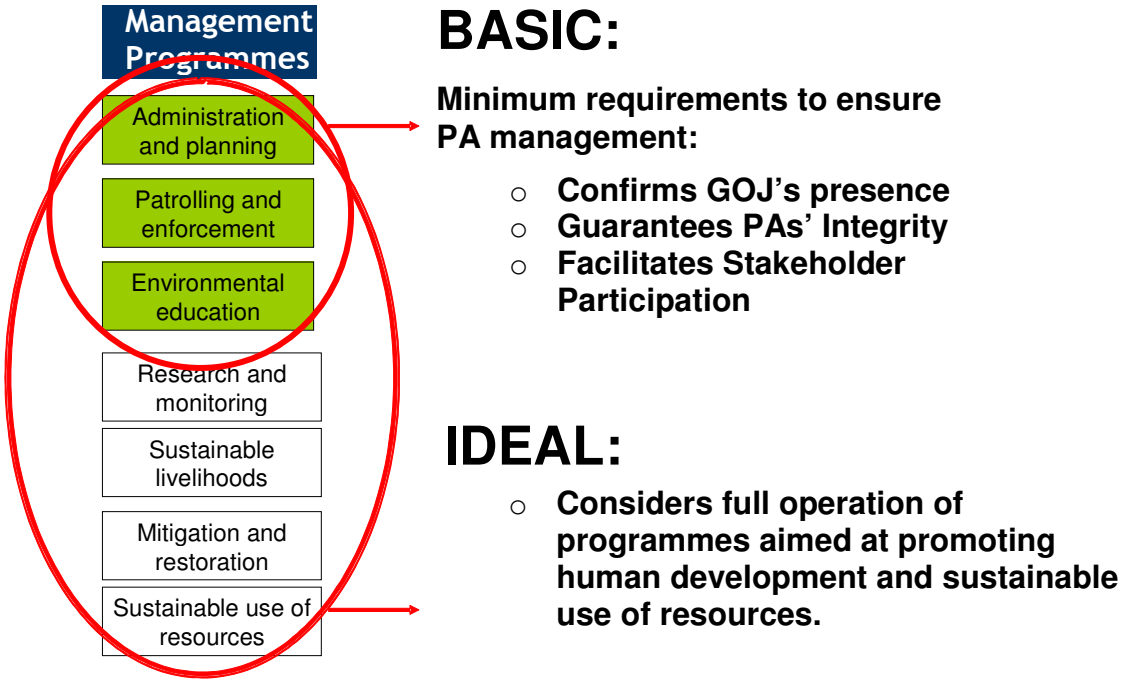
4.2 The Basic and Ideal Scenarios for Management

Scenarios are useful to reflect management priorities and segregate which programmes and activities are considered fundamental in the short and medium term, and which can be expected to add value and complement current practices in the longer term. Scenarios are based on the seven management programmes identified above. While implementing the first

three programmes will be considered the basic management scenario at the site level, the implementation of all programmes constitutes an ideal management scenario (Figure 1). The criteria behind defining which programmes will be considered as suitable for basic management, takes into account international practices and opinions of the implementing agencies.

In addition to this, the PASMP should define a basic set of activities to be developed under each programme in order to move this exercise forward and provide the necessary level of detail so as to improve the estimates of expenditures.

Figure 1: Management Programmes for Basic and Ideal Scenarios



4.3 General Standards for PA Management

The first important outcome of the financial needs assessment workshop was the definition of a set of standards to be considered by the PA system. Over 100 items were chosen after careful consideration of its relevance and use for site conservation management.

Considering the need for adaptive management and bearing in mind that every PA possesses unique characteristics, these standards should be considered as a point of reference that might not be applied in every case but contributes to the overall planning for the PA system.

The selected standards respond to the analysis of the resources needed to implement the three management programmes for the basic scenario, and later the seven programmes that constitute the ideal scenario. In this regard, certain infrastructure for tourism was considered exclusively for the ideal scenario. Professional services to address sustainable livelihoods, research and sustainable use of resources are also represented only in the ideal scenario.

Table 3 and Table 4 present the 80 items identified for each scenario, 54 of these items are considered for the basic scenario. These items are divided into the five expenditure categories identified earlier. Human Resources (11); Operational Costs (6); Equipment (22); Professional Services with 6 at the Site Level and 17 items at the Systemic Level; and Infrastructure, Major Equipment and Vehicles with 18 items. Items at the Systemic Level consist entirely of professional services and represent activities that benefit the system as a whole and not just an individual PA.

Table 3: Categories of Standards for PA Management

Categories of Standards	Total
SITE LEVEL (63)	
• Human Resources	11
• Operational Costs	6
• Equipment	22
• Professional Services	6
• Infrastructure, Major Equipment and Vehicles	18
SYSTEMIC LEVEL (17)	
• Professional Services	17
	80

Table 4 contains the standards that have been proposed for the protected areas in the system. Standards have been set for both the basic and ideal scenarios, bearing in mind the different protected area programmes that would fall into these two scenarios, as depicted in Figure 1. Original tables that include assumptions considered for the budget are presented in Annex 3.

Table 4: Standards for PA Management for Basic and Ideal Scenarios

EXPENDITURE CATEGORY [**SITE LEVEL**]	SUGGESTED STANDARD	
	BASIC	IDEAL
HUMAN RESOURCES		
1. PA Manager (Technical)	1 per PA (PA = Region for Forestry)	
2. Administrative Assistant	1 per PA	
3. Administrative Manager (Office and Operations)	-	1 per PA if required
4. Chief of Corps (Senior Ranger Coordinator		1 per 12 Rangers
5. Ranger	1 per 10 km^2	2 per 10 km^2
6. Public Education Officer (Facilitator of Education)/Community Outreach Officer	1 per PA	
7. Programme Officer (Tourism, Planning, Research, sustainable Finance)		At least 1 per PA
8. Ancillary Staff	1 per PA	
9. Operations Manager (for Marine PA)		1 per PA
10. Transportation Allowance	Average 7,200 km per year per person	
11. Subsistence	84 hours per month per person	
OPERATIONAL COSTS		
12. Workshops and Meetings	4 meetings at 15 participants per year	6 meetings at 30 participants per year
13. Utilities (telephone, water, electricity, rental office space)	Average US$1,200.00 per month	
14. Insurance (public liability, employers, buildings, vehicles)		3.5% infrastructure, major equipment and vehicles
15. Fuel/Diesel	3,500 litres per car	
16. Maintenance	5% of infrastructure, major equipment and vehicles	
17. Uniforms	2 per person per year	4 per person per year
EQUIPMENT		
18. Field Equipment (water poncho, knife, canteen, etc.)	1 per Ranger	
19. Camping Equipment	1 per 4 Ranger	
20. Computer	1 per PA	
21. Laptop		1 per PA
22. Printer	1 per PA	
23. Telefex		1 per PA
24. Spanner		1 per PA
25. GPS	1 per PA	
26. Base Radio	1 per PA	
27. Walkie Talkie	1 per 5 Ranger	
28. (Film) Camera		1 per PA
29. TV	1 per PA	
30. DVD	1 per PA	
31. Projector		1 per Visitor Centre
32. Photo Camera	1 per PA	
33. Binoculars	2 per Building	
34. Telescope	1 per Visitor Centre	
35. Complete Office Furniture	1 per PA	
36. Complete House Furniture	1 per PA	
37. First Aid Kit	1 per Building & Vehicle	
38. Fire Control Equipment	1 per Building & Vehicle	
39. Complete Science Laboratory		1 per PA
PROFESSIONAL SERVICES		
40. Management Plan Formulation	1 every 10 years	
41. Management Plan Review	1 every 3 years	
42. Management Effectiveness Assessment	1 every 3 years at Site Level	1 every 3 years at System Level
43. Business Plans Development (including tourism development, feasibility study, etc.)	1 every 5 years; only for PAs with great potential	

EXPENDITURE CATEGORY [**SITE LEVEL**]	SUGGESTED STANDARD	
	BASIC	IDEAL
44. Enforcement Plan		PAs with special needs
45. Commissioned Land Surveyor		Site specific
INFRASTRUCTURE, MAJOR EQUIPMENT & VEHICLES		
46. Administrative Centre /main PA Office	1 per PA; 1,350 ft^2 (150 m^2)	
47. Security Post (Entrance gate)	1 per high pressure zone; 15 m^2 (site specific)	
48. Satellite Ranger Station	1 per high pressure zone; 30 m^2 (site specific)	
49. Ranger Base (house/base)	1 per PA; 80 m^2 (site specific)	
50. Visitor Centre		1 per PA; 200 m^2 (site specific)
51. Research Centre		1 per PA; 300 m^2 (site specific)
52. Boundaries Marker	1 per 10 km	1 per 1 km
53. Nautical Boundaries (Buoys)	1 per 2 km	1 per 1 km
54. Store Room		1 per PA; 50 m^2, concrete
55. Trails (includes signs and related infrastructure)		Site specific
56. Roads – Maintenance (Access + internal)		
57. Camping Sites		1 per PA; 100 m^2 wood
58. Signs	1 per access/entrance + 1 visitor centre + 1 per road	
59. Vehicle	1 per PA, 4 x 4 double cab pickup per 6 persons per site; (+ device to transport boats when needed)	
60. Motor Cycle	1 per 2 persons	1 per person
61. Patrolling Boat with motor	2 per Marine PA; 6 persons; 250 HP	
62. Transport Boat with motor		1 per Marine PA; 10 persons; 750 HP
63. Assistance required from JDF (Air and Sea)		

EXPENDITURE CATEGORY [**SYSTEMIC LEVEL**]	SUGGESTED STANDARD	
	BASIC	IDEAL
PROFESSIONAL SERVICES		
64. Fundraiser	1 person per year	3 persons per year
65. GIS and Alphanumeric database	Basic maps to set boundaries	Thematic information and Database
66. Training Event for Human Resources	1 every 2 years; 50 persons; 3 days	1 each year; 50 persons; 3 days
67. Planning and related events	2 per year; 30 persons	4 per year; 30 persons
68. Consultancy to establish a research and monitoring programme including research protocols and training		1 every 5 years
69. Research Programme		3 scientists + laboratory per PA
70. Consultancies related to the CBD POW commitments	1 every 2 years	1 per year
71. Conflict Management Consultancy		1 every 4 years
72. Attendance to International PA Conservation related conferences and events	2 per year	6 per year
73. Update PA System Strategic Plan	1 every 10 years	
74. Video		1 video per year; 30 min; 10 min; 1 min)
75. TV Publicity		24 per year
76. Radio Publicity		48 per year
77. Information Handouts/Brochures	15,000 per year	
78. Broadcasts	3 per year	6 per year
79. Detailed Research to follow up on eco-regional assessments	1 every 4 years	
80. Legislation (contracting Lawyers)	1 per year	

4.4 The Results of the Financial Needs Assessment

The determination of the financial needs of JPAS reflects an estimation of the real needs and resources necessary to accomplish management goals and programmes in the basic and ideal scenarios.

The results of the FNA show the urgency to mobilize substantial additional resources to the PA system. The amount that would be needed every year in order to meet the basic scenario is US$8.41 million, while the ideal scenario requires around US$17.14 million per annum (Table 5).

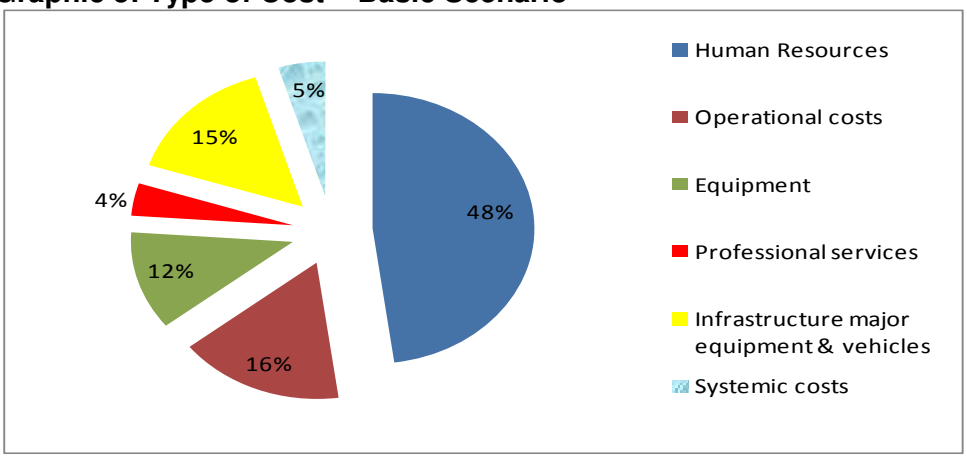
Table 5: Estimated Annual Costs (USD) for JPAS – the Basic & Ideal Scenarios

	Basic	Ideal
SITE LEVEL		
Recurrent Costs		
• Human Resources	4,025,455	6,457,745
• Operational costs	1,387,763	4,108,441
• Equipment	988,757	1,412,532
Sub-total: Recurrent	**6,401,975**	**11,978,718**
Capital Costs		
• Professional Services	325,350	327,950
• Infrastructure, Major Equipment & Vehicles	1,286,917	3,372,301
Sub-total: Capital	**1,612,267**	**3,700,251**
[Sub-Total Site Level]	**[8,014,242]**	**[15,678,969]**
SYSTEM LEVEL		
• Systemic Costs (Capital Costs - Professional Services)	397,250	1,470,750
Grand Total	**8,411,492**	**17,149,719**

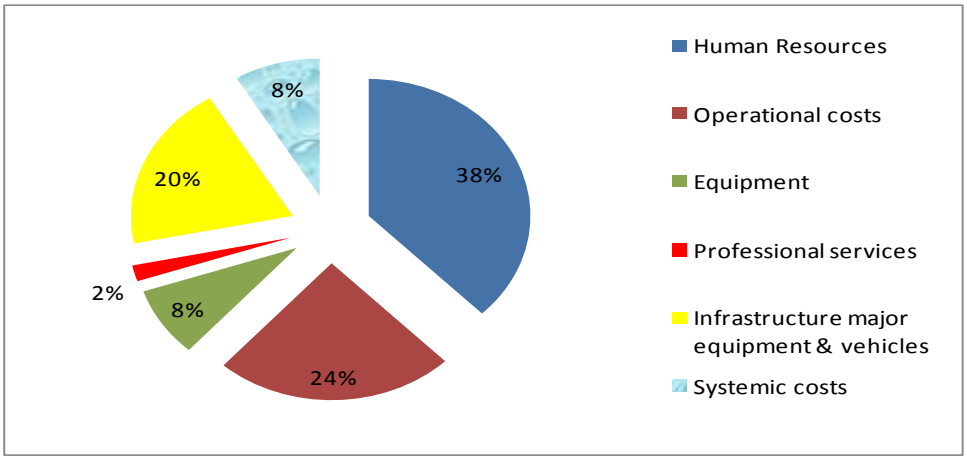
Although these estimates exceed the current level of investment in the PA system by several orders of magnitude, it is extremely important to reflect on the overall economic impact of PA conservation in Jamaica. The research carried out for this plan has pointed to the fact that more than 90% of the tourists are concentrated within and around key PAs of the system. Tourism alone contributes up to 50% of the country's exports, almost 22% of the GDP and 32% of total employment.[vii] Considering that this economic activity depends directly on the quality of the attributes and features of PAs, it would be fair to say that every dollar invested in the PA system, according to the basic scenario requirements, would generate an additional amount of US$100.00 to the Jamaican economy.[viii] This is certainly an extraordinary investment opportunity not only from a private or public perspective, but mostly from a social perspective considering its enormous contribution to job creation.

Graphics 5 and 6 present the distribution of costs for the system, with the recurrent costs associated with the yearly budget varying from approximately US$6.4 million for the basic scenario to US$11.97 million for the ideal. A key capitalization target to ensure salaries and operational expenses for an endowment trust fund in both scenarios would be approximately $71.0 million to $124.0 million, considering a conservative 7% return on investments.

Graphic 5: Type of Cost – Basic Scenario



Graphic 6: Type of cost – Ideal Scenario



The financial requirement for the ideal scenario is over two times the amount estimated for the basic scenario. Regarding human resources there is a 60.42% increase from basic to ideal, while for operational costs there is a 196% increase; Equipment, 42.85%; Professional Services is almost equal in both scenarios; Infrastructure, Major Equipment and Vehicles, 162%; and for Systemic Costs a 270% increase. Systemic costs considers resources that should be directed to the system as a whole because of economies of scale, and other considerations arising from a system level management such as, meeting Jamaica's commitments to the CBD and activities related to the sophistication and institutional strengthening that accompanies the paradigm shift from weak management of single PAs to the management of PAs within a systemic and systematic approach. More than half of this increase will feed a national communication strategy that includes media coverage and much more visibility nationally and internationally.

The budget requirements are further detailed in Tables 6 and 7 which outline estimates for each protected area and systemic level costs; while Graphic 7 summarises the annual financial needs of each management agency in both the basic and ideal scenarios.

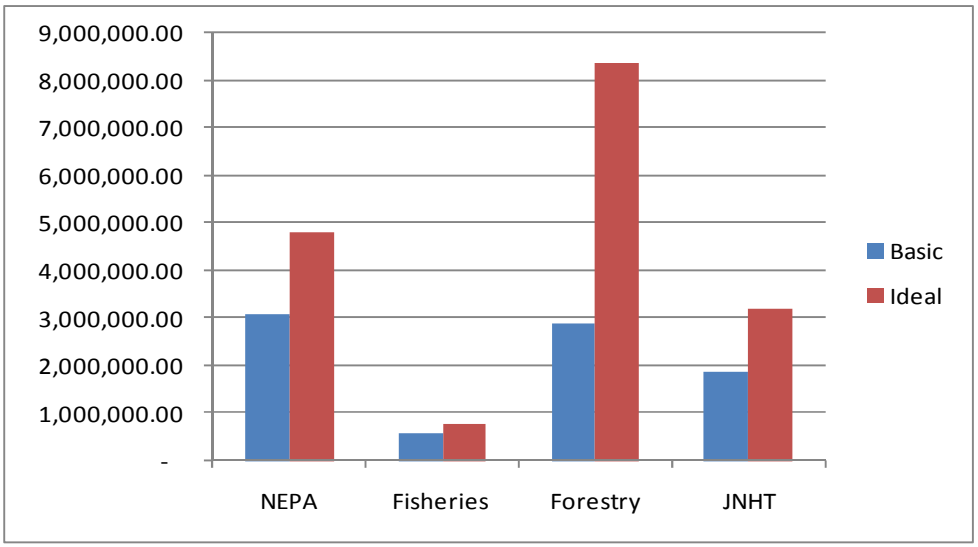
Table 6: Estimated Annual Financial Needs per Protected Area & Systemic Level (USD) [BASIC SCENARIO]

Protected Area/Systemic	Human Resources	Operational Costs	Equip-ment	TOTAL Recurrent	Profess-ional Services	Infrastruc-ture, Major equipment & Vehicles	TOTAL Capital Costs	TOTAL
NEPA- Montego Bay Marine Park	72,525	46,091	40,710	159 ,326	15,000	26,325	41,325	200,651
NEPA- Blue and John Crow Mountains NP	306,000	84,108	88,520	478,628	17,000	101,000	118,000	596,628
NEPA-Negril Environmental PA	153,000	42,054	44,260	239,314	8,500	50,500	59,000	298,314
NEPA-Negril Marine Park	96,700	61,455	54,280	212,435	20,000	35,100	55,100	267,535
NEPA-Palisados-Port Royal PA	134,010	45,474	34,371	213,855	5,400	65,820	71,220	285,075
NEPA-Coral Spring/ Mountain Spring PA	30,600	8,411	8,852	47,863	1,700	10,100	11,800	59,663
NEPA-Portland Bight Protected Area	446,700	151,581	114,570	712,851	18,000	219,400	237,400	950,251
Ocho Rios Marine Park	38,680	24,582	21,712	84,974	8,000	14,040	22,040	107,014
NEPA-Mason River Protected Area	15,300	4,205	4,426	23,931	850	5,050	5,900	29,831
Fish. Div.- Bogue Lagoons Fish Sanctuary	96,700	61,455	54,280	212,435	20,000	35,100	55,100	267,535
Fish. Div.- St. Thomas	96,700	61,455	54,280	212,435	20,000	35,100	55,100	267,565
Forestry Northeast	573,580	153,611	103,152	830,343	23,800	128,744	152,544	982,887
Forestry Southeast	491,640	131,666	88,416	711,722	20,400	110,352	130,752	842,474
Forestry Northwest	409,700	109,722	73,680	593,102	17,000	91,960	108,960	702,062
Forestry Southwest	327,760	87,778	58,944	474,482	13,600	73,568	87,168	561,650
JNHT- Port Royal and Palisados	102,700	47,896	22,226	172,821	18,000	49,380	67,380	240,201
JNHT- Black River (St. Elizabeth)	41,080	19,158	8,170	68,409	7,200	7,752	14,952	83,361
JNHT- Spanish Town (St. Catherine)	112,970	52,686	24,448	190,104	19,800	54,318	74,118	264,222
JNHT- Titchfield Hill (Portland)	30,810	14,369	6,128	51,306	5,400	9,414	14,814	66,120
JNHT- Falmouth (Trelawny)	112,970	52,686	24,448	190,104	19,800	54,318	74,118	264,222
JNHT- Seville (St. Ann)	142,400	50,699	23,420	216,519	18,000	50,600	68,600	285,119
JNHT- Rio Nuevo Taino Site (St. Mary)	71,890	33,527	15,558	120,975	12,600	26,166	38,766	159,741
JNHT- Mountain River Cave (St. Catherine)	7,120	2,535	1,171	10,826	900	1,930	2,830	13,656
JNHT- Mason River Reserve (Clarendon)	113,920	40,559	18,736	173,215	14,400	30,880	45,280	218,495
Sub-Total	**4,025,455**	**1,387,763**	**988,757**	**6,401,975**	**325,350**	**1,286,917**	**1,612,267**	**8,014,242**
SYSTEMIC COSTS	-	-	-		397,250	-	397,250	397,250
TOTAL	**4,025,455**	**1,387,763**	**988,757**	**6,401,975**	**722,600**	**1,286,917**	**2,009,517**	**8,411,492**

Table 7: Estimated Annual Financial Needs per Protected Area & Systemic Level (USD) [IDEAL SCENARIO]

Protected Area/Systemic	Human Resources	Operational Costs	Equip-ment	Total Recurrent	Professional Services	Infrastruc-ture, Major equip-ment & Vehicles	TOTAL Capital Costs	TOTAL
NEPA- Montego Bay Marine Park	96,525	62,822	45,885	205,232	15,000	48,075	63,075	268,307
NEPA- Blue and John Crow Mountains NP	362,000	111,497	96,420	569,917	17,000	162,880	179,880	749,797
NEPA-Negril Environmental PA	181,000	55,749	48,210	284,959	8,500	81,440	89,940	374,899
NEPA-Negril Marine Park	128,700	83,762	61,180	273,642	20,000	64,100	84,100	357,742
NEPA-Palisados-Port Royal PA	264,810	90,933	63,606	419,349	6,000	123,690	129,690	549,039
NEPA-Coral Spring/ Mountain Spring PA	36,200	11,150	9,642	56,992	1,700	16,288	17,988	74,980
NEPA-Portland Bight Protected Area	882,700	303,110	212,020	1,397,830	20,000	412,300	432,300	1,830,130
Ocho Rios Marine Park	51,480	33,505	24,472	109,457	8,000	25,640	33,640	143,097
NEPA-Mason River Protected Area	18,100	5,575	4,821	28,496	850	8,144	8,994	37,490
Fish. Div.- Bogue Lagoons Fish Sanctuary	128,700	83,762	61,180	273,642	20,000	64,100	84,100	357,742
Fish. Div.- St. Thomas	128,700	83,762	61,180	273,642	20,000	64,100	84,100	357,742
Forestry Northeast	1,027,180	307,481	169,652	1,504,313	23,800	622,104	645,904	2,150,217
Forestry Southeast	880,440	263,555	145,416	1,289,411	20,400	533,232	553,632	1,843,043
Forestry Northwest	733,700	219,629	121,180	1,074,509	17,000	444,360	461,360	1,535,869
Forestry Southwest	586,960	175,703	96,944	859,607	13,600	355,488	369,088	1,228,695
JNHT- Port Royal and Palisados	122,700	454,039	26,526	603,264	18,000	49,500	67,500	670,764
JNHT- Black River (St. Elizabeth)	41,080	181,616	9,890	232,586	7,200	7,800	15,000	247,586
JNHT- Spanish Town (St. Catherine)	134,970	499,443	29,178	663,591	19,800	54,450	74,250	737,841
JNHT- Titchfield Hill (Portland)	36,810	136,212	7,418	180,439	5,400	9,450	14,850	195,289
JNHT- Falmouth (Trelawny)	134,970	499,443	29,178	663,591	19,800	54,450	74,250	737,841
JNHT- Seville (St. Ann)	229,800	69,118	37,820	336,738	18,000	83,600	101,600	438,338
JNHT- Rio Nuevo Taino Site (St. Mary)	71,890	317,827	18,568	408,285	12,600	26,250	38,850	447,135
JNHT- Mountain River Cave (St. Catherine)	10,490	3,456	1,891	15,837	900	3,580	4,480	20,317
JNHT- Mason River Reserve (Clarendon)	167,840	55,295	30,256	253,391	14,400	57,280	71,680	325,071
Sub-Total	**6,457,745**	**4,108,441**	**1,412,532**	**11,987,718**	**327,950**	**3,372,301**	**3,700,251**	**15,678,969**
SYSTEMIC COSTS	-	-	-		1,470,750	-	1,470,750	1,470,750
TOTAL	**6,457,745**	**4,108,441**	**1,412,532**	**11,987,718**	**1,798,700**	**3,372,301**	**5,171,001**	**17,149,719**

Graphic 7: Annual Financial Needs per Management Agency



Graphic 7 shows the funding requirements for achieving the basic scenario varying among the management agencies from US$567,000 to US$3.0 million dollars per year; however the ideal scenario presents the greater variation within agencies, that is from US$700,000 to US$8.3 million dollars per year. Of significance is that for the Forestry Department the ideal scenario will require almost 200% additional funding as needed for the basic scenario, while NEPA will need approximately 60% more, the Fisheries Division approximately 14% more and the JNHT approximately 63% more.

Table 8 presents a ten-year budget for JPAS, while Tables 9, 10, 11 and 12 present an individual budget per agency. This budget assumes a moderate yearly growth in order to meet the Basic management scenario in the fourth year and the ideal scenario at year 9. Other assumptions such as development over the short, medium or long tem, potential for tourism and research were considered as shown in Annex 2.

Programmes under ideal management scenario such as sustainable livelihoods and research will start to be developed at the site level at the fourth year, achieving full operation at the end of the eighth year. Resources for equipment consider a provision for maintenance and replacement ensuring periodic updating according to their lifespan.

Table 8: Ten-Year Budget for Jamaica Protected Areas System (USD)

Expenditure Categories	JPAS Total /Years									
	1	2	3	4	5	6	7	8	9	10
Human Resources	1,610,182	2,415,273	3,220,364	4,025,455	4,025,455	4,520,422	5,166,196	5,811,971	6,457,745	6,457,745
Operational Costs	555,105	832,658	1,110,211	1,387,763	1,387,763	2,875,909	3,286,753	3,697,597	4,108,441	4,108,441
Equipment	395,503	593,254	791,006	988,757	988,757	988,773	1,130,026	1,271,279	1,412,532	1,412,532
Professional Services	130,140	195,210	260,280	325,350	325,350	325,350	327,950	327,950	327,950	327,950
Infrastructure & Transportation	1,286,917	1,286,917	1,286,917	1,286,917	1,286,917	3,372,301	3,372,301	3,372,301	3,372,301	3,372,301
Systemic Costs	158,900	238,350	317,800	397,250	397,250	1,029,525	1,176,600	1,323,675	1,470,750	1,470,750
TOTAL	4,136,747	5,561,662	6,986,577	8,411,492	8,411,492	13,112,279	14,459,825	15,804,772	17,149,719	17,149,719

Table 9: Ten-Year Budget for NEPA (USD)

NEPA	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10
Human Resources	515,258	772,887	1,030,516	1,288,146	1,288,146	1,446,535	1,653,183	1,859,831	2,066,478	2,066,478
Operational Costs	177,634	266,451	355,267	444,084	444,084	920,291	1,051,761	1,183,231	1,314,701	1,314,701
Equipment	126,561	189,841	253,122	316,402	316,402	316,407	361,608	406,809	452,010	452,010
Professional Services	41,645	62,467	83,290	104,112	104,112	104,112	104,944	104,944	104,944	104,944
Infrastructure & Transportation	411,813	411,813	411,813	411,813	411,813	1,079,136	1,079,136	1,079,136	1,079,136	1,079,136
Systemic costs	79,450	119,175	158,900	198,625	198,625	514,763	588,300	661,838	735,375	735,375
TOTAL	1,352,361	1,822,635	2,292,909	2,763,183	2,763,183	4,381,244	4,838,932	5,295,789	5,752,645	5,752,645

Table 10: Ten-Year Budget for Jamaica National Heritage Trust (USD)

JNHT	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10
Human Resources	322,036	483,055	644,073	805,091	805,091	904,084	1,033,239	1,162,394	1,291,549	1,291,549
Operator Costs	111,021	166,532	222,042	277,553	277,555	575,182	657,351	739,519	821,688	821,688
Equipment	79,101	118,651	158,201	197,751	197,751	197,755	226,005	254,256	282,506	282,506
Professional Services	26,028	39,042	52,056	65,070	65,070	65,070	65,590	65,590	65,590	65,590
Infrastructure & Transportation	257,383	257,383	257,383	257,383	257,383	674,460	674,460	674,460	674,460	674,460
Systemic costs	31,780	47,670	63,560	79,450	79,450	205,905	235,320	264,735	294,150	294,150
TOTAL	827,349	1,112,332	1,397,315	1,682,298	1,682,298	2,622,456	2,891,965	3,160,954	3,429,944	3,429,944

Table 11: Ten-Year Budget for the Forestry Department (USD)

Forestry	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10
Human Resources	676,276	1,014,415	1,352,553	1,690,691	1,690,691	1,898,577	2,169,802	2,441,028	2,712,253	2,712,253
Operator Costs	233,144	349,716	466,288	582,861	582,861	1,207,882	1,380,436	1,552,991	1,725,545	1,725,545
Equipment	166,111	249,167	332,222	415,278	415,278	415,284	474,611	553,937	593,264	593,264
Professional Services	54,659	81,988	109,318	136,647	136,647	136,647	137,739	137,739	137,739	137,739
Infrastructure & Transportation	540,505	540,505	540,505	540,505	540,505	1,416,366	1,416,366	1,416,366	1,416,366	1,416,366
Systemic costs	31,780	47,670	63,560	79,450	79,450	205,905	235,320	264,735	294,150	294,150
TOTAL	1,702,479	2,283,461	2,864,446	3,445,432	3,445,432	5,280,662	5,814,275	6,346,796	6,879,317	6,879,317

Table 12: Ten-Year Budget for the Fisheries Division (USD)

Forestry	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10
Human Resources	96,611	144,916	193,222	241,527	241,527	271,225	309,972	348,718	387,465	387,465
Operator Costs	33,306	49,959	66,613	83,266	83,266	172,555	197,205	221,856	246,506	246,506
Equipment	23,730	35,595	47,460	59,325	59,325	59,326	67,802	76,277	84,752	84,752
Professional Services	7,808	11,713	15,617	19,521	19,521	19,521	19,677	19,677	19,677	19,677
Infrastructure & Transportation	77,215	77,215	77,215	77,215	77,215	202,338	202,338	202,338	202,338	202,338
Systemic costs	15,890	23,835	31,780	39,725	39,725	102,953	117,660	132,368	147,075	147,075
TOTAL	254,561	343,234	431,907	520,580	520,580	827,918	914,654	1,001,233	1,087,813	1,087,813

5. MECHANISMS FOR FUNDING JPAS

In recent years a range of innovative mechanisms have been developed internationally which go beyond conventional funding sources for PA conservation. Some of these mechanisms have been applied in Jamaican PAs with various results, while others are awaiting an enabling environment to be fully operational. Funding mechanisms can be categorized on a spectrum from public to private sources, with a further distinction between mechanisms that rely on external funding inflows and self-generated revenues. The International Union for the Conservation of Nature (IUCN) proposes to group these mechanisms into three categories according to how funds are primarily raised and used.[ix]

1. Mechanisms and approaches which are concerned with attracting and administering external flows, including government and donor budgets, non-governmental organisation (NGO) grants and private and voluntary donations, from both international and domestic sources;
2. Mechanisms for generating funding to encourage conservation activities, including cost- and benefit sharing, investment and enterprise funds, fiscal instruments and arrangements for private or community management of PA resources and facilities; and
3. Mechanisms which employ market-based charges for PA goods and services, including resource use fees, tourism charges and payments for ecosystem services.

5.1 Current Funding for Protected Areas in Jamaica

There is at present no annual breakdown for current sources of funding for protected areas, nor is there a department that is dedicated to keep track of this important information. It is therefore necessary to develop professional and specialized financial planning and accounting systems for JPAS. However, there are currently three major sources of funding for the management of PAs which are: governmental budgets, international cooperation and self-generated funds. It is also clear that the current composition of mechanisms and sources is insufficient and inadequate, since it is not meeting the financial needs of the system and is not taking full advantage of available funding and market-based opportunities.

The vast majority of funding to manage the JPAS is from governmental sources, assigned through specific budgets for each of the four agencies in charge of PA management. Despite the minimal financial resources allocated by the government, the budget allows for the maintenance of core management functions and key staff. It is important to mention the existing coordination among GOJ agencies to maximize synergies, share resources and responsibilities. The implementation of this plan is anticipated to follow the same pattern.

With regard to the funding from International cooperation and donors, the primary focus of these agencies is technical assistance, provision of planning tools and capacity building in general. The most active international donors in Jamaica are USAID (United States Agency for International Development), CIDA (Canadian International Development Agency), European Union (EU), DFID (British Department of International Development), UNDP (United Nations Development Programme), GEF (Global Environmental Facility), and the three development banks—World Bank, Inter-American Development Bank and Caribbean Development Bank.[x] It is difficult to assess the amount allocated for environment in general and PA in particular, however, there is a general perception that these sources have been decreasing over the years. Usually, International donors channel their resources for PA

conservation directly through governmental agencies; implementing agencies such as UNDP and the United Nations Environment Programme (UNEP); or international NGOs such as The Nature Conservancy and local NGOs such as Jamaica Conservation and Development Trust, and the Montego Bay Marine Park Trust.

The third source of resources with an important potential for growth are self-generated revenues, although the current amount generated is still low. Among the variety of mechanisms in place it is worth mentioning the entrance fees, different user fees for marine and terrestrial PAs, and charges for use of infrastructure such as roads and timber sales. Out of the four key agencies there are two agencies with longstanding experience with these mechanisms, that is, the Forestry Department and the Jamaica National Heritage Trust.

5.2 Potential Sources of Additional Funding

After a careful literature review, visits to specific PAs, three workshops and a number of in-depth interviews, the following list has been proposed as some of the most promising mechanisms available to finance PA conservation in Jamaica:

Public Sources

1. GOJ Subvention to NEPA, JNHT, Forestry Department and Fisheries Division
2. Tourism Enhancement Fund
3. Taxes on hotels, energy, aviation
4. Tax breaks or subsidies for private conservation effort/investment
5. Earmarking charges or penalties related to natural resource use (e.g. timber stumpage fees, park entry fees, pollution taxes)
6. Direct public investment for PA infrastructure

Private Sources

7. Corporate Social Responsibility (CSR) programmes
8. Eco-tourism enterprises
9. Personal donations programme
10. Sponsorships /adopt a PA
11. Dedicated fund-raising campaigns or events
12. Private foundations
13. Biodiversity friendly products
14. Certified sustainable forestry and fisheries products
15. Organic agriculture
16. Sustainable non-timber forest products
17. Portfolio investors (e.g. “green” funds)
18. JPAS Credit Card

International Sources

19. Multilateral
20. Bilateral
21. Debt for nature swaps
22. GEF and other environmental funds

Self-Generated Sources

23. Tourism-related fees (visitors, hotels, tour operators)
24. Fees for placing antennas and infrastructure in PA

25. Carbon sequestration in biomass/ REDD
26. Service concessions
27. Watershed protection incentives
28. Special events like concerts and eco-challenges
29. Green seals
30. Bio-prospecting agreements
31. Tradable development rights (biodiversity offsets and easements)
32. Publicity (access, trails, material)

From the list above, a smaller group (18) of potential mechanisms that seemed promising was selected and further reviewed using a rapid feasibility assessment, considering issues such as the legal and political feasibility, the complexity of implementing the mechanism and the financial return (Table 13). The group of mechanisms presented in Table 13 are either presently implemented in Jamaica but need to improve or have been implemented by different PA systems in the region. It is important to note that some mechanisms were not included in this group due to the current lack of verifiable information locally.

Table 13: Feasibility of Implementing Selected Mechanisms

	Feasibility (1 Low – 3 High)				
	Legal	**Political**	**Complexity**	**Return**	**Total**
Public					
1. GOJ Subvention to NEPA, JNHT, Forestry Department and Fisheries Division	3	2	2	3	10
2. Taxes on hotels, energy, aviation	2	1	2	3	8
3. Tax breaks or subsidies for private conservation	2	1	2	2	7
4. Debt for nature swap	3	2	1	2	8
5. Charges or penalties related to natural resource use	3	2	1	1	7
Private					
6. Corporate social responsibility programmes	3	2	2	2	9
7. Personal donations/sponsorship programmes	3	3	2	2	10
8. Portfolio investors (e.g. “green” funds)	3	2	1	2	8
9. JPAS Credit Card	3	3	2	2	10
Self-Generated Sources					
10. Tourism fees (visitors, hotels, tour operators)	2	2	2	3	9
11. Fees for antennas and infrastructure placed in PA	2	2	2	3	9
12. Carbon credits/REDD	3	3	1	3	10
13. Service concessions	2	2	2	3	9
14. Watershed protection incentives	1	1	1	2	5
15. Publicity (contracts for access, trails, material)	2	3	2	2	9
16. Dedicated fund-raising campaigns or events	3	3	2	2	10
17. Bio-prospecting agreements	1	2	2	3	8
18. Tradable development rights (biodiversity offsets and easements)	2	1	3	3	9

Of the 18 selected mechanisms assessed, 11 gave a total score higher than 8 points. Scores higher than 8 points suggest a greater potential for successful implementation in the short and medium term. This allows prioritizing of mechanisms that combine both high feasibility of implementation and important impact in revenue generation. However, in the planning for future funding, three of the eleven high scoring mechanisms (fees for antennas and infrastructure, carbon credits/REDD, and tradable development rights—biodiversity offsets and easements) are omitted, and two scoring 8 (taxes on hotels, energy, aviation; and debt for nature swap) have been included, resulting in 10 of the mechanisms from Table 13 being considered for this plan.

In addition to the 10 high feasibility mechanisms from Table 13, three mechanisms currently being implemented in Jamaica—the Tourism Enhancement Fund, Multilateral and Bilateral funding sources, and the Global Environmental Facility (GEF)—are included in Table 14 with a description of each mechanism and associated assumptions and targets for possible increased financing for JPAS. This indicates the possibility of realizing a gradual increase in funding for JPAS over time during the ten-year lifespan of this plan.

These mechanisms were considered because of the feasibility of implementation and success. A number of critical success factors are taken into account such as the complexity and technical capacity that needs to be in place, the cost of implementation in comparison with the potential revenues that will be generated, and the political support that will be demanded in order to ensure an enabling institutional and legal environment to realize these opportunities. Another important consideration made is the time that each mechanism will take before generating an adequate level of funding to meet the planned expectations. It is considered important to prioritize Mechanisms according to their potential to generate returns in the short and medium term, which means between the first and third year of implementation.

If these mechanisms are implemented and the targets achieved then JPAS could realize the basic management scenario in year 4 and the ideal management scenario achieved in year 9.

Table 14: Potential Funding Mechanisms for JPAS Ten-Year Plan

Source of Funding	Description	Assumptions and Targets
1. Public GOJ Budgets for NEPA, JNHT, Forestry Department and Fisheries Division	Current sources of funding for JPAS. These funds cover human resources, operational costs and equipment but are currently inadequate even for the basic scenario.	It is assumed an increase in current funding for these agencies in order to ensure the coverage of recurrent costs (human resources and operational costs) and equipment to meet the basic scenario.
2. Tax on hotels	Aviation tax exists to feed the Tourism Enhancement Fund. A new tax is proposed to hotels that are inside or in the buffer zone of JPAS. Resources will be used for control and patrolling, to monitor visitors' impact on PAs and improve services and information to visitors. The net impact of this tax equals USD $1 per visitor at the end of year 10. If a new tax proves to be too difficult to implement, it was suggested to try to increase the existing one that feeds the TEF instead.	Approximate number of rooms in Jamaica is 16,000. At least 85% of these might be located inside or in the buffer zone of the JPAS. The tax considers one night per year per room for hotels located inside or in buffer zones of JPAS, at an average price of US$100 per night. There would be gradual implementation of this mechanism starting in year 3.

Source of Funding	Description	Assumptions and Targets
3. Debt for Nature Swap	This is a mechanism by which public debt is purchased at a discount by an outside agency and retired in exchange for government commitments to fund conservation activities, often through the establishment of a trust fund.	A recent debt for nature swap with the UK accounted for US$10.0 million approximately. These resources were destined to poverty alleviation initiatives. A debt for JPAS swap for the same amount at a conservative 5% return generates a yearly amount of US$500,000.
4. Corporate Social Responsibility (CRS) programmes/corporate sponsorship	JPAS provides a number of services that benefit the business sector in Jamaica. A CSR approach is based on finding opportunities for mutual benefit that lead to developing specific sponsorship products and options for corporate involvement in JPAS financial sustainability.	The designing of sponsorship categories to enhance corporate participation as a source of funding to JPAS. A total of 207 hotels operate in Jamaica, of which 25 have more than 200 rooms. A conservative target is proposed for this mechanism, starting with 5 to 20 companies with an average donation of US$10,000.
5. Personal Donations/ Sponsorship Programme – Jamaican Diaspora	This is a mechanism that would allow channelling resources from the Jamaican Diaspora. Jamaicans living abroad have a great potential to contribute to the island's most important natural features through individual donations that could be online or through the regular banking system. This is particularly interesting and feasible bearing in mind that this target group might be visiting national parks abroad and is familiar with this kind of donation schemes.	2.7 million Jamaicans are living abroad. This projection assumes an amount of US$20 per donation per year; a conservative projection considers reaching at the end of year 10, 0.0005% of the total population (13,500 people) with an amount of US$30 per donation.
6. JPAS Credit Card	Partnership with a credit card such as Visa or MasterCard in order to issue a JPAS special edition credit card. Cardholders agree to donate close to 0.5% of yearly consumption to JPAS.	Target 1,000 to 5,000 credit cards; average revenue of US$60 per CC per year.
7. Tourism fees	This considers exploring options to implement the most adequate mechanism such as entrance fee, tour operator fee or hotel fee[xi] to generate revenue from visitors. This would also include increasing and further enforcing payment of current visitor fees.	Average revenue of US$2 per visitor combining different user fees; taking into account 1.7 million tourists, not including cruise visitors, visiting island; gradual application.
8. Service Concessions	This mechanism is already being applied by JNHT. It consists of the implementation of specific service concessions in designated PAs, such as cafeteria and gift shops in visitor centres.	Target 5 to 10 concessions operating yearly; average revenue US$25,000.
9. Publicity Contract	Considers one exclusive publicity contract for the entire JPAS per year. This gives the contractor the right to place publicity inside of PA and to use JPAS logo as a partner organisation.	Annual amount of contract is US$200,000.
10. Dedicated Funding-raising Campaigns/ Events	Special events organised on a yearly basis to raise awareness and support from private sector.	Target 1 event per year to garner US$100,000.
11. Tourism Enhancement Fund (TEF)	Tourism Enhancement Fund collects US$10 from incoming airline passengers and US$2 from cruise passengers.[xii] Approximate size of TEF is US$20.0 million per year.	JPAS would improve quality and quantity of projects designed to address TEF criteria and/or lobby to receive a commitment to allocate to JPAS a fixed amount of TEF annually. JPAS is expected to increase its participation from TEF starting from 3% in second year to 20% in year 10.

Source of Funding	Description	Assumptions and Targets
12. Multilateral and bilateral	Multilateral and bilateral sources of current environmental investment in Jamaica accounts for US$6.5 million per year[xiii].	Current allocation to PAs is unknown. Target set for this source considers a conservative 7% of current investment amount during the first five years and a 10% from year 5 onwards.
13. Global Environment Facility (GEF)	Total amount available from the Resource Allocation Framework (RAF) 4 to biodiversity is US$5.1 million[xiv] for a four-year period ending in 2010, after which the RAF 5 will be implemented.	It is assumed that 75% of GEF (RAF 5) allocations to biodiversity will directly address JPAS; this would start in year 3.

Out of the major potential sources of funding presented in Table 14, those relating to the private sector represent only around 3% of the potential revenue; as it would take a considerable amount of time and effort to realize these types of mechanisms. The other three sources (GOJ mechanisms, international sources, and self-generated sources) account for 97% of total additional funding, almost in equal parts providing a balanced portfolio.

The most viable funding source, with almost 27% of the total contribution, is related to tourism fees. However, it is acknowledged that this mechanism might be particularly difficult to achieve because of political pressure from the tourist sector. At the same time, it makes a great deal of business sense to raise approximately US$8.0 million to protect the natural resource base when the net benefit to the Jamaican economy is greater than US$1.6 billion. According to a recent economic valuation for marine conservation in Jamaica, taxes of up to US$10 per visitor will not have any significant impact in visitors' demand;[xv] the two tourism-related mechanisms presented in this projection together equal US$3 per visitor.

In terms of implementation two key assumptions are that there would be at a minimum, a twelve-month preparation and start-up process and the four agencies responsible for PA management will receive increased budget allocation to be able to cover at least 100% of recurrent costs (human resources, operational costs and equipment) at the basic scenario level. This means that the GOJ is expected to cover the basic recurrent costs for the period, while other potential sources of funding would complement governmental budgetary allocations in order to achieve the expected targets.

The other sources of funding would start generating additional resources to JPAS after the second year, considering at least a twelve-month period to generate the necessary conditions and enabling environment to design and implement a portfolio of mechanisms. They are expected to generate significant amounts right after the third year, and could eventually provide the additional amounts required for reaching the ideal scenario in the ninth year, with the possibility of providing enough to capitalize a trust fund for JPAS during the period.

These mechanisms will need strong political support and call for the need to elevate the JPAS profile at the highest level. Coordinated action between the four agencies is strongly needed in order to build the economic case for JPAS and to communicate it properly using a number of media tools and public relation strategies. It is also important to consider the need to have a full-time team of professionals, whose exclusive task would be to take advantage of funding opportunities, and to design and implement financial mechanisms for JPAS. Without this it will

be very difficult to effectively address existing opportunities and further promote new financial sustainability programmes.

Table 15: Projection of Potential Sources of Funding – 10 Years

	POTENTIAL GOJ BUDGET SUBVENTION USD/YEAR									
	Y1	**Y2**	**Y3**	**Y4**	**Y5**	**Y6**	**Y7**	**Y8**	**Y9**	**Y10**
NEPA	819,453	1,229,179	1,638,906	2,048,632	2,048,632	2,048,632	2,048,632	2,048,632	2,04 8,632	2,048,632
JNHT	512,158	768,237	1,024,316	1,280,395	1,280,395	1,280,395	1,280,395	1,280,395	1,280,395	1,280,395
Forestry Department	1,075,532	1,613,298	2,151,064	2,688,830	2,688,830	2,688,830	2,688,830	2,688,830	2,688,830	2,688,830
Fisheries Division	153,647	230,471	307,295	384,119	384,119	384,119	384,119	384,119	384,119	384,119
Total Potential GOJ Budget Subvention	2,560,790	3,841,185	5,121,580	6,401,975	6,401,975	6,401,975	6,401,975	6,401,975	6,401,975	6,401,975
Annual Budget Requirement (see Table 8)	4,136,747	5,561,662	6,986,577	8,411,492	8,411,492	13,112,279	14,459,825	15,804,772	17,149,719	17,149,719
FINANCIAL GAP	**-1,575,957**	**-1,720,447**	**-1,864,997**	**-2,009,517**	**-2,009,517**	**-6,710,303**	**-8,057,850**	**-9,402,797**	**-10,747,744**	**-10,747,744**
	POTENTIAL MECHANISMS TO FILL THE FINANCIAL GAP USD/YEAR									
GOJ Mechanisms										
Tax on Hotels	-	-	272,000	408,000	544,000	680,000	816,000	1,088,000	1,224,000	1,360,000
Debt for Nature Swap	650,000	650,000	975,000	975,000	1,300,000	1,300,000	1,300,000	1,300,000	1,300,000	1,300,000
Private										
Corporate Social Responsibility programmes	-	50,000	70,000	100,000	120,000	150,000	170,000	200,000	200,000	200,000
Personal Donations/Sponsorship Programme – JA Diaspora	-	-	27,000	35,517	43,200	54,000	162,000	280,00	270,000	405,000
JPAS Credit Card	-	30,000	60,000	90,000	120,000	150,000	180,000	210,000	240,000	300,000
Self-Generated Sources										
Tourism fees	-	-	1,700,000	2,040,000	2,380,000	2,720,000	3,060,000	3,400,00	3,400,000	3,400,000
Service Concessions	-	-	125,000	125,000	125,000	150,000	175,000	200,000	225,000	250,000
Publicity	-	200,000	200,000	200,000	200,000	200,000	200,000	200,00	200,000	200,000
Dedicated Fund-raising Campaigns	-	100,000	100,000	100,00	100,000	100,000	100,000	100,000	100,000	100,000
Tourism Enhancement Fund	-	510,000	850,000	1,190,000	1,700,000	2,210,000	2,550,000	3,400,000	3,400,000	3,400,000
Multilateral & Bilateral	-	-	1,275,000	1,275,000	1,275,000	1,275,000	1,275,000	1,275,000	1,275,000	1,275,000
GEF			500,000	500,000	500,000	500,000	500,000	500,000	500,000	500,000
TOTAL TO FILL THE GAP	**650,000**	**1,540,000**	**6,154,000**	**7,038,517**	**8,407,200**	**9,489,000**	**10,488,000**	**12,143,000**	**12,334,000**	**12,690,000**

6. THE STRATEGIC ACTION PLAN FOR FINANCIL SUSTAINABILITY

This Strategic Action Plan is guided by the need to effectively improve the financial sustainability of Jamaica's system of protected areas. The application of the UNDP Scorecard on financial management resulted in low scores when compared with international and regional countries; the broad objective is to incrementally improve performance in all the areas where weaknesses were identified.

6.1 The Vision

By the year 2020 the financial sustainability process will assist the Jamaican Protected Areas System to become the best protected area system in the Caribbean by the provision of adequate funding to achieve and maintain the ideal management scenario.

6.2 The Mission

To successfully implement concrete financial mechanisms with full participation from the public and private sectors, non-governmental organisations and civil society thereby enabling the Jamaican Protected Areas System (JPAS) to achieve its management objectives.

6.3 Key Success Factors

- Appropriate policies and laws to allow PAs to manage the entire revenue stream from generation of income to investment.

- Full recognition of the multiple contributions of PAs to the national economy, poverty alleviation and national development in general.

- Substantial increase in current governmental budget allocation to PAs.

- Agencies responsible for managing PAs with sufficient capacity to manage PAs based on sound principles of business planning as well as conservation biology principles, ensuring that there is sufficient human capacity to use financial tools for improving PA financial sustainability.

- Business plans and other planning tools are prepared and used to ensure that funds are managed and administered in a way that promotes cost efficiency and management effectiveness, allows for long-term planning and security, and provides incentives and opportunities for managers to generate and retain funds at the PA level.

- Building a diverse funding portfolio, going beyond conventional mechanisms and including multiple funding sources, is a key element of PA financial stability and sustainability.

6.4 The Action Plan

Component 1: Legal, Regulatory and Institutional Frameworks

Goal: Improve scorecard from 27% to 50% by year 2015

Objectives

- To improve the policy, legal and institutional framework to facilitate effective implementation of mechanisms for revenue generation and retention.
- To improve the allocation of resources for the management of protected areas.
- Establish a mechanism to monitor the implementation of this strategy.
- Increase awareness and visibility of JPAS as a key contributor to Jamaica's economy.

Activities

Year 1

1. Generate clear policies and procedures to ensure effective application of revenue generating mechanisms across the system.
2. Put in place a trust fund that will adequately supplement GOJ's funding to JPAS.
3. Generate the appropriate legal and institutional conditions to implement new financial mechanisms in order to diversify the current funding portfolio.
4. Define the policy and legal mechanisms to allow for:
    a. An overall increase in the current rate of user fees and other sources of revenue.
    b. Payment for environmental services.
    c. Allowing access and benefit sharing with communities and other stakeholders.
5. Set up a Trust Fund to serve as an effective mechanism for the JPAS and Initiate campaign to capitalize the Trust Fund.
6. Initiate and advance discussions regarding a debt for JPAS swap.
7. Undertake market assessments and economic valuations to propose a set of tariffs for PA´s goods and services.
8. Conduct a system level economic valuation, stressing the benefits of the JPAS to the key economic sectors as well as poverty alleviation in Jamaica.
9. Design and implement a strategy to elevate JPAS profile among decision makers and public opinion.
10. Improve and adjust the design of co-management, concessions and other participation schemes to effectively generate additional resources for PA conservation.
11. Build capacity in co-managers and further promote other institutional arrangements that facilitate participation in the JPAS.

Component 2: Business Planning and Tools for Cost-Effective Management

Goal: Improve scorecard from 10% to 30% by year 2015

Objectives

- Improve conservation planning tools; taking into consideration mainstreaming financial sustainability issues into current tools as well as designing new tools to address specific funding opportunities.
- Improve JPAS integration into national planning and key development processes.
- Improve financial administration and effectiveness ensuring that funding is allocated and spent in a way that supports PA finance needs and conservation goals.

Activities

- Generate criteria and policies for PA resource allocation.
- Define a standard and format for PA management plans that include a financial sustainability component.
- Update current PA management plans and generate new ones where not available.
- Select pilot PA for developing and implementing business plans.
- Design specific training programmes for PA managers and personnel assigned to the Financial Sustainability Team.
- Facilitate a network and enabling conditions for PA managers to share their knowledge and experience regarding conservation finance, such as periodic meetings and information tools.
- Provide adequate training and incentives for PA managers.
- Design and implement an administrative and financial system for JPAS.
- Design and implement new accounting and monitoring systems that facilitate control and decision making.

Component 3: Tools for Revenue Generation by PAs

Goal: Improve scorecard from 37% to 50% by year 2012

Objectives

- Increase governmental budget for JPAS.
- Build a diverse stable and secure funding portfolio, minimizing funding risks and fluctuations.
- Creating an enabling financial and economic framework.

Priority Activities

- Build an economic case for financing conservation in Jamaica.
- Define a strategy to increase JPAS receiving support from the Tourism Enhancement Fund as well as other governmental funding opportunities.
- Develop specific products based on the opportunities for cooperation and in kind support for the different management programmes, such as sponsorship from universities to undertake monitoring and research activities.
- Conduct market and feasibility assessments for new mechanisms.

- Design and implement most promising mechanisms arising from previous activities.
- Design and implement specific fiscal instruments for PA financial sustainability.
- Define a set of tariffs according to proper economic valuation exercises.
- Review current user fees and generate a procedure and methodology to update them periodically.
- Implement payment for environmental services schemes in selected pilot PAs.
- Generate a marketing and communication strategy to promote PA goods and services.
  .

6.4.1 *Implementation Approach*

The implementation approach envisions that the process for the implementation of the financial strategy will involve firstly, the promotion of an enabling environment to ensure political support and resources for effective implementation; secondly, the creation of a sustainable finance team; and thirdly, the setting up of a proper resource centre as a means to channel technical and financial support for the process.

6.4.2 *Initial Support and Commitments*

This step is necessary to start a financial sustainability process. It is intended to ensure first, the understanding of the scope and rationale behind this plan. Without a clear end in mind, the whole process would lack the motivation and sense of purpose to further commit and mobilize different resources and actors. The participants involved in this step are fundamentally decision makers at the central level agencies. Since the plan consumes resources it needs to ensure a long-term commitment for its successful implementation; it is desirable to include from this stage on, current and potential sources of funding.

The second desirable result is to ensure that an informed decision is being taken, recognising its consequences in terms of resources, time, and additional activity that will be generated as a consequence of this plan. As a result of this decision, human and economic resources should be committed, stating a clear focal point responsible for the success of the JPAS financial sustainability strategy, as well as the technical and logistical support to undertake the necessary activities. In this particular case, relating the financial strategy's implementation to potential sources of funding such as GEF ensures long-term sustainability to guarantee that activities and objectives set in this plan will be followed properly.

This does not mean that JPAS will depend on external resources for its financial sustainability, however, donors and international cooperation could play an extraordinary role by ensuring that some of their resources be invested according to the objectives and guidelines of this plan.

The third result is the understanding of how this tool will be accepted by the various agencies and PA staff, and integrated into the current PA activities and other relevant management tools available. In this regard it is interesting to note that out of the eight strategic directions for capacity building that were identified through the JPAS management effective assessment, at least six are directly related to the major challenges presented for the financial strategy. These strategic directions[xvi] are:

1. Sustainable Financing;
2. Collaboration;
3. Enabling Environment (Policy, Legal and Regulatory Framework);
4. Human Resources Management for protected areas;
5. Research, Monitoring and Evaluation;
6. Boundary and Zoning Setting;
7. Public Education and Awareness; and
8. Infrastructural Development.

The final result of this step is the creation of a coordinating group such as the PAC or a similar arrangement made by high level representatives of different PA stakeholders with the capacity to make commitments, mobilize the necessary resources and endorse their formal support for the plan's implementation. This group should commit to meet no less than biannually and its composition must secure political and financial support to undertake the process.

6.4.3 *Creating a Financial Sustainability Team*

Since financial sustainability is a new concept for PA conservation in Jamaica, the first experiences should be focused on building the necessary capacities and ensuring local participation in the different stages of the process. For this reason it is strongly suggested that the plan should not be considered as a set of external consultancies, developed in isolation by professionals outside the agency or PAs. This does not mean that external support and technical expertise are not needed, but the process must be controlled by the agencies and PA staff.

A team should be established to act as a think tank for financial sustainability and to supervise the overall implementation of the Plan. The team should maintain close liaison with the four principal protected areas management agencies, a national interagency body such as the PAC and with international cooperation agencies. The team should therefore play an integral role in the resource planning and resource allocation processes. A basic start could consider three persons: one team leader, a management effectiveness specialist, and an experienced accountant. In the near future, this team should be expanded to include an environmental economist and a business administrator.

International Cooperation: This plays a fundamental role in the provision of financial resources, and technical expertise to feed the process. It is especially important that donors consider integrating the implementation into current management tools and other capacity building initiatives. Projects and organisations should commit to hire external advice and consultants as needed.

National External Consultant: Acts as the implementation's co-manager. The consultant participates in the day-to-day activities by working in continuous coordination with the agencies, and supporting the integration and analysis of the different components of the strategy. As needed, s/he will generate the necessary information available, and lead the design of information instruments such as surveys, interviews, focal groups, etc. This professional must have a background in marketing, management or environmental economics. It is extremely important that the person is selected on the basis of understanding and being comfortable with natural areas issues. An individual cannot sell or communicate something that they do not value and enjoy.

International External Consultant: In order to further strengthen local capacities during the early stages of the national process, and to ensure the quality of the first mechanisms to become models, it is important to consider the advice and guidance of an international consultant. This profile will advise, provide feedback and review the overall BP process at the PA and central agency level.

Looking at the future the agencies must start thinking about policies to attract, retain, and maintain professional profiles in business, market analysis and environmental economics. Meanwhile the assistance and expertise of external consultants is a valuable asset to design the frameworks, prepare guidelines, develop key capacities, and overview the first stages of the process.

BIBLIOGRAPHY

Hayman, A. 'National Report on Management Effectiveness Assessment and Capacity Development Plan for Jamaica's System of Protected Areas.' Capacity Development Working Group, 2007.

Bovarnik, Andrew. 'Scorecard for Protected Areas Financial Sustainability.' UNDP, 2007.

Brown, Charlie, and Edwards, Scott. 'Situation Analysis of Jamaica's Protected Areas System Plan.' 2005.

Emerton, L., Bishop, J., and Thomas, L. *Sustainable Financing of Protected Areas: A Global Review of Challenges and Options*. Switzerland and Cambridge, UK: IUCN, Gland, 2006. x + 97pp

Galindo, José. 'Estimación de la contribución económica del turismo en areas protegidas de Sudamérica.' The Nature Conservancy, 2007.

Mentefactura. 'Estrategia de sostenibilidad financiera del Sistema Nacional de Áreas Protegidas del Ecuador.' Ministerio del Ambiente, 2006.

Edwards, Peter. 'Sustainable Financing for Ocean and Coastal Management in Jamaica: The Potential for Revenues from Tourist User Fees.' 2008.

Taïeb, Philipe. 'Securing Funding from International Development Agencies.'

PricewaterhouseCoopers 2004. 'The Jamaican Hotel Industry – 2004.'

ANNEX 1
FINANCIAL SCORECARD – PART II – ASSESSING ELEMENTS OF THE FINANCING SYSTEM

Component 1 – Legal, regulatory and institutional frameworks					**Comment**
Element 1 – Legal policy and regulatory support for revenue generation by PAs	**None (0)**	**A few (1)**	**Several (2)**	**Fully (3)**	
(i) Laws or policies are in place that facilitate PA revenue mechanism		1			User fee regs for marine parks & terrestrial PAs exist Some areas are covered by NRCA Act such as scuba diving, mooring buoys etc For forestry there are provisions for collection of funds for goods and services—timber sales, charge for use of roads Funds collected on behalf of government, such as Ministry of Finance—money is not kept
(ii) Fiscal instruments such as taxes on tourism and water or tax breaks exist to promote PA financing		1			Tourism Enhancement Fund exists—the charge is made to tourists and submitted to a fund which is used for issues No payment for environmental services (such as water) exists NRCA uses some funds collected from beach licences (Policy of the Authority)—the funds are used to support projects within PAs
Elements 2 – Legal, policy and regulatory support for revenue retention and sharing within the PA system	**No (0)**	**Under Development (1)**	**Yes, but needs Improvement (2)**	**Yes, satisfactory (3)**	
(i) Laws or policies are in place for PA revenue to be retained by the PA system (central and site levels)			2		Laws exist for the retaining of revenue NRCA is required by law to put 50% of fees into appropriation of aid This will increase with the establishment of Executive Agencies (such as Forestry and Fisheries)—the Executive agencies will be able to retain some of the fees collected Revenue collected within National Parks are retained Of beach licence fees (collected at the system level) that are collected by the NRCA, about 25% is issued to the system for management
(ii) Laws and policies are in place for PA revenue to be retained at the PA site level			2		Some PAs collect fees which are used within the area; however some areas have not defined revenue generation activities Fees collected by SITES 100% of fees collected are retained
(iii) Laws and policies are in place for revenue sharing at the PA site level with local stakeholders	0				None exist Local groups may ask for contributions from the NRCA and it may be issued—but this is not the policy of the Authority

Element 3 – Legal and regulatory conditions for establishing funds (endowment, sinking or revolving) (1)					
	No (0)	**Established (1)**	**Established with limited capital (2)**	**Established with adequate capital (3)**	
(i) A fund has been established and capitalized to finance the PA system		1			Jamaica National Parks Trust Fund was initially for the system, but is now only used for Blue & John Crow Mountains National Park and the Montego Bay Marine Park The fund mangers are reviewing if this could be established for system again Local Forest Fund exists to facilitate issuing of funds to communities. Currently has J$1.0 M—money comes from sale of Dendrology manual … not yet being used
	None (0)	**A few (1)**	**Several (2)**	**Sufficient (3)**	
(ii) Funds have been created to finance specific PAs		1			JNPTF was established for this but is not being used Various PAs have own funds established—Trust Funds created but not sustained
	No (0)	**Partially (1)**	**Quite well (2)**	**Fully (3)**	
(iii) Fund expenditures are integrated with natural resources management	0				If a Park cannot maintain itself outside of the management fees provided by the NRCA, it usually has to close operations. The parks usually have to seek additional funding from other donors etc.
Element 4 – Legal, policy and regulatory support for alternative institutional arrangements for PA management to reduce cost burden to government	**None (0)**	**Under development (1)**	**Yes, but needs Improvement (2)**	**Yes, Satisfactory (3)**	
(i) There are laws or policies which allow and regulate concessions for PA services	0				Could be explored in the future
(ii) There are laws or policies which allow and regulate co-management of PAs			2		Entities providing co-management do not have the capacity to seek additional funds; while at the same time complaining that NEPA is not providing sufficient funds Pool of funds from which these entities could previously draw on has dried up, therefore the entities are approaching the central government for more funds; but are not receiving the amounts being asked for The funders were also not keen on funding core functions; thus the gap existed. The obligations of the partners would therefore need clarification.
(iii) There are laws or policies which allow and regulate local government management of PAs	0				None exists—but there is nothing against this They have a regulatory role but not management
(iv) There are laws which allow, promote and regulate private reserves			2		Other acts allow for private use (such as Forestry Act and Wild Life Protection Act)

Element 5 – National PA financing policies and strategies	**No (0)**	**Yes, but needs Improvement (2)**	**Yes, Satisfactory (3)**		
(i) There are key PA financing policies for:					
- Comprehensive, standardized and coordinated cost accounting systems (both input and activity)	0				System exists for disaggregating of figures, but not a requirement
- Revenue generation and fee levels across PAs		2			None exists One set fee structure (entrance fee), for instance, is outlined in the law In forestry fees, stumping is signed off by the Ministry.
- Safeguards to ensure that revenue generation does not adversely affect conservation objectives	0				FD—allows for allowable cut for timber which allows for sustenance of forests NEPA does not have one
(ii) Degree of formulation, adoption and implementation of a national financing strategy [2]	**Not begun (0)**	**In progress (1)**	**Completed (3)**	**Under Implementation (5)**	
		1			In progress
Element 6 – Economic valuation of protected area systems (ecosystem services, tourism based employment etc)	**None (0)**	**Partial (1)**	**Satisfactory (2)**	**Full (3)**	
(i) Economic valuation studies on the contribution of protected areas to local and national development are available	0				EAG and GEF valuation projects are commencing
(ii) PA economic valuation influences government decision makers	0	(e.g. in the Ministry of Environment)	(e.g. in other Ministries)	(e.g. in the Ministry of Finance)	Allows for policies to be developed
Element 7 – Improved government budgeting for PA systems	**No (0)**	**Partially (2)**	**Yes (3)**		
(i) Government policy promotes budgeting for PAs based on financial need as determined by PA management plans	0				
(ii) PA budgeting includes funds to financial threat reduction strategies in buffer zones (e.g. livelihoods of communities living around the PA)	0				Concept of buffer zones exist but not enforced
(iii) Administrative (e.g. procurement) procedures facilitate budget to be spent, reducing risk of future budget cuts due to low disbursement rates		2			For all agencies and ministries, unspent funds are sent beck to central government funds Procurement procedures allow for money to be spent, which in turn allows for increased budget request and allocation In the case of NEPA, money received is always less than requested
(iv) Ministry of Finance plans to increase budget, over the long term, to reduce the PA financing gap	0				Greater investment in PAs due to co-financing (in-kind) from GEF projects to come on stream

Element 8 – Clearly defined institutional responsibilities for financial management of PAs	**None (0)**	**Partially (1)**	**Improving (2)**	**Full (3)**	
Mandates of public institutions regarding PA finances are clear and agreed		1			Distinction between NGOs and government is clear on the extent of support for the PAs
Element 9 – Well-defined staffing requirements, profiles and incentives at site and system level	**None (0)**	**Partial (1)**	**Almost there (2)**	**Full (3)**	
(i) There is an organisational structure with a sufficient number of economists and financial planners in the PA authorities (central, regional and site levels) and sufficient authority to properly manage the finances of the PA system	0				NEPA has post; but not filled by trained economist
(ii) PA site manager responsibilities include, financial management, cost-effectiveness and revenue generation [4]		1			It is expected, however performance and accountability is lacking
(iii) Budgetary incentives motivate PA managers to promote site level financial sustainability (e.g. sites generating revenue do not experience budget cuts)	0				None exists Increases in salaries are tied in to performance levels—managers are therefore encouraged to improve performance
(iv) Performance assessment of PA site managers includes assessment of sound financial planning, revenue generation, fee collection and cost-effective management	0				It should be considered
(v) There is auditing capacity for PA finances				3	FD and NEPA both have internal audit facilities Auditor General exists and audits public entities
(vi) PA managers have the capacity to budget and plan for the long term (e.g. over 5 years)			2		
Total Score for Component 1					Actual score: 24 24 Total possible score: 95 95 0.252631579

Component 2 – Business planning and tools for cost-effective management					**Comment**
Element 1 – PA site-level business planning	**Not begun (0)**	**Early Stages (1)**	**Near Completed (2)**	**Completed (3)**	
(i) PA management plans include conservation objectives, management needs and costs based on cost-effective analysis			2		There needs to be more focus on the cost-effective element
(ii) PA management plans used at PA sites across the PA system		1			Local plans for Forestry are in early stages Some PAs have plants but the extent to which they are used is not known
(iii) Business plans, based on standard formats and linked to PA management plans and conservation objectives, are developed across the PA system [5]	0				Need recognised
(iv) Business plans are implemented across the PA system	0				
(degree of implementation measured by achievement of (Objectives)					
(v) Business plans for PAs contribute to system level planning and budgeting	0				
Element 2 – Operational, transparent and useful accounting and auditing systems	**None (0)**	**Partial (1)**	**Near Completed (2)**	**Fully Completed (3)**	
(i) There is a transparent and coordinated cost (operational and investment) accounting system functioning for the PA system	0				Useful, but not yet in place
(ii) Revenue tracking system for each PA in place and operational	0				
(iii) There is a system so that the accounting data contributes to system level planning and budgeting	0				
Element 3 – Systems for monitoring and reporting on financial management	**None (0)**	**Partial (1)**	**Near Completed (2)**	**Completed and Operational (3)**	
(i) All PA revenue and expenditure are fully and accurately reported by PA authorities to stakeholders		1			Management fees are issued by authority Under delegation instruments, reporting on the management fees component is done
(ii) Financial returns on tourism related investments are measured and reported where possible (e.g. track increase in visitor revenues before and after establishment of a visitor centre)	0				No clear relationship between the co-management authority and the authority—relationship needs some clarity for system to be streamlined
(iii) A monitoring and reporting system in place to show how and why funds are allocated across PA sites and the central PA authority	0				
(iv) A reporting and evaluation system is in place to show how effectively PAs use their available finances (i.e. disbursement rate and cost-effectiveness) to achieve management objectives	0				

Element 4 – Methods for allocating funds across individual PA sites	**No (0)**	**Yes (2)**			
(i) National PA budget is allocated to sites based on agreed and appropriate criteria (e.g. size, threats, needs, performance)	0				Not structured. Submissions are made to Authority based on needs and approved accordingly. No specific budget is presented by PA managers—only for crises
(ii) Funds raised by co-managed PAs do not reduce government budget allocations where funding gaps still exist		2			Note: this should be a positive as the entity would not be relying on the government to fund
Element 5 – Training and support networks to enable PA managers to operate more cost-effective PAs	**Absent (0)**	**Partially done (1)**	**Almost done (2)**	**Fully (3)**	
(i) Guidance on cost-effective management developed and being used by PA managers	0				
(ii) Inter-PA site level network exists for PA managers to share information with each other on their costs, practices and impact	0				Formerly a Jamaica Protected Areas Network—no longer meeting
(iii) Operational, and investment cost comparisons between PA sites complete, available and being used to track PA manager performance	0				The comparisons that should be made should be between PAs
(iv) Monitoring and learning systems of cost-effectiveness are in place and feed into system management policy and planning	0				
(v) PA site managers are trained in financial management and cost-effective management	0				This is needed
(vi) PA financing system facilitates PAs to share costs of common practices with each other and with PA headquarters [6]	0				
Total Score for Component 2					Actual Score: 6 Total possible score: 61 % 0.098360656

Component 3 – Tools for revenue generation by PAs					
Element 1 – Number and variety of revenue sources used across the PA system	**None (0)**	**Partially (1)**	**A fair amount (2)**	**Optimal (3)**	
(i) Up-to-date analysis of revenue options for the country complete and available including feasibility studies;		1			TNC had someone looking at revenue options within PAs in Jamaica Not necessarily up to date. GEF PA project will be looking at revenue generation
(ii) There is a diverse set of sources and mechanisms generating funds for the PA system			2		TEF, EFJ, User fees (NRCA), Forestry fund—all exist
(iii) PAs are operating revenue mechanisms that generate positive net revenues (greater than annual operating costs and over long-term payback initial investment cost)	0				No one is doing this at the moment
(iv) PAs enable local communities to generate revenues, resulting in reduced threats to the PAs		1			Within BJM Nat Park and through SGP of the UNDP, local communities are growing crops such as pineapples for Forestry; local groups operate trails etc.
Element 2 – Setting and establishment of user fees across the PA system	**No (0)**	**Partially (1)**	**Satisfactory (2)**	**Fully (3)**	
(i) A system-wide strategy and action plan for user fees is complete and adopted by government		1			Not sure if any exists under Jamaica National Heritage Trust and Fisheries
(ii) The national tourism industry and Ministry are supportive and are partners in the PA user fee system and programmes			2		Tourism sector was involved in the development of fees within the Marine Parks and National Parks. No objections for implementation of fee system as they are aware of carrying cap issue
(iii) Tourism related infrastructure investment is proposed and developed for PA sites across the network, based on analysis of revenue potential and return on investment [7]	0				Exists but cost-effectiveness not considered
(iv) Where tourism is promoted, PA managers can demonstrate maximum revenue whilst not threatening PA conservation objectives	0				
(v) Non-tourism user fees are applied and generate additional revenue			2		Exists in some areas—such as revenue from pictures
Element 3 – Effective fee collection systems	**None (0)**	**Partially (1)**	**Completed (2)**	**Operational (3)**	
(i) System-wide guidelines for fee collection are complete and approved by PA authorities			2		Manual developed for collection of fees by PAs
(ii) Fee collection systems are being implemented at PA sites in a cost-effective manner			2		JCDT collects for special functions Heritage Trust has fee system for all sites and for special functions Operational at selected sites (not operational for NEPA) Presently, Forestry does not charge for use of facilities
(iii) Fee collection systems are monitored, evaluated and acted upon			2		Operational at JNHT Beach licences fees are monitored Timber licences fees are monitored

(iv) PA visitors are satisfied with the professionalism of fee collection and the services provided			2	Not Applicable	Visitors to Holywell demand the use of the facilities—not sure of complaint regarding services, but visitor log has increased over the years For Forestry, stomping fees are often said to be too high; after hurricanes, the fees have to be lowered to accommodate clients JNHT does not have ongoing evaluation, but is assessed by repeat visitors. Fees are low and nominal
Element4 – Marketing and communication strategies for revenue generation mechanisms	**No (0)**	**Partially (1)**	**Satisfactory (2)**	**Fully (3)**	
(i) Communication campaigns and marketing for the public about tourism fees, conservation taxes etc. are widespread and high profile at national level		1			Tourism Fees only are applicable to Jamaica (via TEF) JNHT communicates their fees to visitors Neither Forestry nor NEPA market the fees charged
(ii) Communication campaigns and marketing for the public about PA fees are in place at PA site level	0				Not yet developed as user fee system is not yet in place
Element 5 – Operational PES scheme for PAs [8]	**No (0)**	**Partially (1)**	**Progressing (2)**	**Fully (3)**	
(i) A system-wide strategy and action plan for PES is complete and adopted by government	0				Looking at such a system for water Could not work for Forestry because upstream users are not involved Does not exist really—has been looked at but not finalized or agreed
(ii) Pilot PES schemes at select PA sites developed	0				
(iii) Operational performance of pilots is monitored, evaluated and reported	0				
(iv) Scale up of PES across the PA system is under way	0				
Element 6 – Concessions operating within PAs [9]	**No (0)**	**Partially (1)**	**Progressing (2)**	**Fully (3)**	
(i) A system-wide strategy and implementation action plan is complete and adopted by the government for concessions	0				
(ii) Concession opportunities are operational at pilot PA sites				3	JNHT has 2 operational at a site (Seville in the parish of St. Ann and Port Royal in Kingston)
(iii) Operational performance (environmental and financial) of pilots is monitored, evaluated, reported and acted upon				3	JNHT only
(iv) Scale up of concessions across the PA system is under way	0				

Element 7 – PA training programmes on revenue generation mechanisms	None (0)	Limited (1)	Satisfactory (2)	Extensive (3)	
(i) Training courses run by the government and other competent organizations for PA managers on revenue mechanisms and financial administration		1			TNC/TPDCo/Tourism ministry offer a course but not at government level Not opened to all PA managers
Total Score for Component 3					Actual score: 25 % 0.362318841

ANNEX 2
BASIC CRITERIA FOR RESOURCE ALLOCATION IN PA

Protected Area		Terrestrial/ Marine/Other	% of demonstrative PA	Priority (Short/ Medium/ Long)	Potential for Tourism (Yes/No)	Potential for Research (Yes/No)
1	Montego Bay Marine Park	Marine	75	Short	Yes	Yes
2	Blue and John Crow Mountains National Park	Terrestrial	100	Short	Yes	Yes
3	Negril Environmental Protection Area	Marine/ terrestrial	50	Medium	Yes	Yes
4	Negril Marine Park	Marine	100	Short	Yes	Yes
5	Palisadoes–Port Royal Protected Area	Marine/ terrestrial	30	Short	Yes	Yes
6	Coral Spring–Mountain Spring Protected Area	Terrestrial	10	Short	No	Yes
7	Portland Bight Protected Area	Marine/ terrestrial	100	Short	Yes	Yes
8	Ocho Rios Marine Park	Marine	40	Short	Yes	Yes
9	Mason River Protected Area	Terrestrial	5	Short	No	Yes
10	Bogue Lagoon Fish Sanctuary	Marine	100	Short	No	Yes
11	Saint Thomas	Marine	100	Short	No	Yes
12	FORESTRY Northeast	Terrestrial	140	Short	Yes	Yes
13	FORESTRY Southeast	Marine/ terrestrial	120	Short	No	Yes
14	FORESTRY Northwest (COCKPIT)	Terrestrial	100	Short	Yes	Yes
15	FORESTRY Southwest	Marine/ terrestrial	80	Medium	Yes	Yes
16	Port Royal and Palisadoes (Kingston)	Regulate	100	Short	Yes	Yes
17	Black River (St. Elizabeth)	Regulate	40	Long	No	No
18	Spanish Town (St. Catherine)	Regulate	110	Short	Yes	Yes
19	Titchfield Hill (Portland)	Regulate	30	Short	Yes	No
20	Falmouth (Trelawny)	Regulate	110	Short	Yes	Yes
21	Seville (St. Ann)	Own and manage	100	Short	Yes	Yes
22	Rio Nuevo Taino Site (St. Mary)	Regulate	70	Long	No	Yes
23	Mountain River Cave (St. Catherine)	Own and manage	5	Medium	No	Yes
24	Mason River Reserve (Clarendon)	Managed by others	80	Short	No	Yes

Source: Protected Areas Committee Meeting

ANNEX 3
GENERAL STANDARDS FOR PA MANAGEMENT

FINANCIAL NEEDS ASSESSMENT/GENERAL STANDARDS FOR PA MANAGEMENT				
Expenditure Category Human Resources	**Suggested Standard**	**Cost USD**	**Basic**	**Ideal**
PA Manager (Technical; Forestry would not need a manager per PA; Regional Manager)	1 per PA	**2000–25000**	x	
Administrative Manager (office running; operative)	1 per PA; when needed	**15000–20000**		x
Administrative Assistant (office running; operative)	1 per PA	**12000–15000**	x	
Chief of corps (senior ranger coordinator)	1 per 12 rangers	**12000–15000**		x
Ranger	Basic: 1 per 10 km^2; Ideal: 2 per 10 km^2	**10000–12000**	x	
Public education officer (facilitator of education)/Community outreach officer	1 per PA	**15000–20000**	x	
Programme officer (tourism, planning, research, sustainable finance, etc.)	at least 1 per PA	**17000–20000**		x
Ancillary staff	1 per PA	**5000–7000**	x	
Driver		**7000–10000**	x	
Operations manager (for marine PA)	1 per PA	**15000–20000**		x
Operational costs	**Suggested Standard**	**Cost USD**	**Basic**	**Ideal**
Transportation allowance (only outside of the PA)	$6000 per travelling officer per year plus mileage; average 7200 km per year per person	**Site specific**	x	
Subsistence	$0.75 per hour per person; 84 hours per month per person	**Site specific**	x	
Workshops and meetings organised by the PA per year (does not include accommodation)	Basic: 4 meetings 15 participants; Ideal: 6 meetings 30 participants	**500 per ws**	x	
Basic utilities (phone, electricity, water, rental office space)	Average $1000 per month	**1200**	x	
Insurance (% of insurance; public liability + employers + buildings + vehicles)		**3.5%**		x
Internet service	Lowest rate	**35**		x
Fuel/Diesel	Average consumption per car per year; 3500 per car	**2500**	x	
Maintenance	5% infrastructure, transportation, equipment	**5%**		

Equipment	Suggested Standard	Cost USD	Basic	Ideal
Uniforms	Basic: 2 per person; Ideal: 4 per person per year	**900**	x	
Field equipment (water poncho, knife, canteen)	One per ranger	**200**	x	
Camping equipment	One each 4 rangers	**700**	x	
Computer	1 per PA	**1000**	x	
Laptop	1 per PA	**1700**		x
Printer	1 per PA	**350**	x	
Telefax	1 per PA	**150**		x
Scanner	1 per PA	**300**		x
GPS	1 per PA	**600**	x	
Base radio	1 per PA	**1500**	x	
Walkie Talkie	1 per 5 rangers	**300**	x	
Film camera	1 per PA	**800**		x
TV	1 per PA	**500**		
DVD	1 per PA	**100**		
Projector	1 per visitor centre	**1000**		x
Photo camera	1 per PA	**400**	x	
Binoculars	2 per building	**120**	x	
Telescope	1 per visitor center	**800**	x	
Complete office furniture	1 per PA	**600**	x	
Complete house furniture	1 per PA	**800**	x	
First aid kit	1 per building & vehicle	**120**	x	
Fire control equipment	1 per building & vehicle	**80**	x	
Complete science laboratory	1 per PA	**1200**		x
Professional services	**Suggested Standard**	**Cost USD**	**Basic**	**Ideal**
Management plan formulation (explanatory note of what this means/includes research programme)	1 every 10 years	**50000**	x	
Management plan review	1 every 3–5 years	**10000**		x
Management effectiveness assessment (some operational changes should be reviewed in operational plan)	1 every 3 years; Basic: system level; Ideal: site level	**15000**		x
Business plans (including tourism development/feasibility study)	1 each 5 years; only for PAs with great potential	**15000**	x	
Enforcement plan	PAs with special needs	**10000**		x
Commissioned land surveyor	Site specific (USD 300 * ha)	**Site specific**		

Infrastructure major equipment & vehicles	Suggested Standard	Cost USD	Basic	Ideal
Administrative center/main PA office	1 per PA; 1350 ft^2 (150m^2) (site specific)	**40000–60000**	x	
Security post (entrance gate)	1 per high pressure zone; 15 m^2 (site specific)	**4000–6000**	x	
Satellite ranger station	1 per high pressure zone; 30 m^2 (site specific)	**8000–10000**	x	
Ranger base (house/base)	1 per PA; 80 m^2 * person (site specific)	**20000–25000**	x	
Visitor centre	1 per PA; 200 m^2 * person (site specific)	**54000–60000**		x
Research centre	1 per PA; 300 m^2 * person (site specific)	**80000–90000**		x
Boundary markers	Basic: 1 per 10 km; Ideal: 1 per 1 km	**300**	x	
Nautical boundaries (buoy)	Basic: 1 per 2 km; Ideal: 1 per 1 km	**200**	x	
Store room	1 per PA; 50 m^2 (concrete)	**10000**		x
Trails (includes signs and related infrastructure)	(Site specific) (300 USD per km of trail)	**300 per km**		x
Roads	Maintenance ($1000 per km* year) Access + internal roads	**1000 per km**	x	
Camping sites	1 per PA; 100 m^2 (wood)	**10000–15000**		x
Signs	1 per access/entrance + 1 visitor centre + 1 per road	**1500**	x	
Vehicle	1 per PA; 4x4 double cab pick-up each 6 persons in a site: (+device to transport boats when needed)	**50000–60000**	x	
Motorcycle	Basic: 1 every 2 people/ Ideal: 1 per person	**4000**	x	
Patrolling boat with motor	2 per PA; 6 people (250 HP)	**50000**	x	
Transport boat with motor	1 per PA; 10 people (750 HP)	**75000**		x
Assistance required from JDF (air & sea)	Site/agency specific	**20000–25000**	x	

Systemic	Suggested Standard	Cost USD	Basic	Ideal
Fundraiser	Basic: 1 person; Ideal: 3 persons	**40000**		
GIS and alphanumerical database	Basic: PA basic maps to set boundaries; Ideal: thematic information and database	**60000–120000**	x	
Training event for human resources	Basic: 1 every 2 years; Ideal: 1 per year (50 people * 3 days)	**2000–2500**	x	
Planning and related events	Basic: 2 per year; Ideal: 4 per year (30 people)	**1000–1500**	x	
Consultancy to establish a research and monitoring programme including research protocols and training to PA	1 every 5 years	**25000–30000**		x
Research programme (3 scientists + lab+)		**125000**		
Consultancies related to the POW commitments (CBD)	Basic: 1 per year; Ideal: 3 per year (30 people)	**25000**	x	
Consultancy to develop CBD reports and other related international commitments	Basic: 1 per 2 years; Ideal:1 per year	**15000**		x
Conflict management consultancy	1 each 4 years	**5000**		x
Attendance at international PA conservation related conferences and events	Basic: 2 per year; Ideal: 6 per year	**4000 per person**	x	
Update PAS Strategic Plan	1 every 10 years	**250000**		x
Video	1 video (30 min; 10 min; 1 min)	**30000**		x
TV publicity	24 per year	**60000**		x
Radio publicity	48 per year	**20000**		x
Information handouts/brochures	15000 per year	**1000**	x	
Broadcasts	Basic:3; Ideal: 6	**2500**		x
Detailed research to follow up	1 every 4 years	**40000–50000**	x	
Legislation (lawyers/)	1 per year	**20000**	x	

ENDNOTES

[i] José Galindo, 'Estimación de la contribución económica del turismo en areas protegidas de Sudamérica' (The Nature Conservancy, 2007).

[ii] L. Emerton, J. Bishop, and L. Thomas, *Sustainable Financing of Protected Areas: A Global Review of Challenges and Options* (Switzerland and Cambridge, UK: IUCN, Gland, 2006), x + 97pp.

[iii] National Environment and Planning Agency, Jamaica National Heritage Trust, Forestry Department, Fisheries Division.

[iv] Andrew Bovarnik, 'Scorecard for Protected Areas Financial Sustainability' (UNDP, 2007).

[v] L. Emerton, J. Bishop, and L. Thomas, *Sustainable Financing of Protected Areas*.

[vi]Charlie Brown, Scott Edwards, 'Situation Analysis of Jamaica's Protected Areas System Plan' (2005).

[vii] http://tourism.gov.jm/master_plan/tef/

[viii] José Galindo, 'Estimación de la contribución económica del turismo en áreas protegidas de Sudamérica'

[ix] L. Emerton, J. Bishop, and L. Thomas, *Sustainable Financing of Protected Areas*.

[x] Philippe Taïeb, 'Securing Funding from International Development Agencies: Background Research & Lessons' (Fall 2005).

[xi] The combined effect of the hotel tax and visitor fee equals US$3 per visitor. This suggests a decline close to 1% in visitation, according to Peter Edwards' paper.

[xii] http://tourism.gov.jm/master_plan/tef/

[xiii] Philipe Taïeb, 'Securing Funding from International Development Agencies.'

[xiv] Interview with NEPA.

[xv] Peter E.T. Edwards, 'Sustainable Financing for Ocean and Coastal Management in Jamaica: The Potential for Revenues from Tourist User Fees' (2008).

[xvi] A. Hayman, 'National Report on Management Effectiveness Assessment and Capacity Development Plan for Jamaica's System of Protected Areas' (Capacity Development Working Group, 2007).