Protected Areas System Master Plan: Jamaica

CONSULTATION DRAFT

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Acknowledgments

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Members of the Protected Areas Committee

- Forestry Department - Chair
- National Environment and Planning Agency (NEPA)
- MWLECC
- Jamaica National Heritage Trust (JNHT)
- Chair of CITES Scientific Authority
- Fisheries Division, MAF
- The Nature Conservancy – Secretariat to the PAC

Acronyms

CBD	Convention on Biological Diversity
CBO	Community-Based Organization
CEPF	Critical Ecosystem Partnership Fund
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
COP	Conference of the Parties
EFJ	Environmental Foundation of Jamaica
E-NGOs	Environmental Non-Governmental Organizations
FCF	Forest Conservation Fund
GEF	Global Environment Facility
GoJ	Government of Jamaica
IUCN	International Union for the Conservation of Nature and Natural Resources
IOJ	Institute of Jamaica
JCDT	Jamaica Conservation and Development Trust
JNHT	Jamaica National Heritage Trust
KBA	Key Biodiversity Area
MWLECC	Ministry of Water, Land, Environment and Climate Change
NBSAP	National Biodiversity Strategy and Action Plan
NEPA	National Environment and Planning Agency
NRCA	Natural Resources Conservation Authority
OPM	Office of the Prime Minister
PAs	Protected Areas
PAC	Protected Areas Committee
PASP	Protected Areas System Plan
PASMP	Protected Areas System Master Plan
PoWPA	Programme of Work on Protected Areas
TNC	The Nature Conservancy
UNFCCC	United Nations Framework Convention on Climate Change
UNCCD	United Nations Convention to Combat Desertification

Foreword

Despite their relatively low numbers worldwide, protected areas have contributed to the protection of 80% of threatened species. Many protected areas also provide social and economic benefits, supporting livelihoods for millions of people, safeguarding crucial services such as fresh water, food and carbon storage as well as mitigation of natural disasters. Protected areas can contribute to facing the challenges of biodiversity loss, water shortages, food insecurity and rapid climate change. In developing the Protected Areas System Master Plan (PASMP) Jamaica has recognised the critical role that these areas have to play in national and local mitigation and adaptation strategies to build resilience to climate change.

Jamaica has long recognized the value of protected areas and declared the first of its several protected areas in 1904. The aim of the PASMP is now to develop a comprehensive and representative system of protected areas including our landscape, seascape and natural and cultural heritage. The Plan, which is in keeping with Vision 2030 Jamaica – National Development Plan, will be the primary national policy document for strengthening management and extending protected area coverage. The core idea of protected areas system planning is that effective planning and management of protected areas requires a coordinated approach, both with respect to the various units within the system, and with other land uses and management activities.[1]

The PASMP is a product of many years of effort from all sectors of society. While recognising its importance, we acknowledge that the work must continue. The effective implementation of the Plan will require partnerships between the Government of Jamaica, communities, NGOs, academia and other interested parties as we continue towards a sustainable future for the nation.

Minister (responsible for the environment and forestry)

Minister (responsible for heritage and culture)

Minister (responsible for agriculture and fisheries)

[1] Hayman, A. (2007). *Protected Area System Master Plan Institutional Arrangements and Coordination.*

1. Background

1.1 Rationale for Jamaica's Protected Areas System Master Plan

1.1.1 Coherence in Protected Areas Management

> ***"The vision for Jamaica's protected areas is one of effective management through a system which represents the diversity of the country's ecosystems and local heritage, towards the achievement of environmental, economic, cultural and social goals for the benefit of all generations."***

The Protected Areas System Master Plan (PASMP) is the road map for making the vision for Jamaica's protected areas a reality. It sets out guidelines for establishing and managing a comprehensive network of protected areas that supports national development by contributing to long-term ecological viability; maintaining ecological processes and systems; and protecting the country's natural and cultural heritage. The PASMP sets out strategies and activities that will lead to the establishment of a network of protected areas that is representative, effectively managed, and sustainably financed. It covers the five-year period 2013-2017.

Jamaica's protected areas are governed by a complex amalgam of legislation, policies, management authorities, and management actors. It also comprises a wide range of categories of protected areas that are subject to different protective regimes, based on management objectives. As at 1 January 2012, there were 19 different categories of "protected areas" in Jamaica under the jurisdiction of four government agencies – the Fisheries Division, the Forestry Department, the Jamaica National Heritage Trust (JNHT), and the National Environment and Planning Agency (NEPA) (see Appendix 1). The different types of protected areas were established independently during the past century under various acts of parliament in efforts to safeguard unique biological and cultural features in the country (Ecological Working Group (EWG), 2009). However, inadequate linkages across agencies and ministries and a lack of clarity in definitions of categories of areas for protection have hindered effective management (EWG, 2009). The PASMP is intended to improve coherence in management while ensuring that the country's network of protected areas delivers tangible benefits and supports national development goals.

"The PASMP is intended to improve coherence in management while ensuring that the country's network of protected areas delivers tangible benefits and supports national development goals."

1.1.2 Benefits of a System Approach

A system approach to protected areas management links conservation with other human endeavours. As many of the major threats to conservation are due to factors and conditions that are external to

protected areas, a holistic and integrated approach to protected areas management is the best option for addressing the underlying threats and challenges to conservation (Davey, 1998).

The International Union for the Conservation of Nature (IUCN) has identified a number of reasons for taking a system approach to planning. Some of the reasons that are particularly relevant in the Jamaican context include the following:

- To relate protected areas to national priorities, and to prioritise different aspects of protected areas development;
- To move away from a case by case, ad hoc approach to resource management decision making;
- To target proposed additions to the protected area estate in a more rational and persuasive manner than ad hoc planning;
- To facilitate integration with other relevant planning strategies, such as those for national tourism, national biodiversity conservation or sustainable development;
- To facilitate access to international and national funding by defining priorities for investment in protected areas and increasing the level of confidence in the efficient use of funds and resources;
- To define a better process of decentralisation and regionalization of protected area activities, resources and responsibilities, including the involvement of NGOs and the private sector;
- To assist in making decisions relating to trade-offs, clarify roles and responsibilities of different stakeholders, and facilitate diverse stakeholder involvement;
- To provide a broader perspective for addressing site-specific issues, such as tourism management; and
- To assist in meeting obligations under international treaties (Davey, 1998).

Protected area management outcomes are better if they are:

- Linked within a wider "network of protected and managed lands and waters in order to maintain ecological processes, functions and services."

- Incorporated (at both the levels of design and management) into a "broader framework of land-use plans and natural resource laws and policies in order to maximize benefits from, and mitigate threats to, biodiversity" (Ervin, J., *et al*. 2010:7).

The benefits of an integrated protected areas network are shown in Box 1.

Box 1 Economic, Social and Ecological benefits of an Integrated Protected Areas Network

Economic, social and ecological benefits of an integrated protected areas network
An integrated, functional network of protected areas, buffer zones and corridors, sustained by an enabling policy environment and long-term funding, will ensure many benefits to society, including: ✓ ***Livelihood security***: By ensuring that communities have the natural resources they need to survive; ✓ ***Municipal water supplies***: By ensuring that natural land cover is intact and

Economic, social and ecological benefits of an integrated protected areas network

provides the quantity and quality required by an ever increasing population;

- ✓ ***Agriculture***: By ensuring the maintenance of ecosystem services required by agriculture, including water, soil stabilization, and pollination;
- ✓ ***Natural disaster mitigation***: By providing natural buffers against the effects of severe flooding, storm surges, high winds, and the increasing impacts of climate change;
- ✓ ***Fisheries***: By ensuring that areas of importance to fisheries stocks, such as migratory routes, nursery and incubation sites and spawning grounds are maintained;
- ✓ ***Tourism***: By providing the natural infrastructure required for a nature-based tourism industry.

Source: Ervin, J., et *al*. 2010, based on The Convention on Biological Diversity, 2008.

1.1.3 Linkages to National Plans and Strategies

The preparation and publication of the PASMP is consistent with national plans and strategies, as set out in the following documents:

- The ***Policy for Jamaica's System of Protected Areas (1997***) provides for the development of a national system plan for all protected areas to set priorities and identify national interests in protected areas, and guide annual planning of work programmes, budgets, staff, training, and equipment (Government of Jamaica, 1997). Indeed, the ***National Strategy and Action Plan on Biological Diversity in Jamaica*** notes that the successful implementation of this policy depends on "the coordination of policy, planning and implementation among the agencies with responsibility for the different types of protected areas" (National Environment and Planning Agency, 2003).

- National outcome 13 of ***Vision 2030 Jamaica: National Development Plan*** is the sustainable management and use of environmental and natural resources. Vision 2030 recognises the PASMP as a critical tool towards meeting the country's Environmental Performance Index targets (Planning Institute of Jamaica, 2009).

- In addition to sound stewardship of natural resources, Vision 2030 supports the need to preserve our heritage through the development of a framework for identifying, protecting and preserving aspects of our heritage. The National Development Plan has identified the preservation, development and promotion of Jamaica's cultural heritage as one of the national strategies towards developing an "authentic and transformational culture" (National outcome 4); the PASMP plays a critical role in this regard.

- The ***Combined Sector Plan Natural Resources and Environmental Management and Hazard Risk Reduction and Climate Change*** of Vision 2030 Jamaica: National Development Plan calls for the finalisation and promulgation of the PASMP by 2012 under Goal 2: Sustainable Management and Utilisation of Natural Resources.

Additionally, the PASMP is an important guiding framework for selected national and sectoral strategies:

- The ***Medium Term Socio-Economic Policy Framework (MTF) 2009 - 2012***, which supports the delivery of Vision 2030 recognises the environment as a cross-cutting issue to be integrated in the implementation of the priority and supporting outcomes of the MTF. Environmental strategies for the medium term include the establishment of terrestrial and marine protected areas (Planning Institute of Jamaica, 2008).

- The ***Strategic Forest Management Plan 2010 - 2014*** sets out an intention to align priorities for protecting and designating Forest Reserves with the PASMP (Forestry Department, 2009).

- The ***Master Plan for Sustainable Tourism Development (2002)*** recognises the centrality of environmental sustainability to Jamaica's tourism industry. It also notes that the country's ability to "offer culture, nature and heritage-based products, entertainment, sports, and adventure tourism" is one way in which it could differentiate itself from most other Caribbean destinations. The Tourism Master Plan calls for the declaration of protected areas and the financial sustainability of protected areas that could be nature-based attractions within the tourism product. The PASMP has an important role to play in ensuring this is done in an appropriate and coherent manner.

- The ***Culture, Creative Industries and Values Sector Plan*** of Vision 2030 identifies heritage preservation and development as one of the ten broad areas of intervention within its strategic approach. More specifically, strategy 7.2.3 relates to the strengthening of identification, monitoring, maintenance and promotion of protected heritage sites. The PASMP provides an important context for several of the actions in support of this strategy (Culture, Creative Industries and Values Task Force, 2009).

1.1.4 Meeting International Treaty Obligations

The preparation of the PASMP fulfils one of Jamaica's obligations as a Party to the ***Convention on Biological Diversity (CBD***) and the Plan is aligned with the CBD's Programme of Work on Protected Areas (PoWPA) (see Section 4.2.1).

The PASMP is a useful tool in meeting the country's obligations under other multilateral environmental agreements, including the following: ***Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)***, ***UN Framework Convention on Climate Change (UNFCCC)***, ***Convention on Wetlands of International Importance Especially as Waterfowl Habitat (Ramsar Convention)***, the ***UN Convention on the Law of the Sea (UNCLOS)***, and the ***UN Convention to Combat Desertification***

(UNCCD). Given the benefits of protected areas to biodiversity conservation, habitat protection, reducing greenhouse gases and minimising soil degradation, the PASMP's integration into relevant strategies and national reports will be a key vehicle for its effective implementation.

Similarly, within the cultural sphere, the PASMP will support meeting obligations under the ***Convention on the Protection of the Underwater Cultural Heritage***, and the ***Convention for the Safeguarding of the Intangible Cultural Heritage***, ***and*** the ***Convention Concerning the Protection of the World Cultural and Natural Heritage (World Heritage Convention)***.

1.2 The Process of Developing the Protected Areas System Master Plan

The PASMP is the product of many years of work involving several stakeholders. There have been two initiatives to develop a protected areas system and master plan. Between 1989 and 1998, the USAID-supported Protected Areas Resource Conservation Projects (PARC I and PARC II) sought to develop a system of protected areas and in 1992 the lead implementing organisation under the projects, the Jamaica Conservation and Development Trust (JCDT), led a process to prepare a draft Protected Areas System Plan. The main outcomes of this period were the preparation of a draft plan, the declaration of new protected areas, and the development and approval of a National Protected Areas Policy in 1997.[2]

The current effort that led to the preparation of this PASMP had its genesis in a 2001 review of the management of protected areas in Jamaica by the Caribbean Natural Resources Institute (CANARI), which recommended the preparation of a national system plan for protected areas for approval by NEPA and endorsement by other stakeholders. In 2003, CANARI further proposed that the project to implement the system be funded with the support of the Environmental Foundation of Jamaica (EFJ) and the Canada/Jamaica Green Fund. Three components of the current PASMP were prepared under the Protected Areas System Plan (PASP) Project: legal, culture and heritage, and public awareness.

In 2006, the Protected Areas Committee (PAC) was established and a process agreed for the completion of a PASMP, with the support of The Nature Conservancy. The PAC was mandated to prepare the Master Plan as the road map for an effectively managed and sustainably financed, representative protected areas system, in accordance with the CBD's guidelines and PoWPA, as well as national needs. The PAC was supported by three technical working groups: the Ecological Working Group; the Sustainable Finance Group and the Capacity Development Working Group. The names of the individuals who served on these working groups between 2006 and 2010 appear in Appendix 2.

The preparation and finalisation of the reports that informed the development of the PASMP was subjected to a process of stakeholder consultation. Subsequently, the PAC accepted and signed off on all the reports. Focus Group meetings were also convened to re-examine the issues related to legal and institutional frameworks in an effort to ensure that the current realities were taken into account.

[2]Note that the policy primarily dealt with protected areas under the Natural Resources Conservation Authority Act.

The PASMP has been informed by the following studies:

1. Capacity Development Working Group. (2007). *National Report on Management Effectiveness Assessment and Capacity Development Plan for Jamaica's Protected Areas*, January. Kingston: Government of Jamaica

2. Ecological Working Group (EWG). (2009). *Jamaica's National Ecological Gap Assessment Report (NEGAR).* May 2009. Kingston: Government of Jamaica

3. Galindo, J. (2009). *Financial Sustainability Plan for Protected Areas System of Jamaica*, Mentefactura, December 30.

4. Griffith, S. and K. Emmanuel. (2005). *Protecting Heritage and Culture: It's Role in the Protected Areas System Plan and Impact on National Development,* January.

5. Hayman, A. (2007). *Protected Areas System Master Plan Institutional Arrangements and Coordination*, March.

6. McCalla, W. (2004). *Protected Areas System Plan Legal Framework* , November 26.

7. Spence, T. (2006). *Strategic Plan for Developing the Protected Areas System Plan*, February.

8. Yugorsky, P. and A. Sutton. (2004). *Jamaica's Protected Areas System Plan Biodiversity Report.Working Paper 1: Categorization of Protected Areas in Jamaica.* First Draft. Prepared for the National Environment and Planning Agency, and National Environmental Societies Trust. November 3.

9. Robinson, L. (2004). *National Consultations and Public Awareness Strategy for Jamaica's Protected Areas System Plan Project*. Prepared for the National Environmental Societies Trust. December.

10. Protected Areas Committee. (2009). *Meetings of the Protected Areas Committee - Institutional Arrangements Subcommittee between 15th June 2009 and 17 October.*

1.3 What Are Protected Areas and Why Are They Important?

A protected area is a clearly defined geographical area of land and or water that is dedicated to and managed for the long term conservation and sustainable use of its ecological systems, biodiversity and/or specific natural, cultural or aesthetic resources. It is a place that has been singled out for the formal regulation of human activity because of its ecological, natural and/or cultural importance to a region, country or even the world**.** Natural and heritage sites are afforded different levels of protection, depending on the management objective.

Protected areas benefit people and nature. They are important for biodiversity conservation and maintaining the health and diversity of ecosystems. They support many natural cycles and ecological processes that are essential for life on earth. They provide habitats for wildlife, including threatened and endangered species.

Protected areas can be a source of livelihoods, for example through nature-based tourism, or they can enhance livelihoods through the ecosystem services they provide, for example pollination by social insects to support farming or nursery habitats for marine animals to support fisheries. Jamaica's protected areas are no exception; most of them play an important role in supporting livelihoods.

"A protected area is a clearly defined geographical area of land and or water that is dedicated to and managed for the long term conservation and sustainable use of its ecological systems, biodiversity and/or specific natural, cultural or aesthetic resource."

Protected areas are repositories of (plant and animal) genetic material that may be the basis of new foods, medicines and other products. Their scientific value includes providing benchmarks to measure the nature and rate of environmental change. Protected areas also have important educational and recreational value. And people are now beginning to look to protected areas to play an important role in reducing the impacts of climate change (see for example Dudley, N., et *al*. [editors], 2010).

Heritage sites and other cultural assets are important historic and cultural links to the past. They provide present generations a sense of continuity and a source of identity. They are part of a location's special identity and have cultural values that should be handed down to future generations (Australian Heritage Commission, 2000).

1.4 The Benefits and Value of Jamaica's Protected Areas

Approximately 18 per cent of Jamaica's land and 15 percent of the country's archipelagic waters are currently under some form of protection. The more than 350 protected areas currently in existence include national parks, such as the Blue and John Crown Mountains National Park; forest reserves such as the Cockpit Country Forest Reserve; game reserves such as the Glistening Waters Game Reserve; marine parks such as the Montego Bay Marine Park; fish sanctuaries such as the Oracabessa Fish

Sanctuary; and heritage sites such as the Spanish Town Historic District. Lists of Jamaica's natural and cultural heritage protected areas are attached at Appendices 3 and 4 respectively.

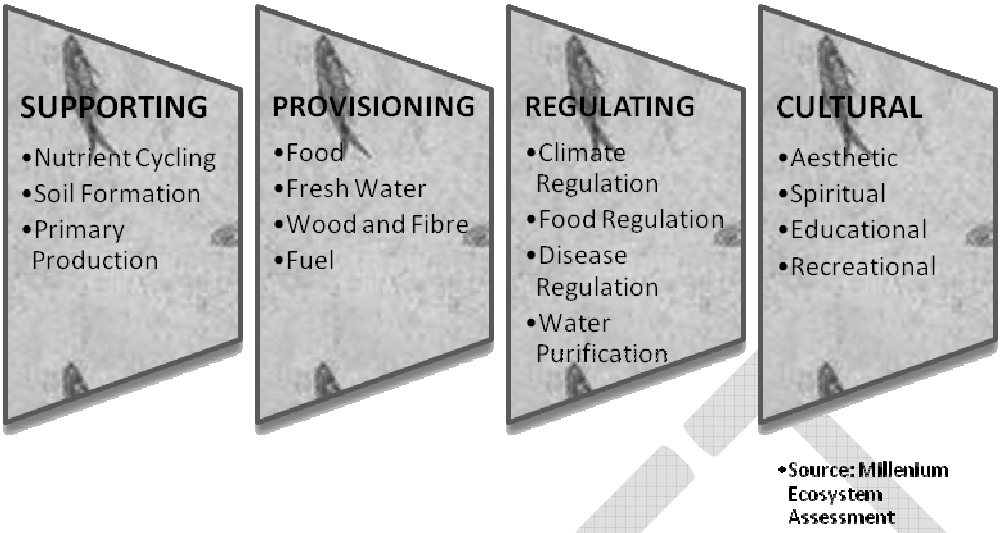
Jamaica's protected areas provide the range of ecosystem services that are essential to human well-being (see Figure 1). The ecosystems in these sites have extractive direct use values (e.g. fisheries); non-extractive direct use values (tourism and recreation); indirect use values (control of soil erosion and coastal protection); and non-use values (biodiversity). Forests, for example, play a vital role in protecting and conserving water, soils and biological diversity (Forestry Department, 2009). The forested areas that protect upper watersheds reduce run-off and allow percolation thereby ensuring a more regular flow of water to reservoirs (Forestry Department, 2002).

"… protected areas provide the range of ecosystem services that are essential to human well-being."

Coastal and marine ecosystems in marine protected areas support fisheries and well as recreational activity and tourism. Studies of the country's marine protected areas show that they have had some success. In 2008, there were two to three time more commercially important fish species and lobster inside marine protected areas than in unprotected areas. A 2011 survey showed that fish diversity and coral cover were higher inside the ***Montego Bay and Negril Marine Protected Areas*** than in unprotected areas (NEPA, 2008 and Newman *et al.*, 2011 cited in Waite, R., E. Cooper *et al*., 2011).

Jamaica's natural environment, including the beaches and reefs, is a primary attraction for its visitors; this means the quality of the environment is important for the tourism industry, which generated 278,500 jobs or 24 per cent of total employment in 2011 and contributed J$335.1 to GDP (accounting for 25.6 per cent of GDP) in that same year (World Travel and Tourism Council, 2012). Marine protected areas can be an important asset to Jamaica's tourism product, particularly for dive tourism and in instances where beach and shoreline protection are a result of reduced coral reef degradation. Terrestrial protected areas, such as forest reserves and heritage sites, are also important tourist attractions and they too are worth being looked after in order to support this economically important industry.

Figure 1 **Categories of Ecosystem Services**



"In affording some level of protection to these and other important natural areas on land and in the sea, we are helping to ensure that they are able to continue to provide a range of services for human-wellbeing."

The ***Blue and John Crow Mountains National Park*** and the ***Cockpit Country*** are two important centres of genetic diversity within the overall Caribbean biodiversity 'hotspot"[3] as well as important sources of water in the east and the west of the island respectively. Nearly 275 Jamaican endemic species and 14 endemic varieties are found in the Blue and John Crown Mountains National Park/Forest Reserve. The National Park/Forest Reserve is an important watershed for Kingston, St. Andrew, Portland and St. Thomas.

The Cockpit Country is the largest remaining intact primary wet limestone forest in Jamaica. It has been called an island within an island because of the specially-adapted biodiversity found there exclusively. The Cockpit Country replenishes the aquifers of five major rivers in western Jamaica: Black River, Great River, Martha Brae, Montego River, and Hector's River. These rivers supply water to St. Elizabeth, Trelawny and St. James (Pryce *et al*., 2008). A 2011 ecosystem service valuation of the Cockpit Country put the annual value of the area's carbon sequestration services at J$896 million (Edwards, 2011).

The ***Portland Bight Protected Area*** is Jamaica's largest protected area. It has several valuable ecological resources, including coral reefs, sensitive wetland systems, unique dry limestone forests, and is home to

[3] The biodiversity hotspot concept was developed in 1998 as a system to help conservationists determine the most immediately important areas for conserving biodiversity. To qualify as a hotspot, a region must meet two strict criteria: it must contain at least 1,500 species of vascular plants (> 0.5 percent of the world's total) as endemics, and it has to have lost at least 70 percent of its original habitat. More than 50 percent of the world's plant species and 42 percent of all terrestrial vertebrate species are endemic to the world's 34 biodiversity hotspots. www.biodiversityhotspots.org

a number of endangered, rare, endemic or protected species, such as the Jamaican Iguana (*cyclura collei*) and the Jamaican Pauraque *(Siphonorhis americana*). The coastal areas of the Portland Bight have the largest remaining mangrove system in Jamaica, comprising 48 km^2 of almost unbroken red mangrove (*Rhizophora mangle*) mixed with buttonwood (*Conocarpus erectus*), white (*Laguncularia racemosa*) and black (*Avicennia germinans*) mangrove trees (CCAM, 1999 *cited in* Cesar, 2000). The carbon sequestration value of these mangroves has been put at US$45 million per year and the total coastal protection value of the area's marine and coastal ecosystems has been estimated at US$ 400,000 per year (with 10 per cent discount rate) (Cesar, 2000).

In affording some level of protection to these and other important natural areas on land and in the sea, we are helping to ensure that they are able to continue to provide a range of services for human-wellbeing. Well-functioning ecosystems with a high level of biodiversity are generally better able to deliver multiple services than ecosystems that are managed for one purpose only, for example agriculture. By declaring and managing protected areas, Jamaica is seeking to maintain balance in the use of its natural resources and ensure that they can continue to support the country and its people.

2. Situation Overview

2.1 Existing Protected Areas and Gaps in Coverage

Notwithstanding the relatively large coverage (approximately 18 per cent of land and 15 percent of archipelagic waters), the existing protected sites do not include all the critical natural processes necessary to maintain Jamaica's significant biological features for the long term. Moreover, a number of biodiversity elements and ecological processes are not part of the current conservation portfolio (Ecological Working Group, 2009). An integrated ecological gap assessment was conducted between 2008 and 2009. The resulting National Ecological Gap Assessment Report (NEGAR) established conservation targets, identified critical representation, ecological and management gaps throughout Jamaica's marine, terrestrial and freshwater systems. A summary of the NEGAR is presented at Appendix 5. Recommendations of the NEGAR have informed the PASMP action plan. Key findings about the current situation are listed below:

2.1.1 Representation Gaps

- Representation of critical marine conservation targets on the eastern coast of Jamaica is ecologically insufficient for functionality within existing protected areas.
- Limited data are available for the analysis of plants and as a result, only "threatened plant assemblages" and vegetation types were selected as floral targets.
- The under-representation of four targets that fall below the ten per cent threshold – Wet and Very Wet Forest on Alluvium, Mesic Forest on Shale, and *Osteopilus marianae* (frog species) – is of particular concern.
- Freshwater gaps are large rivers, wetlands, ponds and lakes as well as freshwater caves that occur in the eastern part of the island and high-altitude streams in the western part that have no representation in any of Jamaica's protected areas.

2.1.2 Ecological Gaps

- The main ecological gap in the design of Jamaica's protected areas is that of connectivity.
- No protected area in Jamaica covers complete river systems from headwaters to the coast. Longitudinal (or linear) and lateral connectivity are critical for the sustainable health of freshwater systems.
- Current protected areas legislation is not designed to accommodate seascape-scale connectivity, functions and processes that are necessary to maintain overall marine biodiversity health.

2.1.3 Management

- Lack of focus on conservation actions that directly impact biodiversity, such as threat abatement and enforcement.
- Inadequate investment of monetary and human resources in conservation.
- Multiple-agency management combined with the lack of a harmonised system of classification to guide the management of protected areas are contributing to inefficiencies and shortcomings in overall performance.

2.1.4 Historical and cultural assets

In the absence of systematic heritage surveys, there is inadequate knowledge of the country's heritage sites; up to 2005, only five to 10 per cent of the island had been surveyed during the previous seven years to locate historic and cultural sites (Griffith, S. and K. Emmanuel, 2005). There is a widely held view within the cultural heritage sector that the country's historical and cultural assets are underrepresented in the existing portfolio.

The protection of intangible cultural heritage (e.g., language, dance, music, healing practices) has received less attention than the built environment. The latter is protected through legislation and placed under the custody of the JNHT, but there are no similar provisions for aspects of intangible cultural heritage (Griffith, S. and K. Emmanuel, 2005). See Appendix 6 for a summary of the report "*Protecting Heritage and Culture: Its Role in the Protected Areas System Plan and Impact on National Development*".

2.2 Threats to Jamaica's Protected Areas

Jamaica's protected areas are subject to a range of pressures and threats that are now compromising their health and integrity. Pollution, invasive species, clearing of vegetation/forests, fires and tourism are the most serious pressures that Jamaica's protected areas face.

Using the measures of severity, extent and permanence of impact, the most important pressures are fishing, shoreline development, agriculture, pollution and invasive species as the lead to widespread and long term impacts. Destructive fishing, over fishing, illegal encroachment, mining and illegal timber harvesting are also leading to more specific, localised impacts within protected areas (Hayman, 2007a).

Climate change is a critical pressure and future threat that will exacerbate other pressures and threats. The impacts of climate change are expected to be severe and, in some cases, permanent. Climate driven erosion and landslides are already affecting areas with the Blue and John Crow Mountains National Park. Coastal and marine areas such as the Negril Environmental Protection Area and the Ocho Rios Marine Park Protected Area are threatened by the effects of hurricanes, including an increase in beach erosion resulting in loss of shoreline (Hayman, 2007a). Coral bleaching events resulting from higher sea surface temperatures also pose a threat to the country's reefs and the roles they play in protection of shoreline and related infrastructure, and for overall marine ecosystem health.

Heritage sites and cultural assets are subject to physical degradation due to lack of resources for their upkeep (Griffith, S. and K. Emmanuel, 2005; Culture, Creative Industries and Values Task Force, 2009). The "politicisation" of protected areas and communities where sites are located has also complicated restoration and preservation works in inner city areas, in particular (Griffith, S. and K. Emmanuel, 2005).

2.3 Challenges to Protected Areas Management

2.3.1 Policy and legislation

The legal framework for protected area management is fragmented, inconsistent and in some aspects incomplete. The legislative framework envisaged in the Policy for Jamaica's System of Protected Areas (1997) is yet to be enacted and although there are many policies affecting protected areas, there has been little follow through with actions to implement the existing legislation. A key need is to standardise

and recognise the legislative overlaps in key legislation affecting protected areas. There is also a need to streamline the use of the term "protected area" across selected legislation (McCalla, 2004).

There are at least thirteen policies and action plans affecting protected areas (see McCalla, 2004 pp 18-22). And there are 14 legislative instruments that directly govern protected areas and another 20 that have a bearing on protected areas (see McCalla, 2004 pp 29 - 41).

There are a number of pending or proposed Acts that could have a significant impact on the framework for protected area management. These include proposals for the establishment of an Environmental Regulatory Authority (ERA) as the body with primary responsibility for environmental policing, compliance monitoring and enforcement, and the enactment of one law to cover the main environmental and planning legislation (referred to as the proposed National Environment and Planning Act).

Discussions to develop overarching legislation for protected areas are in train, but such a law would likely include amendments to the Town and Country Planning Act (1958) and encompass provisions that would have come under the drafting instructions for the previously proposed National Environment and Planning Agency (NEPA) Act or the proposed Wildlife and Protected Areas Act. As an interim measure, an amendment of the Wildlife Protection Act (1945) is being considered.

Also pending are regulations that are essential to completing the gap in the regulatory framework for protected areas and environmental protection under the Natural Resources Conservation Authority (NRCA) Act (1991) (McCalla, 2004). See Appendix 7 for a summary of the report "*Protected Areas System Plan: Legal Framework*."

2.3.2 Institutional arrangements

The management of protected areas is currently the responsibility of four main governmental agencies whose primary objectives, management styles, and conservation approaches differ significantly. 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 protected areas where different agencies share responsibilities (Galindo, 2009).

Key issues associated with current institutional arrangements for protected areas management include:

- Ineffective management structures;
- Weak coordination and collaboration amongst key agencies and other partners;
- Lack of central leadership;
- Absence of a leader/champion; and
- Misalignment of stakeholders' roles and responsibilities (Hayman, 2007b).

2.3.3 Management Effectiveness

Protected area status cannot be automatically assumed to imply active or effective management. Management effectiveness varies within protected areas. The areas in which the management effectiveness review identified operational strengths include the following:

- *Management objectives* - the existence of clear and adequate management objectives;

- *Design and layout of the protected area* - the siting of protected areas is consistent with their objectives and the layout and configuration of protected areas optimises the conservation of biodiversity; and
- *Legal security* - the existence of provisions for long-term, legally binding protection.

Management gaps include: zoning and boundary demarcation; surrounding land use especially by buffer communities and private land owners; critical site level law enforcement; infrastructure, staff numbers and employment conditions; community outreach and conflict resolution (Hayman, 2007c).

Management actors include government agencies and non-governmental organisations, to which management responsibility has been partially or fully devolved through co-management arrangements or memoranda of understanding (MOUs).

Institutional effectiveness is strongest in the following areas where:

- National policies foster dialogue and participation with civic and environmental NGOs;
- There are efforts towards promoting widespread education and environmental training; and
- Protected areas-related laws are complementary to protected area objectives and promote management effectiveness.

Institutional gaps include:

- Lack of demonstrated commitment;
- Lack of a comprehensive inventory/database;
- Inadequate training programmes;
- Lack of routine evaluation;
- Insufficient system wide law enforcement;
- Inadequate system wide funding; and
- Inadequate conservation mechanisms, e.g. incentives for private land users (Hayman, 2007c).

See Appendix 8 for a summary of the report "*Management Effectiveness Assessment and Capacity Development Plan for Jamaica's System of Protected Areas*."

2.3.4 Financing

The three major sources of funding for the management of protected areas are currently: GoJ allocations to agency budgets; international cooperation; and self generated funds. There is at present no annual breakdown of current sources of funding for protected areas, nor is there a department that is dedicated to keeping track of this important information. It is therefore difficult to assess the amount of funding allocated for the environment in general and protected areas in particular, however, there is a general perception that these sources have been decreasing over the years (Galindo, 2009).

The vast majority of funding to manage the Jamaica's protected areas is from governmental sources, assigned through specific budgets for each of the four agencies in charge of protected areas management. Despite the minimal financial resources allocated by the government, the current budget allows for the maintenance of core management functions and key staff. The primary focus of funding

from development partners and donor agencies is technical assistance, provision of planning tools, and capacity building. Funding from self-generated revenues is low, although there is potential for growth in this area. Among the range of mechanisms in place it is worth mentioning entrance fees, different user fees for marine and terrestrial protected areas, and charges for use of infrastructure such as roads and timber sales. The current composition of mechanisms for, and sources of, funding for protected areas management 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 (Galindo, 2009).

See Appendix 9 for a summary of the report *Sustainable Financing Plan for Jamaica's System of Protected Areas 2010 - 20202*.

2.4 System Level Effectiveness

System level effectiveness primarily involves policy-based factors that provide an enabling environment for protected areas to achieve the conservation goals and objectives for which they are designed. The most significant gaps were found in the following factors:

- Insufficient funding for protected areas;
- Insufficient law enforcement;
- Need for a wider array of conservation mechanisms (i.e., conservation incentives for private
- landowners); and
- Unsustainable land use in some areas

Additionally, there is a need for a comprehensive inventory of biodiversity and cultural and heritage assets (Ecological Working Group (EWG), 2009 and Griffith, S and K. Emmanuel, 2005).

2.5 Supporting Initiatives

There are a number of initiatives being implemented in Jamaica that support conservation and protected areas management and that are broadly consistent with the aims of the PASMP. These include the following:

- ***Environmental Foundation of Jamaica***
  The Environmental Foundation of Jamaica (EFJ) was created in 1993 under a "Debt for Nature Swap" between the Governments of Jamaica and the USA. The EFJ has a broad mandate to support environmental management and child development. The EFJ has invested approximately J$199.2 million in support of protected area management in areas that include environmental education, endemic and endangered species conservation and management, habitat conservation and management coastal/marine forests, and species management. For more information see www.efj.org.jm.

- ***Forest Conservation Fund***
  The Forest Conservation Fund (FCF) was established in 2004 and became operational in 2005. The fund was capitalised through a debt for nature swap (the United States Government, TNC, and the Government of Jamaica) with US$15.9 million over 19 years. An Oversight Committee

manages the fund and the Jamaica Protected Areas Trust Ltd. is the fund administrator. The FCF was established to promote conservation and sustainable management and use of natural resources, including forests, for the benefit of local communities. Since 2007, the FCF has invested J$212,746,153.00 in protected area management and forest conservation. For more information see www.jpat-jm.com. The FCF and the EFJ will merge in 2012

- ***Caribbean Challenge Initiative and National Protected Area Trust Fund***
  The Caribbean Challenge is a regional initiative aimed at securing the commitment of countries to effectively protect 20 per cent of their near shore and shelf habitat by 2020. At the national level, the Protected Areas Trust Fund (PATF) is expected to generate long-term funding from a variety of sources for the National System of Protected Areas. For more information see www.nature.org/ourinitiatives/regions/caribbean/caribbean-challenge.xml

- ***The Critical Ecosystem Partnership Fund (CEPF)***
  The Caribbean edition of the Critical Ecosystem Partnership Fund (CEPF) came on stream in October 2010. Its objective is to engage civil society in the conservation of globally threatened biodiversity through targeted investments with maximum impact on the highest conservation and ecosystem services priorities. The CEPF is concerned with terrestrial biodiversity. Against this backdrop, the CEPF will invest US$6.9 million in 45 key biodiversity areas (KBAs) in 11 Caribbean countries, including Jamaica, over a five-year period. For more information see www.cepf.net.

- ***Global Environmental Facility***
  Various projects related to protected areas at the national and regional levels have been funded with support from the Global Environment Facility under the Biodiversity and Sustainable Land Management Focal Areas. The main project funded under the Resource Allocation Framework in 2006 is the project "*Strengthening the Operational and Financial Sustainability of the National Protected Areas System."* The project's objective is to consolidate the operational and financial sustainability of Jamaica's national system of protected areas. The objective will be achieved through three components:
    i. Strengthening of planning and revenue generation;
    ii. Rationalizing and integrating the national system of protected areas; and
    iii. Increasing the effectiveness of protected area management.

  The project will run from April 2010 to February 2016; several of this project's activities will directly support implementation of the PASMP.

3. Vision and Guiding Principles

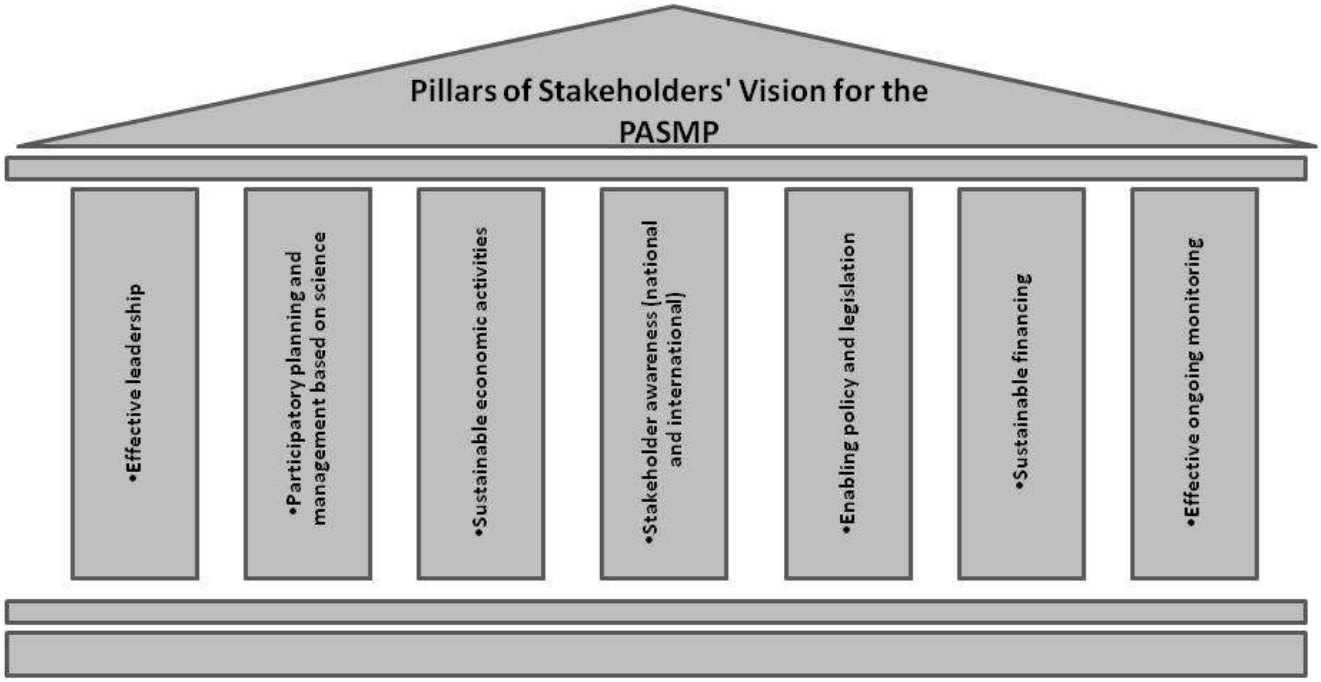
3.1 Vision

The PASMP is guided by the following vision:

> *Jamaica's protected areas are effectively managed through a system which represents the diversity of our ecosystems and local heritage, towards the achievement of our environmental, economic, cultural and social goals for the benefit of all generations.*

This vision statement is undergirded by seven pillars (Figure 2) which emerged out of stakeholder consultations on the Strategic Plan for the Development of the PASMP.[4]

Figure 2 Pillars of the PASMP Vision



[4] Final Report - Strategic Plan for Developing the Protected Areas System Plan, Trevor Spence, February 2006

1. Leadership through a multi-agency body with the authority and skills to guide the management of the protected areas system;

2. Scientifically-based participatory planning and management process in place and implemented;

3. Sustainable economic activities in protected areas;

4. International and national awareness of Jamaica's protected areas system such that national stakeholders respect and understand the economic importance of the environment, relevant regulations, roles and responsibilities of agencies and partners;

5. Revised protected areas policy with legislation that effectively provides an enabling environment that allows stakeholders and interested parties to participate meaningfully in the management of protected areas;

6. A sustainable financing system; and

7. Effective monitoring of ecosystem health with an agreed number of indicators.

3.2 Guiding Principles

The development and enhancement of protected areas in Jamaica is guided by a holistic ecosystems approach, with multiple sub-systems that have complex inter-linkages. The management of protected areas must therefore employ an integrated approach that takes into consideration the natural resource base, the cultural and natural heritage, social dynamics and economic imperatives.

*The management of protected areas must employ an **integrated approach** that takes into consideration the natural resource base, the cultural and natural heritage, social dynamics and economic imperatives.*

The following principles informed the development of the PASMP and will guide its implementation:

- **Protect habitats, ecosystems, species and genetic resources and cultural and natural heritage**

Adopt comprehensive strategies and management plans as part of efforts to conserve biological resources, including populations of indigenous animal and plant species, natural communities, ecosystems and to preserve cultural/natural heritage.

Restore and protect watersheds, rivers, wetlands, forest, coral reefs, and other important ecosystems so that essential resources, such as water, soil, and related ecosystem services are available for the sustainable development of the country.

In so doing, address:[5]

- **Representativeness, comprehensiveness and balance**

Include representative samples of all species and ecosystems within the protected area system, at a sufficient scale to ensure their long term persistence.

- **Adequacy**

The integrity, size and arrangement of individual protected areas "together with effective management" support the "viability of the environmental processes and/or species, populations and communities" which comprise Jamaica's biodiversity.

- **Redundancy**

Include sufficient examples of species and ecosystems within a protected area system to capture genetic variation and protect against unexpected losses.

- **Coherence and complementarity**

Each protected area adds value/makes a positive contribution, in terms of quality and quantity, to the system as a whole.

- **Resilience**

Design protected area systems to withstand stresses and changes. Resilience involves maintaining or recreating viable ecosystems by enlarging or connecting protected areas. Small protected areas surrounded by radically altered habitat are often of limited value. Also, the need for resilience is increased because major climate changes now seem almost inevitable and will have serious impacts on terrestrial and marine protected areas.

- **Consistency**

"Management objectives, policies and classifications under comparable conditions" are applied in standard ways, "so that the purpose of each protected area is clear to all and to maximize the chance that management and use support the objectives."

[5] *Sources include: IUCN Website: National System Planning for Protected Areas (Davey, 1998) and CBD Website e.g. Addis Ababa Principles and Guidelines for the Sustainable Development*

Source: CBD Technical Series 24 Creating ecologically representative protected area systems A guide to conducting gap assessments of protected area Systems for the Convention on Biological Diversity By Nigel Dudley and Jeffrey Parish

- **Cost effectiveness, efficiency and equity**

"Appropriate balance between the costs and benefits, and appropriate equity in their distribution; includes efficiency: the minimum number and area of protected areas needed to achieve system objectives."

- **Adaptive management**

Practice a "systematic approach for improving resource management by learning from management outcomes" "based on science/interdisciplinary research and traditional and local knowledge; iterative, timely and transparent feedback derived from monitoring the use, environmental, socio-economic impacts, and the status of the resource being used; and "adjusting management based on timely feedback from the monitoring procedures."

- **Ecosystem Approach**

Ensure the "integrated management of land, water and living resources that promotes conservation and sustainable use in an equitable way" "based on the application of appropriate scientific methodologies focused on levels of biological organization, which encompass the essential structure, processes, functions and interactions among organisms and their environment. Additionally, recognise that "humans, with their cultural diversity, are an integral component of many ecosystems."

- **Precautionary Approach**

"Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation."

- **Address the need for attitude and behavioural change**

Address the underlying causes of the loss and decline of biodiversity by promoting the necessary societal changes through policies, laws, public education and awareness, taking into account the supporting of sustainable livelihoods.

- **Respect local and traditional knowledge where appropriate.**

Take into account local and traditional knowledge when developing and implementing policies, programmes and plans related to biodiversity.

- **Engage in a participatory approach**

Consult and collaborate with key stakeholders in making decisions about protected areas, in particular by communities directly affected by protected area creation**.**

- **Achieve and maintain financial sustainability**

Develop the necessary legal and institutional framework to support the development and maintenance of adequate financial resources to sustain the protected areas system.

4. Strategic Outcomes and Goals

4.1 Strategic Outcomes

The purpose of the PASMP is to provide a road map to establish and manage a comprehensive, adequate and representative system of protected areas to contribute to the long-term ecological viability of protected areas, to maintain ecological processes and systems, and to protect the country's natural and cultural heritage.

The PASMP is "a road map to establish and manage a comprehensive, adequate and representative system of protected areas to contribute to the long-term ecological viability of protected areas, to maintain ecological processes and systems, and to protect the country's natural and cultural heritage."

The ***primary result anticipated*** is therefore: *Jamaica's protected areas system established*.

Strategic outcomes have been defined at both system and the site levels.

The ***system level*** strategic outcomes of the PASMP are:

1. A Protected Areas System which is representative of Jamaica's biological and cultural heritage, integrated into national, sector or local plans, with increased capacity for site management and mechanisms/strategies in place to address key threats;
2. Plans and initiatives that facilitate the effective participation/involvement of local communities and stakeholders at all levels of protected areas planning, establishment, governance and management;
3. Process of establishment and management of protected areas enhanced and financial sustainability of the system improved to ensure adequate funding to achieve and maintain the basic management scenario;[6] and

[6] The basic management scenario outlined in the *Sustainable Financing Plan for Jamaica's System of Protected Areas 2010-2020* sets out the minimum requirements to ensure protected area management. This scenario confirms the Government of Jamaica's presence, guarantees the integrity of protected areas; and facilitates stakeholder participation. It focuses efforts and interventions on: administration and planning, patrolling and enforcement and environmental education (Galindo, 2009).

4. Professional standards raised through capacity building programmes for the planning, establishment and management of protected areas and understanding and appreciation of benefits of protected areas significantly increased.

The ***site level*** strategic outcome of the PASMP is:

5. Management effectiveness and capacity of the protected areas and relevant joint regime and trans-boundary areas improved and contribute to the effective conservation of biological and cultural elements.

4.2 Goals

The goals of the PASMP are:

Goal 1:	*To integrate protected areas into broader land- and seascapes and sectors so as to maintain ecological structure and function.*
Goal 2:	*To substantially improve site-based protected area planning and management.*
Goal 3:	*To prevent and mitigate the negative impacts of key threats to protected areas.*
Goal 4:	*To identify and integrate climate change adaptation and mitigation measures in protected area planning and management strategies.*
Goal 5:	*To address under-representation of marine, inland water, and terrestrial ecosystems in the national protected area system.*
Goal 6:	*To enhance and secure the involvement of local communities and other relevant stakeholders.*
Goal 7:	*To provide an enabling policy, institutional and socio-economic environment for protected areas.*
Goal 8:	*To ensure the financial sustainability of the protected areas within the national system.*
Goal 9:	*To build capacity for the planning, establishment and management of protected areas.*
Goal 10:	*To strengthen communication, education and public awareness.*
Goal 11:	*To ensure that scientific knowledge contributes to the establishment and effectiveness of protected areas and protected area systems.*
Goal 12:	*To evaluate, monitor and improve protected area management, status and trends.*

Goal 13: *To develop and adopt minimum standards and best practices for the national protected areas system.*

4.2.1 Linkages to the CDB's Programme of Work on Protected Areas

The goals of Jamaica's PASMP are derived from the goals and activities of the CBD's PoWPA and support one of the four following programme elements:

- Programme Element 1: Direct actions for planning, selecting, establishing, strengthening, and managing, protected area systems and sites (Goals 1-5);
- Programme Element 2: Governance, participation, equity and benefit sharing, (Goal 6);
- Programme Element 3: Enabling activities (Goals 7-10); and
- Programme Element 4: Standards, assessment, and monitoring, (Goals 11-13).

The linkages between the goals, the PASMP's strategic outcomes and the CDB's PoWPA are shown in Box 2. Some goals support both system and site level strategic outcomes.

Box 2 Linkages between the Strategic Outcomes and Goals of the PASMP

PASMP Strategic Outcomes	Supporting PASMP Goals	CDB Programme of Work on Protected Areas Programme Element
1. A Protected Areas System which is representative of Jamaica's biological and cultural heritage, integrated into national, sector or local plans, with increased capacity for site management and mechanisms/strategies in place to address key threats.	*Goal 1: To integrate protected areas into broader land- and seascapes and sectors so as to maintain ecological structure and function.*	**Programme Element 1**: Direct Actions for Planning, Selecting, Establishing, Strengthening, and Managing, Protected Area Systems and Sites
	Goal 2: To substantially improve site-based protected area planning and management	
	Goal 3: To prevent and mitigate the negative impacts of key threats to protected areas.	
	Goal 4: To identify and integrate climate change adaptation and mitigation measures in protected area planning and management strategies.	
	Goal 5: To address under-representation of marine, inland water, and terrestrial ecosystems in the national protected area system	
2. Plans and initiatives that facilitate the effective participation/involvement of local communities and stakeholders at all levels of protected areas planning, establishment, governance and management.	*Goal 6: To enhance and secure the involvement of local communities and other relevant stakeholders*	**Programme Element 2**: Governance, participation, equity and benefit sharing,

PASMP Strategic Outcomes	Supporting PASMP Goals	CDB Programme of Work on Protected Areas Programme Element
3. Process of establishment and management of protected areas enhanced and financial sustainability of the system improved to ensure adequate funding to achieve and maintain the basic management scenario.	*Goal 7: To provide an enabling policy, institutional and socio-economic environment for protected areas.*	
	Goal 8: To ensure the financial sustainability of the protected areas within the national system.	
4. Professional standards raised through capacity building programmes for the planning, establishment and management of protected areas and understanding and appreciation of benefits of protected areas significantly increased.	*Goal 9: To build capacity for the planning, establishment and management of protected areas.*	**Programme Element 3**: Enabling activities
	Goal 10: To strengthen communication, education and public awareness	

PASMP Strategic Outcomes	Supporting PASMP Goals	CDB Programme of Work on Protected Areas Programme Element
5. Management effectiveness and capacity of the national system of protected areas and relevant joint regime areas improved and contribute to the effective conservation of biological and cultural elements.	*Goal 11: To ensure that scientific knowledge contributes to the establishment and effectiveness of protected areas and protected area systems.*	**Programme Element 4**: Standards, assessment, and monitoring.
	Goal 12: To evaluate, monitor and improve protected area management, status and trends	
	Goal 13: To develop and adopt minimum standards and best practices for the national protected areas system.	

5. 1 Activities 2013 - 2017

Goal 1: **To integrate protected areas into broader land and seascapes and sectors so as to maintain ecological structure and function.**

Target: By 2017, all terrestrial protected areas are integrated into national, sector or local plans and ecological connectivity established within three sites.

Key Indicators:

- Number of conservation/ecological corridors identified and demarcated.
- Number of restoration and rehabilitation activities carried out for targeted habitats and ecosystems.
- Number of terrestrial protected areas incorporated in the Development Orders and/or Local Sustainable Development Plans

Activities	Lead Agency	Supporting Entities	Year					Notes
			Yr1	Yr2	Yr3	Yr4	Yr5	
1.1 Evaluate national and local experiences in integrating protected areas into broader landscapes and seascapes and sectoral plans and strategies (local & other jurisdictions) to inform the revised PASMP action plan.	NEPA	Forestry Department, Fisheries Division, JNHT, JCDT, NEPT, NCRPS, MBMPT, CCAM and other stakeholder who have managed protected areas				x		

Activities	Lead Agency	Supporting Entities	Year					Notes
			Yr1	Yr2	Yr3	Yr4	Yr5	
1.2 Identify practical steps for improving the integration of protected areas into broader land- and seascapes including policy, legal, planning (e.g. Development Orders and Local Sustainable Development Plans) and other measures.	MWLECC	Forestry Department, Fisheries Division, JNHT, NEPA, PIOJ, Local Planning Authorities, Parish Development Committees					x	
1.3 Develop tools of ecological connectivity, such as ecological corridors, linking together protected areas where necessary or beneficial as determined by national priorities for the conservation of biodiversity (e.g. Litchfield, between Alps and Discovery Mountain).	NEPA, Forestry Department and Fisheries Division	MWLECC, NLA, private landowners		x	x			
1.4 Rehabilitate and restore habitats and degraded ecosystems at 3 sites (e.g. Stephney- John's Vale, Falmouth and Pedro Bank), as appropriate, as a contribution to building ecological networks, ecological corridors and/or buffer zones.[7]	Forestry Department, Fisheries Division and NEPA			x	x	x		To be implemented under the GEF project.

[7] Goal 1.Healthy, productive and biologically diverse ecosystems - Sector Plans, Vision 2030

Goal 2: **To substantially improve site-based protected area planning and management.**

Target: Ten protected areas have effective management in existence by 2017 using participatory and science-based site planning processes that incorporate clear biodiversity objectives, targets, management strategies and monitoring programmes, drawing upon existing methodologies such as METT scorecards and a long-term management plan with active stakeholder involvement.

Key indicators:

- Guidelines developed for highly participatory processes used by protected area managers as part of site-based management planning and implementation.
- Guidelines developed for protected area management and operational plans and disseminated to relevant partners and stakeholders.
- Number of management plans prepared with inputs from community consultations or other participatory mechanisms.
- Number of management plans that incorporate biodiversity conservation targets[8], socio-economic and cultural factors, and climate change adaptation measures.
- Number of heritage site operators using updated Heritage Site Management guidelines.
- Number of PA staff trained in management and conservation.

Activities	Lead Agency	Supporting Entities	Year					Notes
			Yr1	Yr2	Yr3	Yr4	Yr5	
2.1 Assess existing participatory processes and develop guidelines for highly participatory process to be used as part of site-based planning.	NEPA/GEF Project	Forestry Department, Fisheries Division, JNHT	x	x	x	x	x	To be implemented under the GEF Project
2.2 Assess existing participatory processes and develop guidelines for highly participatory process to be used as part of	NEPA/GEF Project	Forestry Department, Fisheries Division, JNHT, Centre for Marine	x	×	×	x	x	To be implemented under the GEF

[8] Criteria laid out in Annex I to the Convention on Biological Diversity and other relevant criteria

Activities	Lead Agency	Supporting Entities	Year					Notes
			Yr1	Yr2	Yr3	Yr4	Yr5	
site-based planning.		Sciences (CMS)-UWI, IOJ, Academia						Project
2.3 Develop guidelines for management and operational plans.	NEPA/GEF Project	Forestry Department, Fisheries Division JNHT, IOJ	x	x				To be implemented under the GEF Project
2.4 Develop, update and implement management guidelines for declared/designated heritage sites to be adopted by all stakeholders including NGOs and private landowners.	JNHT	Forestry Department, IOJ, Fisheries Division, NEPA	x	x	x	x	x	
2.5 Train existing staff in skills to carry out their fundamental role in management and conservation of PAs.	Forestry Department, Fisheries Division, JNHT and NEPA		x	x	x	x	x	
2.6 Convene an Annual Protected Areas Managers Forum to facilitate joint: site-level programming, partnerships; fundraising, lobbying, training and information-sharing.	PAC		x	x	x	x	x	

Goal 3: **To prevent and mitigate the negative impacts of key threats to protected areas.**

National Target: By 2017, effective mechanisms for identifying and preventing, and/or mitigating the negative impacts of key threats to protected areas are in place.

Key indicators:

- Number of strategies to prevent/mitigate threats to protected areas developed and implemented.
- Impact assessment legislation and processes that include biodiversity and heritage concerns.

Activities	Lead Agency	Supporting Entities	Year					Notes
			Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	
3.1 Include biodiversity and heritage related issues into environmental and archaeological impact assessment legislation and/or processes and in strategic environmental assessments.	NEPA and JNHT MWLECC,	MYC, AGD, CPC, Fisheries Division and Forestry Department		x	x			To be implemented under the GEF Project
3.2 Include in protected areas legislation: requirements for assessments such as environmental, social and archaeological impact assessments for developments or activities, (e.g. ecotourism), with the potential to have effects within and adjacent to/outside protected area boundaries, including internationally designated sites e.g., Ramsar and World Heritage Sites and biosphere reserves.	NEPA,JNHT, Forestry Department Fisheries Division Div,	AGD, Chief Parliamentary Counsel, MYC,	x	x				To be implemented under the GEF Project
3.3 Identify and prioritize key threats to protected areas and develop and implement strategies to prevent and/or mitigate such	NEPA, Forestry Department, Fisheries	CMS, IOJ, Academia, NGOs		x	×	×	×	To be implemented under the GEF

Activities	Lead Agency	Supporting Entities	Year					Notes
			Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	
threats.[9]	Division, JNHT							project. Linked to activities in Goals 1 & 3 Ongoing
3.4 Continue addressing invasive alien species.	NEPA	Forestry Department, Fisheries Division, CMS IOJ, Academia, NGOs	x	x	x	x	x	Being implemented under IAS project. Linked to activities in Goals 1 & 3
3.5 Review existing policies and legislation and amend where necessary to address key threats (as identified in 3.3), including *inter alia* the illegal exploitation of resources from protected areas climate change and water pollution.	NEPA/GEF Project MWLECC,	Forestry Department, Fisheries Division, JNHT, MYC, MoAF, AGD, Maritime Authority of Jamaica, Chief Parliamentary Counsel	x	x				

[9] Goal 1.Healthy, productive and biologically diverse ecosystems - Sector Plan, Vision 2030

Goal 4: **To identify and integrate climate change adaptation and mitigation measures in protected area planning and management strategies.**

Target: By 2017, climate change mitigation and adaptation strategies and policies for protected areas defined, developed and implemented.

Key Indicators:

- Number of management plans that include measures for increased resilience based on future climate change/climate variability scenarios.
- Mechanism for coordination and communication between agencies and organisations with responsibility for protected areas and with agencies with a climate change mandate.

Activities	Lead Agency	Supporting Entities	Year					Notes
			Yr1	Yr2	Yr3	Yr4	Yr5	
4.1 Establish mechanism for coordination and communication between agencies and organisations with responsibility for protected areas and with agencies with a climate change mandate.	MWLECC and PAC	NEPA, Forestry Department, Fisheries Division, JNHT, Met Office			x	x	x	Linked to activities in Goals 1, 3 & 11 Ongoing
4.2 Integrate climate change adaptation measures in protected area planning and management strategies including ecosystems-based adaptaion measures and in the design of the protected area system.	PAC	NEPA, Forestry Department, Fisheries Division, JNHT, Met Office, MWLECC	x	x	x			

Goal 5: **To address under-representation of marine, inland water, and terrestrial ecosystems and heritage sites in the national protected area system.**

Targets:

By 2016, increase in number of protected areas representing inland water and terrestrial ecosystems and heritage sites.

Twenty per cent of coastal and near shore habitats to the 200m bathymetric line declared and effectively managed by 2020.

Key Indicators:

- Number of new protected areas declared and integrated into the National System of Protected Areas.
- Number of restoration and protection strategies developed for under-represented sites.
- Percentage of coastal and near shore habitats to the 200m bathymetric line declared and effectively managed

Activities	Lead Agency	Supporting Entities	Year					Notes
			Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	
5.1 Review the NEGAR and prioritise areas for designation.	PAC	NEPA, Forestry Department, Fisheries Division, MWLECC, IOJ, NGOs Academia,	×	×				Linked to activities in Goals 1, 3 &11
5.2 Declare highest priority sites identified in the National Ecological Gap Assessment Report (NEGAR) and other relevant studies. Sites to include marine, terrestrial, inland water and heritage sites, including the following: Pedro Bank, Black River,	Forestry Department, Fisheries Division, JNHT,	MYC, MWLECC, MoAF	x	x	x	x	x	To be partially implemented under the

Activities	Lead Agency	Supporting Entities	Year					Notes
			Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	
Glistening Waters (Falmouth), Blue Lagoon, Gourie and Lowe River.[10]	NEPA							GEF Project: Black River and Pedro Bank. Climate Change Adaptation and Disaster Risk Reduction Project
5.3 Declare and effectively manage coastal and near shore habitats to the 200m bathymetric line.	Forestry Department, Fisheries Division, JNHT, NEPA	MYC, MWLECC, MoAF	x	x	x	x	x	
5.4 Develop restoration and protection strategies for under-represented sites.	Forestry Department, Fisheries Division, JNHT, NEPA	NGOs, Academia	x	x	x	x	x	

[10] Goal 1. Healthy, productive and biologically diverse ecosystems-Vision 2030

Goal 6: **To enhance and secure the involvement of local communities and other relevant stakeholders.**

Target: Full and effective participation by 2017 of local communities and relevant stakeholders, in the management of existing, and the establishment and management of new protected areas.

Key Indicators:

- Number of stakeholder consultations/ community meetings held, and stakeholder committees established and functioning.
- Number of protected areas that integrate the participation of local stakeholders in field management.
- Number of communication mechanisms and frequency of communication with stakeholders and sectors that have an impact on protected areas.
- Number of new partnerships and co-management arrangements for protected area management established.

Activities	Lead Agency	Supporting Entities	Year					Notes
			Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	
6.1 Implement specific plans and initiatives to effectively involve local communities and stakeholders at all levels of protected areas planning, establishment, governance and management, with particular emphasis on identifying and removing barriers preventing adequate participation.	Forestry Department, Fisheries Division, NEPA, JNHT				×	×	×	
6.2 Develop and implement communication programme for the Protected Areas System.	NEPA/GEF Project	Forestry Department, Fisheries Division, MoAF, MWLECC, JNHT, JIS, NGOs		x	x	x	x	GEF Project

Goal 7: **To provide an enabling policy, institutional and socio-economic environment for protected areas.**

Target: By 2017 relevant policies and legislation are reviewed and revised as appropriate, including use of social and economic valuation and incentives, to provide a supportive enabling environment for more effective establishment and management of protected areas and the protected areas system.

Key Indicators:

- Relevant Protected areas legislation and supporting regulations approved by parliament and implemented.
- Policy development process for National System of Protected Areas overarching policy followed through.
- Number of modifications/additions incorporated into existing policies and legislation to improve protected area management.
- Economic development and natural resource use policies take into account the objectives of natural and cultural heritage protected areas.

Activities	Lead Agency	Supporting Entities	Year					Notes
			Yr1	Yr2	Yr3	Yr4	Yr5	
7.1 Review and streamline existing protected area categories with international classifications represented by the International Union for the Conservation of Nature (IUCN) Protected Area Management Categories.	NEPA/GEF Project	Forestry Department, Fisheries Division, JNHT		x				To be implemented under the GEF project.
7.2 Review the existing policies and legislation relating to PAs and develop an overarching policy and legislation for the entire protected area system including the revision of policies regarding protected areas that are the responsibility of the Forestry Department, NEPA/NRCA, Fisheries Division, JNHT.	PAC	Forestry Department, Fisheries Division, JNHT, NEPA, IOJ, MWLECC, MoAF, MYC	x	x				To be implemented under the GEF project.
7.3 Review policies, legal and institutional gaps of agencies/ Ministries (e.g. Mining and Energy, Trade, Housing, Tourism and Agriculture and Fisheries) and identify actions which will negatively affect the mandate of the agencies involved in	Ministry MWLECC-EMD	Ministries with responsibility for mining, energy, trade, housing, tourism and	x	x	x			To be implemented under the

Activities	Lead Agency	Supporting Entities	Year					Notes
			Yr1	Yr2	Yr3	Yr4	Yr5	
protected area management. Recommend amendments to these policies and laws to ensure the protection and sustainable use of the natural and cultural heritage.		agriculture						GEF project.
7.4 Review sectoral policies and recommend the removal of perverse incentives and inconsistencies that increase pressure on protected areas, or take action to mitigate their perverse effects.	MWLECC	AGD and Ministry of Finance		x				
7.5 Review/develop and implement policies and legislation that will protect the tangible cultural heritage of Jamaica from illegal activities.	JNHT	IOJ, NEPA, AGD, MYC	x	x	x			To be implemented under the GEF project.
7.6 Develop additional legislation to include private lands within the national protected areas system.[11]	MWLECC-EMD, MYC	Forestry Dept., NRCA/NEPA, AGD, Ministry of Agriculture and Fisheries Division, Ministry of Youth and Culture (MYC)		x	x			
7.7 Implement new protected area legislation.	Forestry Department, Fisheries Division, JNHT	Ministry of Agriculture and Fisheries Division, MYC NEPA			x	x	x	To be implemented under the GEF Project
7.8 Conduct at least two additional assessments of the contributions of protected areas to the country's economy and	PIOJ, NEPA, JNHT, IOJ,	Windsor Research Centre, Ministry with		x	x	x		

[11] Goal 1.Healthy, productive and biologically diverse ecosystems - Sector Plans, Vision 2030

Activities	Lead Agency	Supporting Entities	Year					Notes
			Yr1	Yr2	Yr3	Yr4	Yr5	
culture including assessments of marine protected areas and a comprehensive assessment for cultural sites.[12]	Forestry Department	responsibility for tourism						
7.9 Assess existing conservation facilities with a view to establishing a comprehensive Conservation Unit that will train persons in the conservation of all forms of Jamaica's material culture.	JNHT and IOJ	UWI	x					
7.10 Establish a comprehensive Conservation Unit and train persons in the conservation of all forms of Jamaica's material culture.	JNHT and IOJ	Academia, MYC, MIND		x	x	x	x	
7.11 Integrate economic valuation and natural resource accounting tools into national planning and decision making processes in order to identify the direct and indirect economic benefits provided by protected areas and who receives these benefits.	PIOJ/UWI	Forestry Department, Fisheries Division, JNHT, NEPA	x	x	x	x	x	
7.12 Cooperate with neighbouring countries (e.g. Colombia, Dominican Republic, Cuba) to establish an enabling environment for trans-boundary protected areas and for neighbouring protected areas across national boundaries.	MWLECC, Ministry of Foreign Affairs	Forestry Dept., Fisheries Division, NEPA, Maritime Authority of Jamaica (MAJ).	x	x	x	x	x	Caribbean Biological Corridor initiative

[12] Goal 1.Healthy, productive and biologically diverse ecosystems - Sector Plans, Vision 2030

Goal 8: **To ensure the financial sustainability of the protected areas within the national system.**

National Target: By 2017, financial, technical and other resources to meet the basic costs to effectively implement and manage 40% of protected areas are secured from both national and international sources.

Key Indicators:

- Increase in NSPA financial capacity measured by UNDP financial sustainability score card using 2009 scores as the base-line.
- Percentage of donor support that is earmarked for protected areas management in relation to total protected area resources.
- Percentage change in revenues generated by five protected areas for management, e.g. user fees.
- Trust Fund established, capitalized and operational.
- Increase in the number of community enterprises based on sustainable use of natural resources in protected areas over 2012 baseline.

Activities	Lead Agency	Supporting Entities	Year					Notes
			Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	
8.1 Establish the baseline for revenues generated from protected areas for management.	NEPA/GEF	Forestry Department, Fisheries Division, JNHT	x					To be implemented under the GEF Project
8.2 Commence implementation of priority activities in the sustainable finance plan such as: Trust Fund, user fees, business plans, international sponsors and donor agencies and development of legislation, as identified under the GEF Project.	NEPA/GEF Project	Forestry Department, Fisheries Division, JNHT	x	x	x	x	x	To be implemented under the GEF Project

Activities	Lead Agency	Supporting Entities	Year					Notes
			Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	
8.3 Encourage integration of protected areas needs into national and, where applicable, regional development and financing strategies and development cooperation programmes.	PIOJ	MWLECC, MoAF, MYC and Ministry of Finance		x	x	x	x	
8.4 Identify and establish positive incentives that support the integrity and maintenance of protected areas including those on private lands, and the involvement of local communities and stakeholders in conservation.	MWLECC, MoAF, MYC, NEPA/GEF Project	Ministry of Finance			x	x	x	
8.5 Develop opportunities for alternative livelihoods in protected areas that are consistent with protected area management objectives.	PAC	MWLECC, MoAF, MYC and Ministry of Tourism		x	x	x	x	To be implemented under the GEF Project Baseline data needed.

Goal 9: To build capacity for the planning, establishment and management of protected areas.

National Target: By 2017, capacity building programmes and initiatives are implemented to develop knowledge and skills at individual, community and institutional levels, and raise professional standards.

Key Indicators:

- Number of protected area staff, NGOs and CBOs trained by type of training received.
- Number of case studies and reports available through the Jamaica Clearing-House Mechanism.

Activities	Lead Agency	Supporting Entities	Year					Notes
			Yr1	Yr2	Yr3	Yr4	Yr5	
9.1 Develop and implement a national training programme for protected area site and system managers that is appropriate for field, professional and technical staff.	NEPA/GEF	Forestry Department, Fisheries Division, JNHT,NEPA			x	x	x	To be implemented under the GEF Project
9.2 Exchange lessons learnt, information and capacity-building experiences among countries and relevant organizations, through the Jamaica Clearing-House Mechanism and other means.	IOJ-CHM	NEPA, Forestry Department, Fisheries Division, JNHT, NGOs		x	x	x	x	Linked to 10.6
9.3 Establish effective mechanisms to document existing knowledge and experiences on protected area management, including traditional knowledge. (Mechanisms to include minutes of meetings, case studies.)	NEPA, Forestry Department, Fisheries Division, JNHT, NGOs	PAC				x	x	Commences in first five-year cycle. Ongoing.

Activities	Lead Agency	Supporting Entities	Year					Notes
			Yr1	Yr2	Yr3	Yr4	Yr5	
9.4 Build capacity in key entities including CBOs and NGOs for economic valuation of ecosystem services.[13]	NRCA	PIOJ, NEPA, Windsor Research, International Expert			x	x		GEF/UNDP *Cross-cutting Capacities development in Jamaica*
9.5 Assess and prioritise the enforcement capacity needs of agencies with a mandate to manage protected areas (natural and cultural resources) and identify mechanisms to address them.	PAC	Ministry of National Security, Jamaica Constabulary Force, Jamaica Defence Force and Island Special Constabulary Force	x	x				

[13] Goal 1.Healthy, productive and biologically diverse ecosystems - Sector Plans, Vision 2030

Goal 10: **To strengthen communication, education and public awareness.**

Target: By 2016 public awareness, understanding and appreciation of the importance and benefits of protected areas is significantly increased.

Key Indicators:

- National protected area communication plan developed and implemented.
- Number of managed protected areas with environmental awareness and communication plans that are being implemented.
- Level of overall public awareness of the importance of protected awareness and natural and cultural resources

Activities	Lead Agency	Supporting Entities	Year					Notes
			Yr1	Yr2	Yr3	Yr4	Yr5	
10.1 Establish or strengthen and implement education and public awareness strategies and communication programmes on the importance of PAs (natural and cultural resources) in terms of their role in the conservation of biodiversity and culture and sustainable socio-economic development targeting all stakeholders.[14]	NEPA, Forestry Department, Fisheries Division, JNHT, NGOs	NGOs, JIS, CPTC, GEF Project		x	x	x	x	Linked to all goals part of information management. Ongoing
10.2 Strengthen, and where necessary, establish information mechanisms directed at target groups such as the private sector, policy makers, educational institutions, development institutions, community-based organizations, the youth, the media, and the general public in managing protected areas.[15]	PAC	NEPA, Forestry Department, Fisheries Division, JNHT		x	x	x	x	To be implemented under the GEF project.

[14] Communication, Education and Public Awareness Initiative (CEPA) under the Convention on Biological Diversity
[15] Goal 2 Sustainable Management and Utilization of Natural Resources –Sector Plans, Vision 2030

Activities	Lead Agency	Supporting Entities	Year					Notes
			Yr1	Yr2	Yr3	Yr4	Yr5	
10.3 Identify core themes for education, awareness and communication programmes relevant to PAs.[16] (Linked to activity 4.2)	PAC	NEPA, Forestry Department, Fisheries Division, JNHT, NGOs		x	x	x	x	To be implemented under the GEF project.
10.4 Implement a KAP survey to evaluate the impacts of communication, education and public awareness programmes on biodiversity conservation and heritage protection.	NEPA/GEF Project	Forestry Department, Fisheries Division , JNHT, NGOs, JIS		x			x	
10.5 Develop and implement programmes to build awareness/knowledge of Archaeological and Environmental Impact Assessments.	JNHT and NEPA	Forestry Department, Fisheries Division		x	x	x	x	
10.6 Increase networking and information sharing on protected areas through the Jamaica Clearing-House Mechanism.	IOJ-CHM	NEPA, Forestry Department, Fisheries Division, JNHT, NGOs	x	x	x	x	x	

[16] Goal 3 Effective, efficient, and accountable governance framework for environment and natural resources - Sector Plans, Vision 2030

Goal 11: **To ensure that scientific knowledge contributes to the establishment and effectiveness of protected areas and the protected area system.**

Target: Scientific knowledge relevant to protected areas is further developed as a contribution to their establishment, effectiveness, and management.

Key indicators:

- Number of new national research partnerships established.
- Number of protected areas that access and contribute to biological information through Jamaica Clearing-House Mechanism.
- Number of research projects that support the priorities of the National System of Protected Areas.

Activities	Lead Agency	Supporting Entities	Year					Duration
			Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	
11.1 Improve scientific and technical cooperation related to protected areas at the national and regional level.	PAC	Forestry Department, Fisheries Division, JNHT, NEPA, CMS-UWI, IOJ, Academia, NGOs, Ministry responsible for science and technology			×	×	×	Linked to activities in Goals 1, 3 & 5 Ongoing
11.2 Promote interdisciplinary research to improve understanding of the ecological, social and economic aspects of protected areas, including methods and techniques for valuation of goods and services from protected areas.	Academia/ PIOJ	Forestry Department, Fisheries Division, JNHT, NEPA, CMS-UWI, IOJ, Academia, NGOs			×	×	×	Linked to activities in Goals 1, 3 & 5 Ongoing
11.3 Promote the dissemination of biological information from and on protected areas, through NGO and agency web sites, including through the Jamaica Clearing-House Mechanism and the protected areas database.	NEPA, Forestry Department, Fisheries		x	x	x	x	x	To be implemented, in part, under

Activities	Lead Agency	Supporting Entities	Year					Duration
			Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	
	Division, JNHT, NGOs, IOJ-CHM, Academia							the GEF project. Linked to 6.2 and 13.2
11.4 Promote research on cultural and historical heritage to engender increased interest in Jamaica's physical and intangible attributes e.g., through Memorandum of Understanding.	JNHT/ Academia (history and archaeology)	IOJ		x	x			
11.5 Develop and implement national biodiversity research agenda.	PAC	NEPA, Forestry Department, Fisheries Division Div., JNHT, MWLECC, IOJ, NGOs, Academia	x	x	x			

Goal 12: **To evaluate, monitor and improve protected areas management, status and trends.**

Target: By 2016, frameworks for monitoring, evaluating and reporting protected areas management effectiveness at sites and the national system of protected areas adopted and implemented.

Key Indicators:

- 25 % increase in management effectiveness in 50% of the NSPA using 2009 scores as the baseline.
- National Protected Areas Data Management System established and used by all PA managers.

Activities	Lead Agency	Supporting Entities	Year					Notes
			Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	
12.1 Develop and adopt appropriate methods, standards, criteria and indicators for monitoring and evaluating the effectiveness of protected area management and governance, taking into account the IUCN-WCPA framework for evaluating management effectiveness, and other relevant methodologies, which should be adapted to local conditions.	NEPA/GEF Project	Forestry Department, Fisheries Division, JNHT		x	x			To be implemented under the GEF Project
12.2 Review existing protected area databases with a view to establishing a centralized national database, which is compatible with the World Database for Protected Areas (WDPA), to assist in the effective monitoring of the proposed protected areas system.	PAC	Forestry Department, Fisheries Division, JNHT,NEPA, IOJ, NGOs		x	x			Linked to 11.3 and 13.2
12.3 Conduct management effectiveness evaluations of the 32 sites and regions in the GEF FSP.	NEPA/GEF Protected Areas Project					x	x	To be implemented under the GEF Project Linked to application of

Activities	Lead Agency	Supporting Entities	Year					Notes
			Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	
								METT score to all sites as part of mid project evaluation.
12.4 Include information resulting from evaluation of protected areas management effectiveness to improve protected areas management and to inform national reports, e.g. under the Convention on Biological Diversity.	MWLECC	Forestry Department, Fisheries Division, JNHT,NEPA, IOJ, NGOs		x			x	
12.5 Commence the implementation of key recommendations arising from site- level management effectiveness evaluations, as an integral part of adaptive management strategies.	Forestry Department, Fisheries Division, JNHT,NEPA						x	
12.6 Monitor and evaluate the implementation of the PASMP.	PAC	Forestry Department, Fisheries Division, JNHT, NEPA,,IOJ, Academia		x	x	x	x	
12.7 Develop and implement prioritisation and categorisation models for historical and cultural sites.	JNHT	IOJ, MYC, NEPA			x	x	x	

Goal 13: **To develop and adopt minimum standards and best practices for the national protected area system.**

Target: By 2016, standards, criteria, and best practices for planning, selecting, establishing, managing and governance of the national system of protected areas and relevant joint regime areas are developed and adopted and integrated into at least 5 management plans.

Key Indicators:

- Protected area system governance and management guidelines published and disseminated
- Number of management and operational plans that incorporate best practice guidelines

Activities	Lead Agency	Supporting Entities	Year					Notes
			Yr1	Yr2	Yr3	Yr4	Yr5	
13.1 Collaborate with relevant organizations and States in developing, reviewing and approving protected areas standards and best practices for selecting, establishing, planning, managing and governance for Jamaican protected areas and make this information available through the Clearing-House Mechanism.	NEPA/GEF Project, Fisheries Division, JNHT Ministry of Foreign Affairs	Forestry Department, Fisheries Division, JNHT, CMS, IOJ-CHM, Academia, NGOs, Other jurisdictions		x	x			Linked to activities in Goals 1 & 2
13.2 Incorporate as appropriate best practices in the development of site management and operational plans.	NEPA/GEF Project	Forestry Department, Fisheries Division, JNHT CMS IOJ, Academia, NGOs			x	x	x	Linked to activities in Goals 1 & 2

6. Institutional Arrangements for Implementation

6.1 The Protected Areas Committee

6.1.1 Role and Responsibilities of the PAC

The Protected Areas Committee (PAC) will oversee the implementation, review and updating of the PASMP. The responsibilities of the PAC include, but are not necessarily limited to, the following:

a. Co-ordinating implementation of the PASMP;
b. Monitoring implementation progress of the PASMP for both effectiveness and efficiency;
c. Reviewing updates provided by respective agencies on ongoing partnerships/ collaborative agreements between stakeholders and review requests for new agreements;
d. Making recommendations to Cabinet through individual or joint submissions through the relevant Ministry or Ministries;
e. Reviewing proposals for declarations of new Protected Areas;
f. Functioning as the reporting mechanism for the PASMP and a forum for individual agencies to discuss issues for either individual or collective action;
g. Recommending protected area policy guidelines;
h. Developing and implementing communication strategies for the PAC (among PAC members, and to partners and wider stakeholders); and
i. Developing and implementing a fundraising strategy for the PAC.

The PAC will meet on a quarterly basis, or more frequently where required. Members will report on their organisation's corporate/operational/management plans, as applicable, indicating where elements of the PASMP are incorporated.

6.1.2 Composition of the PAC

The PAC will comprise the government and non-governmental entities that directly manage protected areas, and/or provide or leverage funding for the protected areas system. The membership of the PAC will include the heads of the agencies listed below:

- Ministry with responsibility for the Environment - Environmental Management Division
- The Nature Conservancy[17]
- Tourism Product Development Company
- Urban Development Corporation

[17] Against the background of the role the TNC has played in the development of the Master Plan and given its strategic global reach and potential to offer funding, leverage funds from donors to government entities, technical expertise, it has been recommended that TNC sit on the PAC.

- Ministry of Finance and Planning
- Forestry Department
- Fisheries Division
- Institute of Jamaica
- Jamaica National Heritage Trust
- National Environment and Planning Agency
- Scientific Authority CITES, Jamaica
- Planning Institute of Jamaica
- Private Sector Organisation of Jamaica
- CBD and biodiversity expert
- Two NGOs (marine and terrestrial; to be rotated every 2 years)
- One LFMC (to be rotated every 2 years)
- One private landowner (to be rotated every two years)
- National Protected Area Trust Fund

Other organisations or individuals may be co-opted to sit on the PAC, or support its work, as needed. In addition, other interested parties drawn from the donor community, funding agencies, academia, NGOs and other civil society groups will be valuable resource partners to the PAC's operation (see 6.1.4 Outreach to Interested Parties).

6.1.3 PAC Chairperson and Secretariat

The chairperson of the PAC will be drawn from one of the four GOJ entities that have a legal mandate to manage protected areas. Chairmanship will rotate every two years.

The PAC will be assisted by a fully-functional Secretariat, which will be responsible for all day-to-day activities of the PAC, including communication, following up on actions to be undertaken by PAC members. The Secretariat is critical in ensuring that members of the PAC are kept focused and informed of decisions and key activities. The Secretariat will be at the responsibility of the ministry/agency that is chairing the PAC.

6.1.4 Outreach to Interested Parties

The PAC will meet with *interested parties* once per annum; they will also be informed of PAC decisions and protected areas system actions through quarterly updates (fact sheets or other forms of communication).

Interested parties include the following entities:-

- Jamaica Protected Areas Trust
- Oversight Committee of merged Forest Conservation Fund and EFJ
- Development Partners (European Union, USAID, CIDA, IICA, UNEP, UNDP)
- Academia (CASE, NCU, UTech., UWI)
- NGOs managing protected areas

7. Monitoring and Evaluation

7.1 Overview

The effective monitoring and evaluation of the PASMP are critical to ensuring successful implementation. The PASMP will be monitored and evaluated on two levels: strategic outcomes and activity implementation. The monitoring and evaluation system at the strategic outcome level uses the indicators indentified in Section 5and this framework is presented in Section 7.6. The Quick Reference Tool in Section 7.7 is intended to be an aid for monitoring activity-level implementation.

7.2 Institutional Framework for Monitoring and Evaluation

The PAC will be responsible for ensuring the effective implementation, monitoring and evaluation of the PASMP through a special sub-committee with responsibility for monitoring and evaluation. Quarterly PAC meetings will provide a forum to discuss implementation of the action plan and monitor progress towards achievement of the PASMP's strategic objectives. The PAC will review implementation actions and approaches, address any challenges encountered and suggest possible solutions.

7.3 Data Collection

Data will be collected through primary sources, such as reports, field visits, workshops, exchange visits, rapid surveys and in-depth investigation.

7.4 Reporting Mechanisms

Monitoring of the PASMP's implementation will be done on a continuous basis and an annual report prepared at the end of each financial year. The report will capture information on achievements made against set targets; documentation of best practices for purpose of replication; challenges and recommendations on the way forward. There will be a mid-term review of the PASMP and an end-term evaluation after five years.

The following are the main mechanisms that will be used by the PAC to report on progress in implementing the PASMP:

- Quarterly implementation progress reports to be posted on the web sites of the four GOJ agencies with a legal mandate to manage protected areas.

- Annual progress reports to be submitted to parliament, the annual meeting with interested parties, and posted on the web sites of the four GOJ agencies with a legal mandate to manage protected areas and Jamaica Clearing-House Mechanism.

- National Reports to the CBD on PoWPA Action Planning and Implementation.

- Annual updates of the World Database of Protected Areas (WDPA).

7.5 Communication and dissemination of information

The PAC will develop an information sharing and communication strategy to ensure that information derived from implementation is widely disseminated to:

- Support continued partner and stakeholder buy-in;
- Inform and influence policy decisions;
- Support the replication of good practice;
- Foster community awareness; and
- Change attitudes towards protected areas.

Communication channels to be used include the following: the Jamaica Clearing-House Mechanism, newsletters, news releases, press conferences, public debates and electronic media (e-mail, internet, and websites).

7.6 Framework for Monitoring and Evaluation

SYSTEM LEVEL					
Goal/Component to be addressed	**National Target**	**Indicator**	**Means of Verification**	**Frequency**	
				Monitoring	**Evaluation**
Strategic Outcome 1. A Protected Areas system which is representative of Jamaica's biological and cultural heritage, integrated into national, sector or local plans, with increased capacity for site management and mechanisms/strategies in place to address key threats.					
Goal 1: To integrate protected areas into broader land- and seascapes and sectors so as to maintain ecological structure and function.	2017: All terrestrial protected areas are integrated into national, sector or local plans and ecological connectivity established within three sites.	Number of conservation/ecological corridors identified and demarcated.	List of corridors Protected area legislation includes ecological corridors	Annually (Yr 2 onwards)	Mid-term review End term assessment
		Number of restoration and rehabilitation activities carried out for targeted habitats and ecosystems.	Reports on management plans/implementation of activities in selected areas	Annually (Yr 2 onwards)	Mid-term review End term assessment
		Number of terrestrial protected areas incorporated in the Development Orders and/or Local Sustainable Development Plans.	Development Orders Local Sustainable Development Plans		End term assessment

SYSTEM LEVEL					
Goal/Component to be addressed	**National Target**	**Indicator**	**Means of Verification**	**Frequency**	
				Monitoring	**Evaluation**
Goal 2: To substantially improve site-based protected area planning and management.	2017: Ten protected areas have effective management in existence using participatory and science-based site planning processes that incorporate clear biodiversity objectives, targets, management strategies and monitoring programmes, drawing upon existing methodologies, such as METT scorecards, and a long-term management plan with active stakeholder involvement.	Guidelines developed for highly participatory processes used by protected area managers as part of site-based management planning and implementation.	Guidelines document Interviews with protected area managers	Annually (Yr 1 onwards)	Mid-term review End term assessment
		Guidelines developed for protected area management and operational plans and disseminated to relevant partners and stakeholders	Guidelines document Dissemination list	Annually (Yr 1 onwards)	Mid-term review End term assessment
		Number of management plans prepared with inputs from community consultations or other participatory mechanisms.	Protected area management plans Notes/minutes of consultations Interviews with protected area managers	Annually (Yr 1 onwards)	Mid-term review End term assessment
		Number of management plans that incorporate biodiversity conservation targets, socio-economic and cultural factors, and climate change adaptation measures.	Protected area management plans Interviews with protected area managers	Annually (Yr 1 onwards)	Mid-term review End term assessment

SYSTEM LEVEL					
Goal/Component to be addressed	**National Target**	**Indicator**	**Means of Verification**	**Frequency**	
				Monitoring	**Evaluation**
		Number of heritage site operators using updated Heritage Site Management guidelines.	Interviews with heritage site operators Heritage site management/operational plans	Annually (Yr 1 onwards)	Mid-term review End term assessment
		Number of PA staff trained in management and conservation.	HR records of protected area management entities	Bi-annually (Yr 1 onwards)	Mid-term review End term assessment
Goal 3: To prevent and mitigate the negative impacts of key threats to protected areas.	2017: Effective mechanisms for identifying and preventing, and/or mitigating the negative impacts of key threats to protected areas are in place.	Number of strategies to prevent/mitigate threats to protected areas implemented.	Documents including threat reduction strategies Operational/ implementation plans of targeted protected areas	Annually (Yr 2 onwards)	Mid-term review End term assessment
		Impact Assessment legislation and processes that include biodiversity and heritage concerns.	Legislation drafted and promulgated, processes/guidelines adopted	Annually (Yr1 onwards)	Mid-term review End term assessment

SYSTEM LEVEL					
Goal/Component to be addressed	**National Target**	**Indicator**	**Means of Verification**	**Frequency**	
				Monitoring	**Evaluation**
Goal 4: To identify and integrate climate change adaptation and mitigation measures in protected area planning and management strategies.	2017: Climate change mitigation and adaptation strategies and policies for protected areas defined, developed and implemented.	Number of management plans that include measures for increased resilience based on future climate change/climate variability scenarios.	Protected areas management plans	Annually (Yr 3 onwards – need confirmation of timing of activity implementation	Mid-term review End term assessment
		Mechanism for coordination and communication between agencies and organisations with responsibility for protected areas and with agencies with a climate change mandate.	Interviews with protected area managers, and mechanisms adopted.	Annually	End term assessment
Goal 5: To address under-representation of marine, inland water, and terrestrial ecosystems and heritage sites in the national protected area system.	2016: Increase in number of protected areas representing inland water and terrestrial ecosystems and heritage sites beginning with Black River and Pedro Bank.	Number of new protected areas declared and integrated into the National System of Protected Areas in accordance with conservation goals as set out in the NEGAR.	New protected areas gazetted and Management Plans in place.	Annually (Yr 1 onwards)	Mid-term review
		Number of restoration and protection strategies developed for under-represented sites.	Documents including restoration and protection strategies for under-represented sites	Annually (Yr 1 onwards)	Mid-term review End term assessment

SYSTEM LEVEL					
Goal/Component to be addressed	**National Target**	**Indicator**	**Means of Verification**	**Frequency**	
				Monitoring	**Evaluation**
	2020: Twenty per cent of coastal and near shore habitats to the 200m bathymetric line declared & effectively managed.	Percentage of coastal and near shore habitats to the 200m bathymetric line declared and effectively managed.	Jamaica Gazette METT Scores of targeted protected areas	Annually starting year 3	End term assessment
Strategic Outcome 2. Plans and initiatives that facilitate the effective participation/involvement of local communities and stakeholders at all levels of protected areas planning, establishment, governance and management.					
Goal 6: To enhance and secure the involvement of local communities and other relevant stakeholders	2017: Full and effective participation of local communities, and of relevant stakeholders in the management of existing, and the establishment and management of new protected areas.	Number of stakeholder consultations/ community meetings held, and stakeholder committees established and functioning	Reports of stakeholder consultations/community meetings from protected area management agencies/organisations	Bi-annually (Yr 3 onwards)	End term assessment
		Number of protected areas that integrate the participation of local stakeholders in field management	Reports of field management activities including the participation of local stakeholders	Annually (Yr 3 onwards)	End term assessment
		Number of communication mechanisms and frequency of communication with stakeholders and sectors that have an impact on protected areas.	Communication strategy and implementation plan Reports regarding implementation of communication strategy/campaign	Annually (Yr 2 onwards)	Mid-term review End term assessment
		Number of new partnerships and co-management arrangements for protected area management	MOUs and co-management agreements	Annually (Yr3 onwards)	End term assessment

SYSTEM LEVEL					
Goal/Component to be addressed	**National Target**	**Indicator**	**Means of Verification**	**Frequency**	
				Monitoring	**Evaluation**
		established.			
Strategic Outcome 3. Process of establishment and management of protected areas enhanced and financial sustainability of the system improved to ensure adequate funding to achieve and maintain the basic management scenario;[18]					
Goal 7: To provide an enabling policy, institutional and socio-economic environment for protected areas.	2017: Relevant policies and legislation are reviewed and revised as appropriate, , including the use of social and economic valuation and incentives, to provide a supportive enabling environment for more effective establishment and management of protected areas and protected areas systems.	Relevant protected areas legislation and supporting regulations approved by parliament and implemented.	Jamaica Gazette	Annually (Yr 1 onwards)	Mid-term review (development) End term assessment (implementation)
		Policy developed and approved by Parliament.	Concept paper Draft policy Consultation reports Green Paper White paper	Annually (Yr 2 onwards)	Mid-term review End term assessment
		Number of modifications/additions incorporated into existing policies and legislation to improve protected area management	Report of review of relevant policies Amendments to policies and legislation	Annually (Yr 1 onwards)	End term assessment
		Economic development and natural resource use policies incorporate the objectives of protected areas.	Report of review of relevant policies	Annually (Yr 1 onwards)	Mid-term review End term assessment

[18] The basic management scenario outlined in the *Sustainable Financing Plan for Jamaica's System of Protected Areas 2010-2020* sets out the minimum requirements to ensure protected area management. This scenario confirms the Government of Jamaica's presence, guarantees the integrity of protected areas; and facilitates stakeholder participation. It focuses efforts and interventions on: administration and planning, patrolling and enforcement and environmental education (Galindo, 2009).

SYSTEM LEVEL					
Goal/Component to be addressed	**National Target**	**Indicator**	**Means of Verification**	**Frequency**	
				Monitoring	**Evaluation**
Goal 8: To ensure the financial sustainability of the protected areas within the national system.	Financial, technical and other resources to meet the basic costs to effectively implement and manage 40% of protected areas are secured from both national and international sources.	Increase in NSPA financial capacity measured by UNDP financial sustainability score card using 2008 scores as the base-line.	Financial sustainability score card	Annually (Yr 1 onwards)	Mid-term review End term assessment
		Percentage of donor support that is earmarked for protected areas management in relation to total protected area resources.	Ministry of Finance and Planning Institute of Jamaica reports	Annually (Yr 2 onwards)	Mid-term review End term assessment
		Percentage change in revenues generated by 5 protected areas for management e.g. user fees.	Financial management records of targeted protected areas	Annually (Yr 1 onwards)	Mid-term review End term assessment
		Trust Fund established, capitalized and operational.	Trust Fund registration documents Financial records	Annually (Yr 1 onwards)	Mid-term review End term assessment

SYSTEM LEVEL					
Goal/Component to be addressed	**National Target**	**Indicator**	**Means of Verification**	**Frequency**	
				Monitoring	**Evaluation**
		Increase in the number of community enterprises based on sustainable use of natural resources in protected areas over 2012 baseline.	Interviews with community project managers in targeted protected areas Financial records of selected community groups in targeted protected areas	Annually (Yr 2 onwards)	Mid-term review End term assessment
Strategic Outcome 4. Professional standards raised through capacity building programmes for the planning, establishment and management of protected areas and understanding and appreciation of benefits of protected areas significantly increased.					
Goal 9: To build capacity for the planning, establishment and management of protected areas.	2017: Capacity building programmes and initiatives are implemented to develop knowledge and skills at individual, community and institutional levels, and raise professional standards.	Number of protected area staff, NGOs and CBOs trained by type of training received.	Training programme reports Interviews with protected area managers	Annually (Yr 3 onwards)	End term assessment
		Number of case studies and reports available through the Jamaica Clearing-House Mechanism.	Jamaica Clearing House Mechanism web site	Annually (Yr 2 onwards)	End term assessment
Goal 10: To strengthen communication, education and public awareness.	2016: Public awareness, understanding and appreciation of the importance and benefits of protected areas is significantly increased.	National protected area communication plan developed and implemented.	Communication strategy and implementation plan (national). Reports on implementation of strategy and plan	Annually (Yr 2 onwards)	Mid-term review End term assessment
		Number of managed protected areas with environmental	Communication strategy and implementation plans of selected sites	Annually (Yr 2 onwards)	Mid-term review End term

SYSTEM LEVEL					
Goal/Component to be addressed	**National Target**	**Indicator**	**Means of Verification**	**Frequency**	
				Monitoring	**Evaluation**
		awareness and communication plans that are being implemented.			assessment
		Level of overall public awareness of the importance of protected awareness and natural and cultural resources.	Results of semi-quantitative rapid assessment of communication message uptake Stakeholder interviews	Annually (Yr 2 onwards)	Mid-term review End term assessment

SITE LEVEL					
Goal/Component to be addressed	**National Target**	**Indicator**	**Means of Verification**	**Frequency**	
				Monitoring	**Evaluation**
Strategic Outcome 5. Management effectiveness and capacity of the protected areas and relevant joint regime and trans-boundary areas improved and contribute to the effective conservation of biological and cultural elements.					
Goal 11: To ensure that scientific knowledge contributes to the establishment and effectiveness of protected areas and the protected area system.	Scientific knowledge relevant to protected areas is further developed as a contribution to their establishment, effectiveness, and management.	Number of new national research partnerships established.	Research agenda document MOU with research partners	Annually	End term assessment
		Number of protected areas that access and contribute to biological information through Jamaica Clearing-House Mechanism.	Jamaica Clearing House Mechanism web site	Annually (Yr 1 onwards)	Mid-term review End term assessment
		Number of research projects that support the priorities of the National System of Protected Areas.	Research agendas of selected protected areas with active management in place	Annually (Yr 3 onwards)	End term assessment
Goal 12: To evaluate, monitor and improve protected area management, status and trends.	2016: Frameworks for monitoring, evaluating and reporting protected areas management effectiveness at sites and the national system of protected areas adopted and implemented	25 % increase in management effectiveness in 50% of the NSPA using 2009 scores as the baseline	Protected areas METT scores	Bi-annually (Yr 4 onwards)	End term assessment
		National Protected Areas Data Management System established and used by all PA managers.	Interviews with protected areas managers Web analytics (Engagement measures of involvement – site visits, time spent, pages viewed)	Annually (Yr 4 onwards) Bi-annually (Yr 2	End term assessment Mid-term review

SITE LEVEL					
Goal/Component to be addressed	**National Target**	**Indicator**	**Means of Verification**	**Frequency**	
				Monitoring	**Evaluation**
				onwards)	End term assessment
Goal 13: To develop and adopt minimum standards and best practices for the national protected areas system.	2016: Standards, criteria, and best practices for planning, selecting, establishing, managing and governance of the national system of protected areas and relevant joint regime areas are developed and adopted.	Protected area system governance and management guidelines.	Guidelines document and dissemination list	Annually (Yr 2 onwards)	Mid-term review
		Number of management and operational plans that incorporate best practice guidelines.	PA management and operational plans	Annually (Yr 3 onwards)	End term assessment

7.7 Quick Reference Tool: PASMP Activities by Completion Date

PASMP activities are shown below by completion date. It should be noted that several of these activities are to be implemented over a multi-year period. The timeframe for implementation shown in the table refers to the period during which implementation will take place, not the specific time that might be allocated for an activity or suite of activities.

Activities to be completed by 2013		
No.	**Activity**	**Timeframe**
2.6	Convene an Annual Protected Areas Managers Forum to facilitate joint: site-level programming, partnerships; fundraising, lobbying, training and information-sharing.	Annual activity
7.9	Conduct at least two additional assessments of the contributions of protected areas to the country's economy and culture including assessments of marine protected areas and a comprehensive assessment for cultural sites.	1 year
8.1	Establish the baseline for revenues generated from protected areas for management.	1 year

Activities to be completed by 2014		
No.	**Activity**	**Timeframe**
2.3	Develop guidelines for management and operational plans.	2 years
2.6	Convene an Annual Protected Areas Managers Forum to facilitate joint: site-level programming, partnerships; fundraising, lobbying, training and information-sharing.	Annual activity
3.2	Include in protected areas legislation: requirements for assessments such as environmental, social and archaeological impact assessments for developments or activities, (e.g. ecotourism), with the potential to have effects within and adjacent to/outside protected area boundaries, including internationally designated sites e.g., Ramsar and World Heritage Sites and biosphere reserves.	2 years
3.5	Review existing policies and legislation and amend where necessary to address key threats (as identified in 3.3), including *inter alia* the illegal exploitation of resources from protected areas climate change and water pollution.	2 years
5.1	Review the NEGAR and prioritise areas for designation.	2 years
7.1	Review and streamline existing protected area categories with international classifications represented by the International Union for the Conservation of	1 year

Activities to be completed by 2014		
No.	**Activity**	**Timeframe**
	Nature (IUCN) Protected Area Management Categories.	
7.2	Review the existing policies and legislation relating to PAs and develop an overarching policy and legislation for the entire protected area system including the revision of policies regarding protected areas that are the responsibility of the Forestry Department, NEPA/NRCA, Fisheries Division, JNHT.	2 years
7.4	Review sectoral policies and recommend the removal of perverse incentives and inconsistencies that increase pressure on protected areas, or take action to mitigate their perverse effects.	1 year
9.5	Assess and prioritise the enforcement capacity needs of agencies with a mandate to manage protected areas (natural and cultural resources) and identify mechanisms to address them.	2 years
10.4	Implement a (baseline) KAP survey to evaluate the impacts of communication, education and public awareness programmes on biodiversity conservation and heritage protection.	1 year
12.4	Include information resulting from evaluation of protected areas management effectiveness to improve protected areas management and to inform national reports, e.g. under the Convention on Biological Diversity.	1 year
12.6	Monitor and evaluate the implementation of the PASMP.	Annual activity

Activities to be completed by 2015		
No.	**Activity**	**Timeframe**
1.3	Develop tools of ecological connectivity, such as ecological corridors, linking together protected areas where necessary or beneficial as determined by national priorities for the conservation of biodiversity (e.g. Litchfield, between Alps and Discovery Mountain).	2 years
2.6	Convene an Annual Protected Areas Managers Forum to facilitate joint: site-level programming, partnerships; fundraising, lobbying, training and information-sharing.	Annual activity
3.1	Include biodiversity and heritage related issues into environmental and archaeological impact assessment legislation and/or processes and in strategic	2 years

Activities to be completed by 2015		
No.	**Activity**	**Timeframe**
	environmental assessments.	
4.2	Integrate climate change adaptation measures in protected area planning and management strategies including ecosystems-based adaptaion measures and in the design of the protected area system.	3 years
7.3	Review policies, legal and institutional gaps of agencies/ Ministries (e.g. Mining and Energy, Trade, Housing, Tourism and Agriculture and Fisheries) and identify actions which will negatively affect the mandate of the agencies involved in protected area management. Recommend amendments to these policies and laws to ensure the protection and sustainable use of the natural and cultural heritage.	3 years
7.5	Review/develop and implement policies and legislation that will protect the tangible cultural heritage of Jamaica from illegal activities.	3 years
7.6	Develop additional legislation to include private lands within the national protected areas system.	2 years
11.4	Promote research on cultural and historical heritage to engender increased interest in Jamaica's physical and intangible attributes e.g., through Memorandum of Understanding.	2 years
11.5	Develop and implement national biodiversity research agenda.	3 years
12.1	Develop and adopt appropriate methods, standards, criteria and indicators for monitoring and evaluating the effectiveness of protected area management and governance, taking into account the IUCN-WCPA framework for evaluating management effectiveness, and other relevant methodologies, which should be adapted to local conditions.	2 years
12.2	Review existing protected area databases with a view to establishing a centralized national database, which is compatible with the World Database for Protected Areas (WDPA), to assist in the effective monitoring of the proposed protected areas system.	2 years
12.6	Monitor and evaluate the implementation of the PASMP.	Annual activity
13.1	Collaborate with relevant organizations and States in developing, reviewing and approving protected areas standards and best practices for selecting, establishing, planning, managing and governance for Jamaican protected areas and make this	2 years

Activities to be completed by 2015		
No.	**Activity**	**Timeframe**
	information available through the Clearing-House Mechanism.	

Activities to be completed by 2016		
No.	**Activity**	**Timeframe**
1.1	Evaluate national and local experiences in integrating protected areas into broader landscapes and seascapes and sectoral plans and strategies (local & other jurisdictions) to inform the revised PASMP action plan.	1 yr
1.4	Rehabilitate and restore habitats and degraded ecosystems at 3 sites (e.g. Stephney- John's Vale, Falmouth and Pedro Bank), as appropriate, as a contribution to building ecological networks, ecological corridors and/or buffer zones	3 years
2.6	Convene an Annual Protected Areas Managers Forum to facilitate joint: site-level programming, partnerships; fundraising, lobbying, training and information-sharing.	Annual activity
7.8	Conduct at least two additional assessments of the contributions of protected areas to the country's economy and culture including assessments of marine protected areas and a comprehensive assessment for cultural sites.	3 years
9.4	Build capacity in key entities including CBOs and NGOs for economic valuation of ecosystem services.	2 years
12.6	Monitor and evaluate the implementation of the PASMP.	Annual activity

Activities to be completed by 2017		
No.	**Activity**	**Timeframe**
1.2	Identify practical steps for improving the integration of protected areas into broader land- and seascapes including policy, legal, planning (e.g. Development Orders and Local Sustainable Development Plans) and other measures.	1 yr
2.1	Assess existing participatory processes and develop guidelines for highly participatory process to be used as part of site-based planning.	5 years
2.2	Assess existing participatory processes and develop guidelines for highly	5 years

Activities to be completed by 2017		
No.	**Activity**	**Timeframe**
	participatory process to be used as part of site-based planning.	
2.4	Develop, update and implement management guidelines for declared/designated heritage sites to be adopted by all stakeholders including NGOs and private landowners.	5 years
2.5	Train existing staff in skills to carry out their fundamental role in management and conservation of PAs.	5 years
2.6	Convene an Annual Protected Areas Managers Forum to facilitate joint: site-level programming, partnerships; fundraising, lobbying, training and information-sharing.	Annual activity
3.3	Identify and prioritize key threats to protected areas and develop and implement strategies to prevent and/or mitigate such threats.	4 years
3.4	Continue addressing invasive alien species.	5 years
4.1	Establish mechanism for coordination and communication between agencies and organisations with responsibility for protected areas and with agencies with a climate change mandate.	3 years
5.2	Declare highest priority sites identified in the National Ecological Gap Assessment Report (NEGAR) and other relevant studies. Sites to include marine, terrestrial, inland water and heritage sites, including the following: Pedro Bank, Black River, Glistening Waters (Falmouth), Blue Lagoon, Gourie and Lowe River	5 years
5.3	Declare and effectively manage coastal and near shore habitats to the 200m bathymetric line.	5 years
5.4	Develop restoration and protection strategies for under-represented sites.	5 years
6.1	Implement specific plans and initiatives to effectively involve local communities and stakeholders at all levels of protected areas planning, establishment, governance and management, with particular emphasis on identifying and removing barriers preventing adequate participation.	3 years
6.2	Develop and implement communication programme for the Protected Areas System.	4 years
7.7	Implement new protected area legislation.	3 years
7.10	Establish a comprehensive Conservation Unit and train persons in the conservation	4 years

Activities to be completed by 2017		
No.	**Activity**	**Timeframe**
	of all forms of Jamaica's material culture.	
7.11	Integrate economic valuation and natural resource accounting tools into national planning and decision making processes in order to identify the direct and indirect economic benefits provided by protected areas and who receives these benefits.	5 years
7.12	Cooperate with neighbouring countries (e.g. Colombia, Dominican Republic, Cuba) to establish an enabling environment for trans-boundary protected areas and for neighbouring protected areas across national boundaries.	5 years
8.2	Commence implementation of priority activities in the sustainable finance plan such as: Trust Fund, user fees, business plans, international sponsors and donor agencies and development of legislation, as identified under the GEF Project.	5 years
8.3	Encourage integration of protected areas needs into national and, where applicable, regional development and financing strategies and development cooperation programmes.	4 years
8.4	Identify and establish positive incentives that support the integrity and maintenance of protected areas including those on private lands, and the involvement of local communities and stakeholders in conservation.	3 years
8.5	Develop opportunities for alternative livelihoods in protected areas that are consistent with protected area management objectives.	4 years
9.1	Develop and implement a national training programme for protected area site and system managers that is appropriate for field, professional and technical staff.	3 years
9.2	Exchange lessons learnt, information and capacity-building experiences among countries and relevant organizations, through the Jamaica Clearing-House Mechanism and other means.	4 years
9.3	Establish effective mechanisms to document existing knowledge and experiences on protected area management, including traditional knowledge. (Mechanisms to include minutes of meetings, case studies.)	2 years
10.1	Establish or strengthen and implement education and public awareness strategies and communication programmes on the importance of PAs (natural and cultural resources) in terms of their role in the conservation of biodiversity and culture and sustainable socio-economic development targeting all stakeholders.	4 years

Activities to be completed by 2017		
No.	**Activity**	**Timeframe**
10.2	Strengthen, and where necessary, establish information mechanisms directed at target groups such as the private sector, policy makers, educational institutions, development institutions, community-based organizations, the youth, the media, and the general public in managing protected areas.	4 years
10.3	Identify core themes for education, awareness and communication programmes relevant to PAs.	
10.4	Implement (an end of project) KAP survey to evaluate the impacts of communication, education and public awareness programmes on biodiversity conservation and heritage protection (post project).	1 year
10.5	Develop and implement programmes to build awareness/knowledge of Archaeological and Environmental Impact Assessments.	4 years
10.6	Increase networking and information sharing on protected areas through the Jamaica Clearing-House Mechanism.	5 years
11.1	Improve scientific and technical cooperation related to protected areas at the national and regional level.	3 years
11.2	Promote interdisciplinary research to improve understanding of the ecological, social and economic aspects of protected areas, including methods and techniques for valuation of goods and services from protected areas.	3 years
11.3	Promote the dissemination of biological information from and on protected areas, through NGO and agency web sites, including through the Jamaica Clearing-House Mechanism and the protected areas database.	5 years
12.3	Conduct management effectiveness evaluations of the 32 sites and regions in the GEF FSP.	2 years
12.4	Include information resulting from evaluation of protected areas management effectiveness to improve protected areas management and to inform national reports, e.g. under the Convention on Biological Diversity.	1 year
12.5	Commence the implementation of key recommendations arising from site- level management effectiveness evaluations, as an integral part of adaptive management strategies.	1 year
12.6	Monitor and evaluate the implementation of the PASMP.	Annual

Activities to be completed by 2017		
No.	**Activity**	**Timeframe**
		activity
12.7	Develop and implement prioritisation and categorisation models for historical and cultural sites.	3 years
13.2	Incorporate as appropriate best practices in the development of site management and operational plans.	3 years

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Appendices

Appendix 1 Categories of Protected Areas in Jamaica as at 1 January 2012

Table 1 Protected Area System Categories

CATEGORY	RESPONSIBLE AGENCY	LAW
Protected Area	Forestry Department: Water, Land, Environment and Climate Change (MWLECC)	Forest Act, 1996 and Forest Regulations
	National Environment and Planning Agency: MWLECC	NRCA Act, 1991
	NEPA: MWLECC	Beach Control Act, 1956
National Park	NEPA: MWLECC	NRCA Act, 1991
Marine Park	NEPA: MWLECC	NRCA Act, 1991
Environmental Protection Area	NEPA: MWLECC	NRCA Act, 1996
Forest Reserve	Forestry Department: MWLECC	Forest Act, 1996 and Forest Regulations
Fish Sanctuary	Fisheries Division: Ministry of Agriculture and Fisheries	Fishing Industry Act, 1976
National Monument	Jamaica National Heritage Trust (JNHT): Ministry of Youth and Culture (MYC)	JNHT Act, 1985
Protected National Heritage	JNHT: MYC	JNHT Act, 1985
Game Sanctuary	NEPA (NRCA): MWLECC	Wild Life Protection Act, 1945
Game Reserve	NEPA (NRCA): MWLECC	Wild Life Protection Act, 1945

Table 2 Other designations not considered part of the system

CATEGORY	RESPONSIBLE AGENCY	LAW
Tree Preservation Order	Local Authority (Town and Country Planning Authority): MWLECC and Local Government Department, through Parish Councils	Town and Country Planning Act, 1958
Conservation Area	NEPA (Town and Country Planning Authority, parish councils): MWLECC	Town and Country Planning Act, 1958
Protected Watershed	NEPA (NRCA): MWLECC	Watershed Protection Act, 1963

Table 3 International designations

CATEGORY	RESPONSIBLE AGENCY	CONVENTION
Ramsar Site	NEPA (NRCA): MWLECC	Convention on Wetlands of International Importance especially as Waterfowl Habitat (Ramsar Convention)
World Heritage Site (no existing sites however submissions have been made to the World Heritage Convention)	Jamaica National Heritage Trust:MYC	World Heritage Convention

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Appendix 3 Protected Areas (natural)

Protected Area Name	Category	Year	Legislation
Grange Hill	Forest Reserve	07/21/1955	Forest Act (1996) & Forest Regulation
Hyde	Forest Reserve	1950-12-01	Forest Act (1996) & Forest Regulation
Hyde	Forest Reserve	1950-12-01	Forest Act (1996) & Forest Regulation
Hermitage	Forest Reserve	1951-01-11	Forest Act (1996) & Forest Regulation
Healthshire	Forest Reserve	1950-12-01	Forest Act (1996) & Forest Regulation
Haycock Hill	Forest Reserve	1950-12-01	Forest Act (1996) & Forest Regulation
Harkers Hall	Forest Reserve	1950-12-01	Forest Act (1996) & Forest Regulation
Hampton Estate	Forest Reserve	2005-03-01	Forest Act (1996) & Forest Regulation
Fort George	Forest Reserve	1959-06-25	Forest Act (1996) & Forest Regulation
Great Goat Island	Forest Reserve	1960-05-30	Forest Act (1996) & Forest Regulation
Jericho	Forest Reserve	1950-12-01	Forest Act (1996) & Forest Regulation
Jericho	Forest Reserve	1950-12-01	Forest Act (1996) & Forest Regulation
Jericho	Forest Reserve	1950-12-01	Forest Act (1996) & Forest Regulation
Jericho	Forest Reserve	1950-12-01	Forest Act (1996) & Forest Regulation
Jericho	Forest Reserve	1950-12-01	Forest Act (1996) & Forest Regulation
Good Hope	Forest Reserve	1963-04-18	Forest Act (1996) & Forest Regulation

Protected Area Name	Category	Year	Legislation
Hope	Forest Reserve	04/18/1963	Forest Act (1996) & Forest Regulation
Hope River Stream	Forest Reserve	04/18/1963	Forest Act (1996) & Forest Regulation
Hope River Stream	Forest Reserve	04/18/1963	Forest Act (1996) & Forest Regulation
Georges Plain Mountain	Forest Reserve	1965-09-23	Forest Act (1996) & Forest Regulation
Geneva Mountain	Forest Reserve	1961-11-03	Forest Act (1996) & Forest Regulation
Garlands	Forest Reserve	07/21/1955	Forest Act (1996) & Forest Regulation
Garlands	Forest Reserve	07/21/1955	Forest Act (1996) & Forest Regulation
Garlands	Forest Reserve	07/21/1955	Forest Act (1996) & Forest Regulation
Fyffe & Rankine	Forest Reserve	1950-12-01	Forest Act (1996) & Forest Regulation
Pennants	Forest Reserve	1950-12-01	Forest Act (1996) & Forest Regulation
Pennants	Forest Reserve	1950-12-01	Forest Act (1996) & Forest Regulation
Greenock	Forest Reserve	1950-12-01	Forest Act (1996) & Forest Regulation
Mount Diablo	Forest Reserve	1950-12-01	Forest Act (1996) & Forest Regulation
Mount Diablo	Forest Reserve	12/01/1950	Forest Act (1996) & Forest Regulation
Mount Diablo	Forest Reserve	12/01/1950	Forest Act (1996) & Forest Regulation
Allsides	Forest Reserve	1962-06-28	Forest Act (1996) & Forest Regulation
Allsides	Forest Reserve	06/28/1962	Forest Act (1996) & Forest Regulation
Allsides	Forest Reserve	06/28/1962	Forest Act (1996) & Forest Regulation

Protected Area Name	Category	Year	Legislation
Peake Bay	Forest Reserve	1950-12-01	Forest Act (1996) & Forest Regulation
Peake Bay	Forest Reserve	1950-12-01	Forest Act (1996) & Forest Regulation
Peake Bay	Forest Reserve	1950-12-01	Forest Act (1996) & Forest Regulation
Peace River	Forest Reserve	1959-06-25	Forest Act (1996) & Forest Regulation
Orchard	Forest Reserve	1950-12-01	Forest Act (1996) & Forest Regulation
Nutfield	Forest Reserve	07/21/1955	Forest Act (1996) & Forest Regulation
Norris	Forest Reserve	1950-12-01	Forest Act (1996) & Forest Regulation
Norris	Forest Reserve	1950-12-01	Forest Act (1996) & Forest Regulation
Norris	Forest Reserve	1950-12-01	Forest Act (1996) & Forest Regulation
Newton	Forest Reserve	1951-01-11	Forest Act (1996) & Forest Regulation
Hyde Hall Mountain	Forest Reserve	1950-12-01	Forest Act (1996) & Forest Regulation
New Forest	Forest Reserve	1950-12-01	Forest Act (1996) & Forest Regulation
Industry Field - Rowkamp	Forest Reserve	1950-12-01	Forest Act (1996) & Forest Regulation
Mount Airy	Forest Reserve	1951-01-11	Forest Act (1996) & Forest Regulation
Lovers Leap	Forest Reserve	1950-12-01	Forest Act (1996) & Forest Regulation
Lloyds	Forest Reserve	1950-12-01	Forest Act (1996) & Forest Regulation
Lloyds	Forest Reserve	1950-12-01	Forest Act (1996) & Forest Regulation
Lloyds	Forest Reserve	1950-12-01	Forest Act (1996) & Forest Regulation

Protected Area Name	Category	Year	Legislation
Lloyds	Forest Reserve	1950-12-01	Forest Act (1996) & Forest Regulation
Lloyds	Forest Reserve	1950-12-01	Forest Act (1996) & Forest Regulation
Lloyds	Forest Reserve	1950-12-01	Forest Act (1996) & Forest Regulation
Llandaff	Forest Reserve	1964-02-04	Forest Act (1996) & Forest Regulation
Llandaff	Forest Reserve	1964-02-04	Forest Act (1996) & Forest Regulation
Llandaff	Forest Reserve	1964-02-04	Forest Act (1996) & Forest Regulation
Litchfield-Matheson's Run	Forest Reserve	1950-12-01	Forest Act (1996) & Forest Regulation
kildare	Forest Reserve	07/21/1955	Forest Act (1996) & Forest Regulation
Kellits-Camperdown	Forest Reserve	1950-12-01	Forest Act (1996) & Forest Regulation
Forest Mountain	Forest Reserve	1967-04-13	Forest Act (1996) & Forest Regulation
New Ground	Forest Reserve	1956-07-12	Forest Act (1996) & Forest Regulation
Blue Mountain Forest Reserve	Forest Reserve	1950-12-01	Forest Act (1996) & Forest Regulation
Cedar Valley	Forest Reserve	07/21/1955	Forest Act (1996) & Forest Regulation
Camp Savannah	Forest Reserve	1971-05-06	Forest Act (1996) & Forest Regulation
Camp Savannah	Forest Reserve	1971-05-06	Forest Act (1996) & Forest Regulation
Cambridge BackLands	Forest Reserve	1959-03-26	Forest Act (1996) & Forest Regulation
Caenwood	Forest Reserve	07/21/1955	Forest Act (1996) & Forest Regulation
Burnt Savannah	Forest Reserve	1950-12-01	Forest Act (1996) & Forest Regulation

Protected Area Name	Category	Year	Legislation
Burnt Savannah	Forest Reserve	12/01/1950	Forest Act (1996) & Forest Regulation
Bull Head	Forest Reserve	1950-12-01	Forest Act (1996) & Forest Regulation
Bottom Hampden	Forest Reserve	1950-12-01	Forest Act (1996) & Forest Regulation
Fort Stewart	Forest Reserve	07/21/1955	Forest Act (1996) & Forest Regulation
Fort Stewart	Forest Reserve	07/21/1955	Forest Act (1996) & Forest Regulation
Bog	Forest Reserve	07/21/1955	Forest Act (1996) & Forest Regulation
Bog	Forest Reserve	07/21/1955	Forest Act (1996) & Forest Regulation
Chesterfield	Forest Reserve	07/21/1955	Forest Act (1996) & Forest Regulation
Chesterfield (Chesterfield 2)	Forest Reserve	05/06/1971	Forest Act (1996) & Forest Regulation
Blue Mountain (Ecclesdown Addition)	Forest Reserve	1945-06-09	Forest Act (1996) & Forest Regulation
Blenheim	Forest Reserve	1950-12-01	Forest Act (1996) & Forest Regulation
Belmont	Forest Reserve	1964-02-04	Forest Act (1996) & Forest Regulation
Belfont	Forest Reserve	1950-01-12	Forest Act (1996) & Forest Regulation
Baron Hill	Forest Reserve	1968-10-24	Forest Act (1996) & Forest Regulation
Baron Hill	Forest Reserve	1968-10-24	Forest Act (1996) & Forest Regulation
Baron Hill	Forest Reserve	1968-10-24	Forest Act (1996) & Forest Regulation
Ballintoy	Forest Reserve	1950-12-01	Forest Act (1996) & Forest Regulation
Ballintoy	Forest Reserve	1950-12-01	Forest Act (1996) & Forest Regulation

Protected Area Name	Category	Year	Legislation
Ballintoy	Forest Reserve	1950-12-01	Forest Act (1996) & Forest Regulation
Ballintoy	Forest Reserve	1950-12-01	Forest Act (1996) & Forest Regulation
Armadale	Forest Reserve	1950-12-01	Forest Act (1996) & Forest Regulation
Bogue	Forest Reserve	07/21/1955	Forest Act (1996) & Forest Regulation
Discovery	Forest Reserve	1950-01-01	Forest Act (1996) & Forest Regulation
Flamstead	Forest Reserve	1963-04-18	Forest Act (1996) & Forest Regulation
Fergis Ramsay	Forest Reserve	1950-12-01	Forest Act (1996) & Forest Regulation
Fellowship	Forest Reserve	1961-01-13	Forest Act (1996) & Forest Regulation
Dallas Mountain (Elleston Run)	Forest Reserve	1950-12-01	Forest Act (1996) & Forest Regulation
Ecclesdown	Forest Reserve	1950-12-01	Forest Act (1996) & Forest Regulation
Ecclesdown	Forest Reserve	1950-12-01	Forest Act (1996) & Forest Regulation
Ecclesdown	Forest Reserve	1950-12-01	Forest Act (1996) & Forest Regulation
Kellits Stream	Forest Reserve	1950-12-01	Forest Act (1996) & Forest Regulation
Kellits Stream	Forest Reserve	1950-12-01	Forest Act (1996) & Forest Regulation
Dromily 'B'	Forest Reserve	1950-12-01	Forest Act (1996) & Forest Regulation
Dromily 'A'	Forest Reserve	1950-12-01	Forest Act (1996) & Forest Regulation
Chatsworth	Forest Reserve	1950-12-01	Forest Act (1996) & Forest Regulation
Chatsworth	Forest Reserve	1950-12-01	Forest Act (1996) & Forest Regulation

Protected Area Name	Category	Year	Legislation
Chatsworth	Forest Reserve	1950-12-01	Forest Act (1996) & Forest Regulation
Dolphin Head	Forest Reserve	1950-12-01	Forest Act (1996) & Forest Regulation
Dolphin Head	Forest Reserve	1950-12-01	Forest Act (1996) & Forest Regulation
Chepstowe	Forest Reserve	1950-12-01	Forest Act (1996) & Forest Regulation
Denham Farm	Forest Reserve	1956-09-27	Forest Act (1996) & Forest Regulation
Deans Valley	Forest Reserve	12/02/1954	Forest Act (1996) & Forest Regulation
Croydon	Forest Reserve	2006-01-01	Forest Act (1996) & Forest Regulation
Cooks Bottom	Forest Reserve	07/21/1955	Forest Act (1996) & Forest Regulation
Content 2	Forest Reserve	07/21/1955	Forest Act (1996) & Forest Regulation
Cockpit Country	Forest Reserve	1950-12-01	Forest Act (1996) & Forest Regulation
Citron Valley	Forest Reserve	07/21/1955	Forest Act (1996) & Forest Regulation
Pennants (Douces)	Forest Reserve	1950-12-01	Forest Act (1996) & Forest Regulation
Pennants (Douces)	Forest Reserve	1950-12-01	Forest Act (1996) & Forest Regulation
Pennants (Douces)	Forest Reserve	1950-12-01	Forest Act (1996) & Forest Regulation
Dover	Forest Reserve	07/21/1955	Forest Act (1996) & Forest Regulation
Tremolesworth	Forest Reserve	1974-07-18	Forest Act (1996) & Forest Regulation
Spring Estate	Forest Reserve	1959-12-10	Forest Act (1996) & Forest Regulation
Spring Garden	Forest Reserve	1950-12-01	Forest Act (1996) & Forest Regulation

Protected Area Name	Category	Year	Legislation
Spring Pen	Forest Reserve	1969-09-10	Forest Act (1996) & Forest Regulation
Spring Vale	Forest Reserve	1950-12-01	Forest Act (1996) & Forest Regulation
St. Faith's	Forest Reserve	1950-12-01	Forest Act (1996) & Forest Regulation
St. Faith's	Forest Reserve	1950-12-01	Forest Act (1996) & Forest Regulation
St. Faith's	Forest Reserve	1950-12-01	Forest Act (1996) & Forest Regulation
St. Faith's	Forest Reserve	1950-12-01	Forest Act (1996) & Forest Regulation
St. Faith's	Forest Reserve	1950-12-01	Forest Act (1996) & Forest Regulation
St. Faith's	Forest Reserve	1950-12-01	Forest Act (1996) & Forest Regulation
St. Faith's	Forest Reserve	1950-12-01	Forest Act (1996) & Forest Regulation
Stephney John's Vale	Forest Reserve	1950-12-01	Forest Act (1996) & Forest Regulation
Stonehenge	Forest Reserve	1950-12-01	Forest Act (1996) & Forest Regulation
Stonehenge	Forest Reserve	1950-12-01	Forest Act (1996) & Forest Regulation
Stonehenge	Forest Reserve	1950-12-01	Forest Act (1996) & Forest Regulation
Shuna	Forest Reserve	1950-12-01	Forest Act (1996) & Forest Regulation
Treadways	Forest Reserve	1950-12-01	Forest Act (1996) & Forest Regulation
Windsor	Forest Reserve	1964-02-04	Forest Act (1996) & Forest Regulation
Windsor	Forest Reserve	1964-02-04	Forest Act (1996) & Forest Regulation
Windsor	Forest Reserve	1964-02-04	Forest Act (1996) & Forest Regulation

Protected Area Name	Category	Year	Legislation
Troja	Forest Reserve	1955-12-26	Forest Act (1996) & Forest Regulation
Troy	Forest Reserve	07/21/1955	Forest Act (1996) & Forest Regulation
Troy	Forest Reserve	07/21/1955	Forest Act (1996) & Forest Regulation
Troy	Forest Reserve	07/21/1955	Forest Act (1996) & Forest Regulation
Trumpet Tree	Forest Reserve	03/15/1962	Forest Act (1996) & Forest Regulation
Tulloch Estate	Forest Reserve	2005-03-01	Forest Act (1996) & Forest Regulation
Virginia	Forest Reserve	1950-12-01	Forest Act (1996) & Forest Regulation
Wallenford & Cedar Valley	Forest Reserve	1964-11-26	Forest Act (1996) & Forest Regulation
Wallenford & Cedar Valley	Forest Reserve	1964-11-26	Forest Act (1996) & Forest Regulation
Wallenford & Cedar Valley	Forest Reserve	1964-11-26	Forest Act (1996) & Forest Regulation
Windsor and Seaman's Valley	Forest Reserve	07/21/1955	Forest Act (1996) & Forest Regulation
Peckham	Forest Reserve	1950-12-01	Forest Act (1996) & Forest Regulation
Teak Pen	Forest Reserve	1950-12-01	Forest Act (1996) & Forest Regulation
Teak Pen	Forest Reserve	1950-12-01	Forest Act (1996) & Forest Regulation
Ramble	Forest Reserve	1950-12-01	Forest Act (1996) & Forest Regulation
Ruthven	Forest Reserve	1950-12-01	Forest Act (1996) & Forest Regulation
Windsor Lodge	Forest Reserve	1950-12-01	Forest Act (1996) & Forest Regulation
Cockpit Country Addition (Peru Mountain)	Forest Reserve	07/21/1955	Forest Act (1996) & Forest Regulation

Protected Area Name	Category	Year	Legislation
Petersfield	Forest Reserve	1951-01-11	Forest Act (1996) & Forest Regulation
Petersville	Forest Reserve	1950-12-01	Forest Act (1996) & Forest Regulation
Pike & Ravens	Forest Reserve	1950-12-01	Forest Act (1996) & Forest Regulation
Raglan Mountain	Forest Reserve	1961-07-27	Forest Act (1996) & Forest Regulation
Richmond Pen- Block A	Forest Reserve	1955-12-21	Forest Act (1996) & Forest Regulation
Richmond Pen- Block B	Forest Reserve	1955-12-21	Forest Act (1996) & Forest Regulation
Richmond Pen- Block G			Forest Act (1996) & Forest Regulation
Rockfort	Forest Reserve	1955-12-21	Forest Act (1996) & Forest Regulation
Richmond Pen- Block I			Forest Act (1996) & Forest Regulation
Quasheba Mountain	Forest Reserve	1965-09-23	Forest Act (1996) & Forest Regulation
Richmond Pen- Block H			Forest Act (1996) & Forest Regulation
Richmond Pen- Block C	Forest Reserve	1955-12-21	Forest Act (1996) & Forest Regulation
Richmond Pen- Block F	Forest Reserve	1955-12-21	Forest Act (1996) & Forest Regulation
Richmond Pen- Block E	Forest Reserve	1955-12-21	Forest Act (1996) & Forest Regulation
Richmond Pen- Block D	Forest Reserve	1955-12-21	Forest Act (1996) & Forest Regulation
Galleon Harbour	Fish Sanctuary	2009-07-28	Fishing Industry Act (1975)
Orange Bay	Fish Sanctuary	2009-07-28	Fishing Industry Act (1975)
Bluefields	Fish Sanctuary	2009-07-28	Fishing Industry Act (1975)

Protected Area Name	Category	Year	Legislation
Galleon	Fish Sanctuary	2009-07-28	Fishing Industry Act (1975)
Three Bays	Fish Sanctuary	2009-07-28	Fishing Industry Act (1975)
Salt Harbour (revised)	Fish Sanctuary	2009-07-28	Fishing Industry Act (1975)
Discovery Bay	Fish Sanctuary	2009-07-28	Fishing Industry Act (1975)
Montego Bay Marine Park	Fish Sanctuary	2009-07-31	Fishing Industry Act (1975)
Bogue Island Lagoon	Fish Sanctuary	1979-07-25	Fishing Industry Act (1975)
Sandals Boscobel	Fish Sanctuary	2010-02-23	Fishing Industry Act (1975)
Oracabessa	Fish Sanctuary	2010-02-23	Fishing Industry Act (1975)
Bowden	Fish Sanctuary	1986-05-13	Fishing Industry Act (1975)
Negril Environmental Protection Area	Environmental Protection Area	1997-11-28	Natural Resources Conservation Authority Act
Negril Marine Park	Marine Park	1998-03-04	Natural Resources Conservation Authority Act
Montego Bay Marine Park	Marine Park	1992-06-05	Natural Resources Conservation Authority Act
Ocho Rios Marine Park	Protected Area	1999-08-16	Natural Resources Conservation Authority Act
Coral Spring-Mountain Spring Protected Area	Protected Area	1998-09-18	Natural Resources Conservation Authority Act
Blue & John Crow Mountains	National Park	1993-02-26	Natural Resources Conservation Authority Act

Protected Area Name	Category	Year	Legislation
Palisadoes-Port Royal Protected Area	Protected Area	1998-09-18	Natural Resources Conservation Authority Act
Portland Bight Protected Area	Protected Area	1999-04-22	Natural Resources Conservation Authority Act
Mason River Protected Area	Protected Area	2002-11-14	Natural Resources Conservation Authority Act
Ocho Rios Protected Area	Protected Area	1966-04-07	Beach Control Act
Port Royal Protected Area	Protected Area	1967-05-08	Beach Control Act
Bogue Lagoon Creek Game Reserve, Montego Bay, St. James	Game Reserve	1963-12-12	Wild Life Protection Act
Kingston and St. Andrew Game Reserve	Game Reserve	1971-04-15	Wild Life Protection Act
Knapdale Game Reserve, St. Ann	Game Reserve	1963-01	Wild Life Protection Act
Reigate Game Reserve, Manchester	Game Reserve	1968-06-06	Wild Life Protection Act
Stanmore Hill Game Reserve, St. Elizabeth	Game Reserve	1988-07-19	Wild Life Protection Act
Alligator Pond, Gut River and Canoe Valley Game Reserve, Manchester/Clarendon	Game Reserve	1997-08-22	Wild Life Protection Act
Amity Hall Game Reserve, St. Catherine	Game Reserve	1997-08-22, amended 2004-07-28	Wild Life Protection Act
Bogue Lagoon Creek Game Reserve, Montego Bay, St. James	Game Reserve	1997-08-22	Wild Life Protection Act
Glistening Waters Game Reserve,	Game Reserve	1997-08-22	Wild Life Protection Act

Protected Area Name	Category	Year	Legislation
Falmouth, Trelawny			
The Great Morass Game Reserve, Holland Bay, St. Thomas	Game Reserve	1997-08-22, amended 2004-07-28	Wild Life Protection Act
The Black River Lower Morass Game Reserve, Black River, St. Elizabeth	Game Reserve	1997-08-22 amended in 1998	Wild Life Protection Act
Great Morass Game Reserve, Negril, Westmoreland/ Hanover	Game Reserve	1997-08-22	Wild Life Protection Act
The Great Morass Parottee Game Reserve, Parottee, St. Elizabeth	Game Reserve	1997-08-22	Wild Life Protection Act
The Black River Upper Morass Game Reserve, Black River, St. Elizabeth	Game Reserve	1997-08-22	Wild Life Protection Act
Cabarita Point Game Reserve, St. Catherine	Game Reserve	1998-08-21	Wild Life Protection Act
Long Island Game Reserve, Clarendon	Game Reserve	1998-08-21	Wild Life Protection Act
Mason River Savanna Game Reserve, Clarendon	Game Reserve	1998-08-21	Wild Life Protection Act
West Harbour-Peake Bay, Game Reserve, Clarendon	Game Reserve	1998-08-21, amended in 1999 and 2004-07-28	Wild Life Protection Act
Portmore and Greater Portmore Game Reserve, St. Catherine	Game Reserve	2004-07-28	Wild Life Protection Act
Fairy Hill-Port Antonio Game Reserve, Portland	Game Reserve	2004-07-28	Wild Life Protection Act

Protected Area Name	Category	Year	Legislation
Priestman's River/Hector's River Area Game Reserve, Portland	Game Reserve	2008-09-19	Wild Life Protection Act

Appendix 4 Historical and Cultural Protected Sites

CLARENDON

Buildings of Architectural and Historic Interest

- Halse Hall Great House (Declared 28/11/2002)

Churches, Cemeteries, Tombs

- St. Peter's Church, Alley (Declared 30/03/2000)

Clock Towers

- May Pen Clock Tower (Declared 15/03/2001)

Natural Sites

- Milk River Spa (Declared 13/09/1990)

HANOVER

Buildings of Architectural and Historic Interest

- Barbican Estate (Declared 16/12/1993)
- Tamarind Lodge (Declared 15/07/1993)
- Old Hanover Gaol/Old Police Barracks, Lucea (Declared 19/03/1992)
- Tryall Great House and Ruins of Sugar Works (Declared 13/09/1990)

Forts and Naval and Military Monuments

- Fort Charlotte, Lucea (Declared 19/03/1992)

Historic Sites

- Blenheim – Birthplace of National Hero – The Rt. Excellent Sir Alexander Bustamante (Declared 05/11/1992)

KINGSTON

Buildings of Architectural and Historic Interest

- 40 Harbour Street (Declared 10/12/1998)
- Headquarters House, Duke Street (Declared 07/01/2000)
- Kingston Railway Station, Barry Street (Declared 04/03/2003)
- The Admiralty Houses, Port Royal (Declared 05/11/1992)

Churches, Cemeteries, Tombs

- Coke Methodist Church, East Parade (Declared 07/01/2000)
- East Queen Street Baptist Church, East Queen Street (Declared 29/10/2009)
- Holy Trinity Cathedral, North Street (Declared 07/01/2000)
- Kingston Parish Church, South Parade (Declared 04/03/2003)
- Wesley Methodist Church, Tower Street (Declared 10/12/1998)
- Old Jewish Cemetery, Hunts Bay (Declared 15/07/1993)

Forts and Naval and Military Monuments

- Fort Charles, Port Royal (Declared 31/12/1992)

Historic Sites

- Liberty Hall, 76 King Street (Declared 05/11/1992)

Public Buildings

- Ward Theatre, North Parade (Declared 07/01/2000)

Statues and Other Memorials

- Bust of General Antonio Maceo, National Heroes Park (Declared 07/01/2000)
- Cenotaph, National Heroes Park (Declared 07/01/2000)
- Negro Aroused, Ocean Boulevard (Declared 13/04/1995)
- Monument to Rt. Excellent Sir Alexander Bustamante, National Heroes Park (Declared 07/01/2000)
- Monument to Rt. Excellencies George William Gordon and Paul Bogle, National Heroes Park (Declared 07/01/2000)
- Monument to Rt. Excellent Marcus Garvey, National Heroes Park (Declared 07/01/2000)
- Monument to Rt. Excellent Norman Manley, National Heroes Park (Declared 07/01/2000)
- Monument to Rt. Excellent Nanny of the Maroons, National Heroes Park (Declared 29/03/2001)

- Monument to the Rt. Excellent Sam Sharpe, National Heroes Park (Declared 29/03/2001)
- Monument to the Most Honourable Sir Donald Sangster, National Heroes Park (Declared 07/01/2000)
- Statue of Edward Jordan, St. William Grant Park (Declared 07/01/2000)
- Statue of Father Joseph Dupont, St. William Grant Park (Declared 07/01/2000)
- Statue of Queen Victoria with Bust of Prince Consort, St. William Grant Park (Declared 07/01/2000)
- Statue of Sir Charles Metcalfe, St. William Grant Park (Declared 07/01/2000)
- Statue of the Rt. Excellent Norman Manley, St. William Grant Park (Declared 04/07/2002)
- Statue of the Rt. Excellent Sir Alexander Bustamante St. William Grant Park (Declared 07/01/2000)

MANCHESTER

Buildings of Architectural and Historic Interest

- Greenvale Railway Station Declared 06/01/2005)
- Marlborough Great House, Spur Tree (Declared 08/04/1999)
- Marshall's Pen Great House (Declared 30/05/2000)
- Sutton Railway Station (Declared 02/10/2003)
- Williamsfield Railway Station (Declared 03/04/2003)

Churches, Cemeteries, Tombs

- Mandeville Parish Church (Declared 19/07/2007)

Historic Sites

- Roxborough Castle Plantation – birthplace of National Hero, the Rt. Excellent Norman Manley (Declared 01/10/1992)

Public Buildings

- Mandeville Court House (Declared 15/03/2001)

PORTLAND

Buildings of Architectural and Historic Interest

- DeMontevin Lodge, Port Antonio (Declared 02/05/1996)

- Orange Bay Railway Station (Declared 02/10/2003)
- Port Antonio Railway Station (Declared 02/05/1996)

Churches, Cemeteries, Tombs

- Christ Church Anglican, Port Antonio (Declared 02/05/1996)

Forts and Naval and Military Monuments

- Fort George, Titchfield (Declared 02/05/1996)
- The Old Military Barracks, Titchfield (Declared 02/05/1996)

Historic Sites

- Bump Grave (Declared 10/05/2007)

Public Buildings

- Buff Bay Court House (Declared 08/04/2004)
- Port Antonio Court House (Declared 02/05/1996)

Statues and Other Memorials

- The Cenotaph, Port Antonio (Declared 03/04/2003)

ST. ANDREW

Aqueducts, Bridges and Dams

- Hope Aqueduct (Declared 06/01/2005)
- Long Lane Aqueduct, Constant Spring (Declared 06/01/2005)
- Papine-Mona Aqueduct, UWI Mona Campus (Declared 31/05/2001)

Buildings of Architectural and Historic Interest

- Admiral's Mountain Great House, Cooper's Hill (Declared 29/03/2001)
- Cherry Garden Great House, 46 Russell Heights (Declared 19/09/2002)
- Craighton House, Irish Town (Declared 17/03/2005)

- Devon House, Hope Road (Declared 13/09/1990)
- Lillian's Restaurant, Old Hope Road (UTECH) (Declared 08/07/2010)
- Mona Great House, off Mona Road (Declared 10/02/1994)
- Oakton House, Maxfield Avenue (Declared 04/04/1991)
- "Regardless", 4 Washington Drive (Declared 29/03/2001)
- 24 Tucker Avenue, former residence of National Hero, the Rt. Excellent Alexander Bustamante (Declared 04/04/1991)

Churches, Cemeteries, Tombs

- Church of the Good Shepherd (Anglican), Constant Spring Road (Declared 17/03/2005)
- Jamaica Free Baptist Church, August Town Road (Declared 13/05/1999)
- St. Andrew Parish Church, Hagley Park Road (Declared 03/04/2003)
- University of the West Indies Chapel, UWI Mona Campus (Declared 29/03/2001)

Clock Towers

- Cross Roads Clock Tower (Declared 06/01/2005)
- Half Way Tree Clock Tower (Declared 07/01/2000)

Public Buildings

- Buxton House, Mico College Campus (Declared 19/03/1992)

Miscellaneous

- Ruins of Three Concrete Silos, Old Hope Road, (UTECH) (Declared 08/07/2010)

Natural Sites

- Hope Botanic Gardens, Old Hope Road (Declared 04/04/1991)
- Rockfort Mineral Bath and Spa, Sir Florizel Glasspole Boulevard (Declared 06/02/1992)

ST. ANN

Buildings of Architectural and Historic Interest

- Bellevue Great House, Orange Hall (Declared 29/03/2001)
- Edinburgh Castle – ruins, main road from Harmony Vale to Pedro (Declared 04/04/1991)
- Liberty Hill Great House, off Lime Hall main road (Declared 02/072009)

- Iolaus (Declared 13/07/1993)
- Mount Plenty Great House, Orange Hall (Declared 29/03/2001)
- Seville Great House, St. Ann's Bay (Declared 13/05/1999)

Churches, Cemeteries, Tombs

- Our Lady of Perpetual Help Church, St. Ann's Bay (Declared 22/03/2001)
- St. Peter Martyr Site (ruins of old Church), St. Ann's Bay (Declared 22/03/2001)

Historic Sites

- 32 Market Street, St. Ann's Bay – birthplace of National Hero the Rt. Excellent Marcus Garvey (Declared 31/12/1992)

Hotels and Taverns

- Moneague Hotel, Moneague College Campus (Declared 23/03/2000)
- Moneague Inn (Declared 13/05/1999)

Miscellaneous

- Cave Valley Chimney (Declared 19/06/2000)

Sugar & Coffee Works

- Drax Hall Waterwheel (Declared 30/03/2006)
- Roaring River Waterwheel & Aqueduct (Declared 25/12/2008)

ST. CATHERINE

Aqueducts, Bridges and Dams

- Bushy Park Aqueduct (Declared 31/01/2002)

Buildings of Architectural and Historic Interest

- Altenheim House, 24 King Street, Spanish Town (Declared 04/04/1991)
- Colbeck Castle – ruin, near Old Harbour (Declared 13/09/1990)
- Hayfield House, near Linstead (Declared 08/07/2010)
- Highgate House, Sligoville (Declared 10/12/1998)
- Old Harbour Railway Station (Declared 02/10/2003)

- Spanish Town Railway Station (Declared 03/04/2003)

Caves and Middens

- Mountain River Cave, Cudjoe Hill (Declared 03/04/2003)
- Two Sisters Caves, Hellshire (Declared 03/04/2003)
- Whitemarl Arawak Museum (Declared 31/12/1992)

Historic Sites

- Port Henderson (Declared 13/04/1995)
- Spanish Town Historic District (Declared 29/12/1994)

Churches, Cemeteries, Tombs

- Cathedral of St. Jago de la Vega (Anglican), Spanish Town (Declared 31/12/1992)
- Phillippo Baptist Church, Spanish Town (Declared 05/11/1992)
- St. Dorothy's Anglican, Spanish Town to Old Harbour main road (Declared 30/03/2000)

Clock Towers

- Old Harbour Clock Tower (Declared 25/12/2008)

ST. ELIZABETH

Buildings of Architectural and Historic Interest

- Appleton Railway Station (Declared 03/04/2003)
- Balaclava Railway Station (Declared 02/10/2003)
- Golmont View House, Reading (Declared 04/07/2002)
- Invercauld House, Black River (Declared 13/09/1990)
- Magdala House, Black River (Declared 13/09/1990)
- Three Munro College Buildings – Coke Farquharson Dining Room, Chapel and Terman Calder Building (Declared 01/07/2004)

Lighthouses

- Lovers' Leap Lighthouse (Declared 09/05/2002)

Churches, Cemeteries, Tombs

- Lacovia Tombstones (Declared 25/12/2008)

ST. JAMES

Buildings of Architectural and Historic Interest

- Anchovy Railway Station (Declared 02/10/2003)
- Barnett Street Police Station, Montego Bay (Declared 23/03/2000)
- Cambridge Railway Station (Declared 02/10/2003)
- Catadupa Railway Station (Declared 03/04/2003)
- Cinnamon Hill Great House (Declared 13/05/1999)
- Dome House, Montego Bay (Declared 04/04/1991)
- Greenwood Great House (Declared 15/03/2001)
- Grove Hill House, Montego Bay (Declared 13/05/1999)
- Harrison House, Montego Bay (Declared 13/05/1999)
- Montpelier Railway Station (Declared 03/04/2003)
- No. 1 King Street, Montego Bay (Declared 15/07/1993)
- No. 2 Orange Street and No. 6 Corner Lane, Montego Bay (Declared 17/02/1994)
- (The Georgian & Round Houses)
- Roehampton Great House (Declared 03/04/2003)
- Rose Hall Great House (Declared 13/05/1999)
- Town House, Montego Bay (Declared 15/03/2001)

Churches, Cemeteries, Tombs

- Burchell Baptist Church, Montego Bay (Declared 02/07/2009)
- Salter's Hill Baptist Church – ruin (Declared 13/05/1999)
- St. Mary's Anglican Church, Montpelier (Declared 23/03/2000)

Forts and Naval and Military Monuments

- Montego Bay Old Fort (Declared 01/12/2005)

Public Buildings

- Old Court House (Montego Bay Civic Centre) (Declared 30/05/1996)

Statues and Other Memorials

- Sam Sharpe Monument (Declared 03/04/2003)
- Sugar and Coffee Works Ironshore Windmill Tower (Declared 03/04/2003)

Miscellaneous

- Old Albert Market, Montego Bay (Declared 30/05/1996)
- Old Slave Ring, Montego Bay (Declared 08/04/2004)
- The Dome, Montego Bay (Declared 30/03/2000)

ST. MARY

Buildings of Architectural and Historic Interest

- Firefly Hill (Noel Coward's House) (Declared 31/12/1992)
- Harmony Hall Great House (Declared 03/04/2003)
- Quebec Estate (Declared 01/12/2005)
- Wentworth Estate (Declared 11/02/1993)

Forts and Naval and Military Monuments

- Fort Haldane (Declared 19/06/2000)

Historic Sites

- Rio Nuevo Battle Site (Declared 13/05/1999)
- Rio Nuevo Taino Site (Declared 01/12/2005)

Public Buildings

- Old Court House (Port Maria Civic Centre) (Declared 02/05/1996)

Statues and Other Memorials

- Claude Stuart Park (Declared 02/05/1996)

ST. THOMAS

Buildings of Architectural and Historic Interest

- Orange Park (Declared 04/07/2002)

Churches, Cemeteries and Tombs

- Christ Church, Morant Bay (Declared 04/07/2002)

Historic Sites

- Stony Gut – home of National Hero the Rt. Excellent Paul Bogle (Declared 05/11/1992)

Natural Sites

- Bath Fountain Spa (Declared 13/09/1990)

Public Buildings

- Morant Bay Court House (Declared 05/11/1992)

Statues and Other Memorials

- Statue of the Rt. Excellent Paul Bogle, Morant Bay (Declared 03/04/2003)

TRELAWNY

Buildings of Architectural and Historic Interest

- Barrett House – ruin, 1 Market Street Falmouth (Declared 04/04/1991)
- Carlton House (Declared 20/07/1990)
- Hyde Hall Great House (Declared 08/04/2004)
- Orange Valley Slave Hospital (Declared 21/12/2006)
- Stewart Castle – ruin (Declared 04/04/1991)
- Vale Royal Great House (Declared 08/04/2004)

Churches, Cemeteries, Tombs

- St. Peter's Anglican Church, Falmouth (Declared 01/10/1992)

Clock Towers

- Duncans Clock Tower (Declared 03/04/2003)

Forts and Naval and Military Monuments

- Fort Balcarres, Falmouth (Declared 20/05/1993)

Historic Sites

- Falmouth Historic District (Declared 05/09/1996)

Public Buildings

- Falmouth Courthouse (Declared 01/10/1992)
- Falmouth Post Office (Declared 01/10/1992)

WESTMORELAND

Buildings of Architectural and Historic Interest

- Ackendown Castle Ruins (Declared 21/12/2006)
- Chebuctoo Great House, Cave (Declared 25/12/2008)
- Thomas Manning Building, Savanna-la-mar (Declared 19/06/2000)

Churches, Cemeteries, Tombs

- Savanna-la-mar Baptist Church (Declared 09/05/2002)
- St. George's Anglican Church, Savanna-la-mar (Declared 25/12/2008)

Forts and Naval and Military Monuments

- Savanna-la-mar Fort (Declared 19/06/2000)

Miscellaneous

- Cast Iron Fountain (Declared 19/06/2000)

UNDERWATER CULTURAL HERITAGE

- Pedro Bank (Declared 01/07/2004)

Appendix 5 National Ecological Gap Assessment Report - Summary

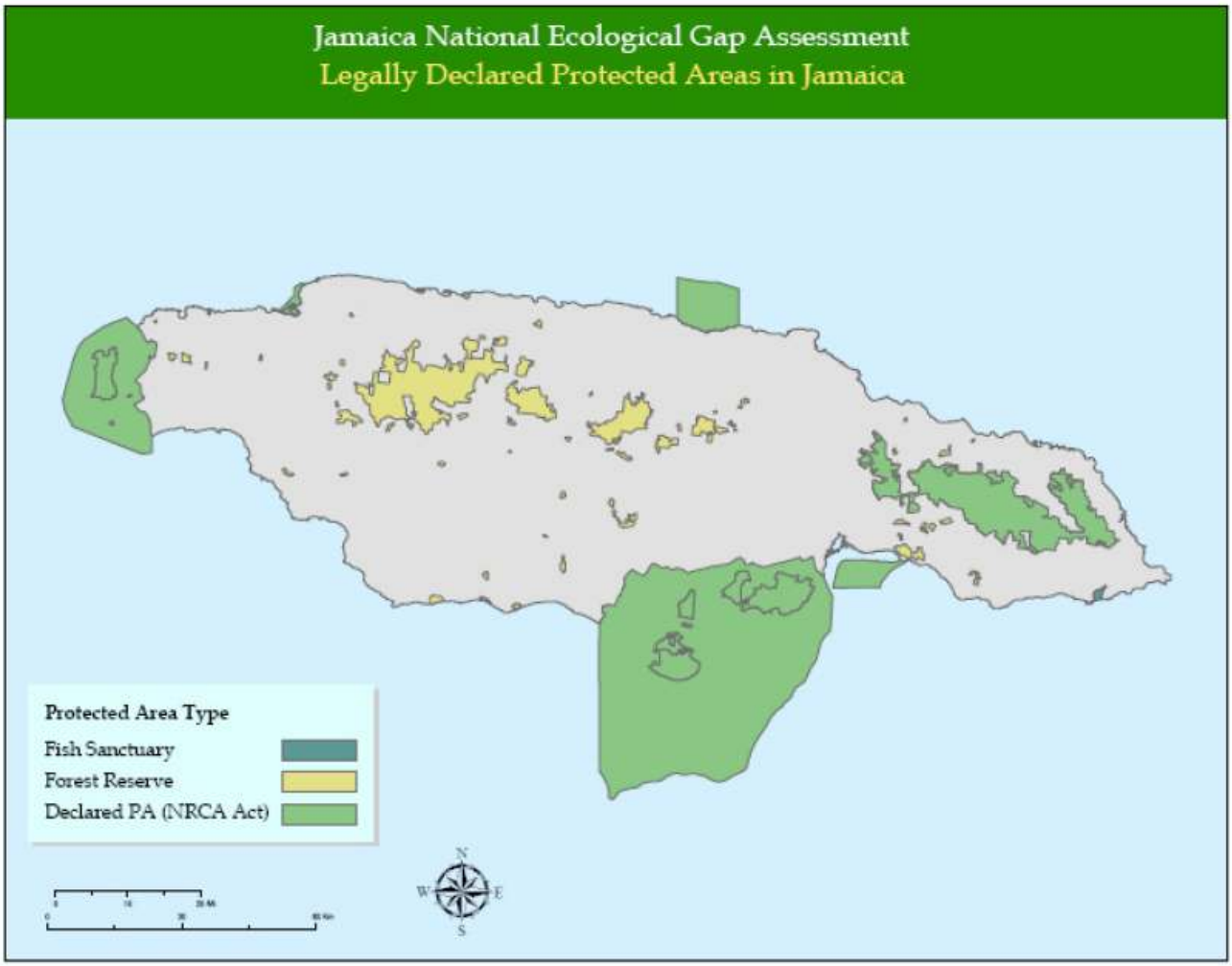
The National Ecological Gap Assessment Report (NEGAR) has two basic objectives:

- Identify where the existing protected areas fall short in adequately protecting a representative sample of all marine, terrestrial and freshwater biodiversity in the country, taking into particular consideration:
    - Representative gaps - How much of the island's critical biodiversity is protected?
    - Ecological gaps - Is what is protected healthy?
    - Management gaps – Are the protected areas under effective management?
- Based on the identified gaps, provide recommendations for bridging the gaps and implementing conservation of these areas.

Current Protected Areas

Jamaica's protected areas encompass a variety of biologically important features such as ecosystems, communities, habitat types, as well as plant and animal species. The existing protected areas cover approximately 18% of Jamaica's land and 15% of the country's archipelagic waters. Despite this relatively large coverage, the existing sites do not necessarily capture the critical natural processes required to maintain the PAs across the nation for the long term. This has been recognised as a gap in the current system of protected areas. See Figure 4 (NEGAR Map 1.1) below for the existing sites declared across Jamaica. This map however does not include the fish sanctuaries that were declared in 2009 and 2010; these along with proposed sanctuaries, are shown in Figure 5.

Figure 3 Legally Declared Protected Ares in Jamaica (NEGAR)



Source: The National Ecological Gap Assessment Report (NEGAR)

Figure 4 **Coastal and Marine Protected Areas (including Fish Sanctuaries)**

Source: The Nature Conservancy

Methodology

The NEGAR identified the specific biological features within the marine, freshwater and terrestrial realms that serve to focus the conservation planning and management efforts. These features - conservation targets as they are called in the report - are an important starting point in conservation as they represent key elements of biological diversity that are critical to maintaining significant ecological functions.

Conservation targets were selected using criteria such as endemism, threat levels, ecological representativeness and vulnerability. The marine plan identified 13 conservation targets, the terrestrial plan lists 55, and the freshwater plan, 22. (Appendix 10 provides a summary of Jamaica's marine, terrestrial and freshwater conservation targets resulting from the assessment.) Modelling was then used to determine where these targets occurred, how many of them remained and in what condition. Based on these analyses, a specific (or adaptive) conservation goal for each target was established by local experts to ensure that the number, size or extent of each target conserved is sufficient to maintain long-term ecological functionality. However, the marine, freshwater and terrestrial assessments also use higher percentage conservation goals for particular targets when needed, based on unique considerations related to Jamaica's island geography and application of the precautionary principle.[19]

To draft a comprehensive conservation portfolio for Jamaica, an overlay analysis of the marine, terrestrial and freshwater realms (NEGAR Maps 10.0, 11.0 and 12.0) was conducted to determine spatial overlaps and connectivity between them. They were then merged to show specific areas of convergence and those that are equally important as individual or stand-alone areas (NEGAR Maps 13.0–15.0). The integrated analysis provided the basis for the proposed recommended system of protected areas, also called the recommended conservation portfolio for Jamaica (NEGAR Map 13.0 – shown in Figure 5).

Throughout the analysis it was recognized that there was limited information of the quality and at a national scale that would have been ideal for this kind of report. In recognition of this issue there is a section of recommendations in the NEGAR focused specifically on research needs.

Report Findings

The overall gap analysis revealed that the representation of critical marine conservation targets in the eastern coast of Jamaica is ecologically insufficient for functionality within existing protected areas. Of particular concern is the complete absence of offshore banks in any designated protected area, and the highly selective representation of cays. Moreover, the current protected area legislation is not designed to accommodate seascape-scale connectivity, functions and processes that are necessary to maintain overall marine biodiversity health.

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[19] Rio Declaration definition of "precautionary approach" also known as the precautionary principle: Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation.

Terrestrial gaps were the most difficult to analyse and the most serious because limited data on plants are currently available. Faunal targets, however, are more comprehensively covered. As a result of the data gap, only "threatened plant assemblages"[20] and vegetation types were selected as floral targets. Of particular concern is the under-representation of four targets that fall below the ten per cent threshold: Wet and Very Wet Forest on Alluvium, Mesic Forest on Shale and *Osteopilus marianae* (frog species). Also 44 of the 55 terrestrial targets fail to meet the adaptive goals that were established, suggesting that most of the terrestrial targets may be highly vulnerable to existing threats and lack of connectivity.

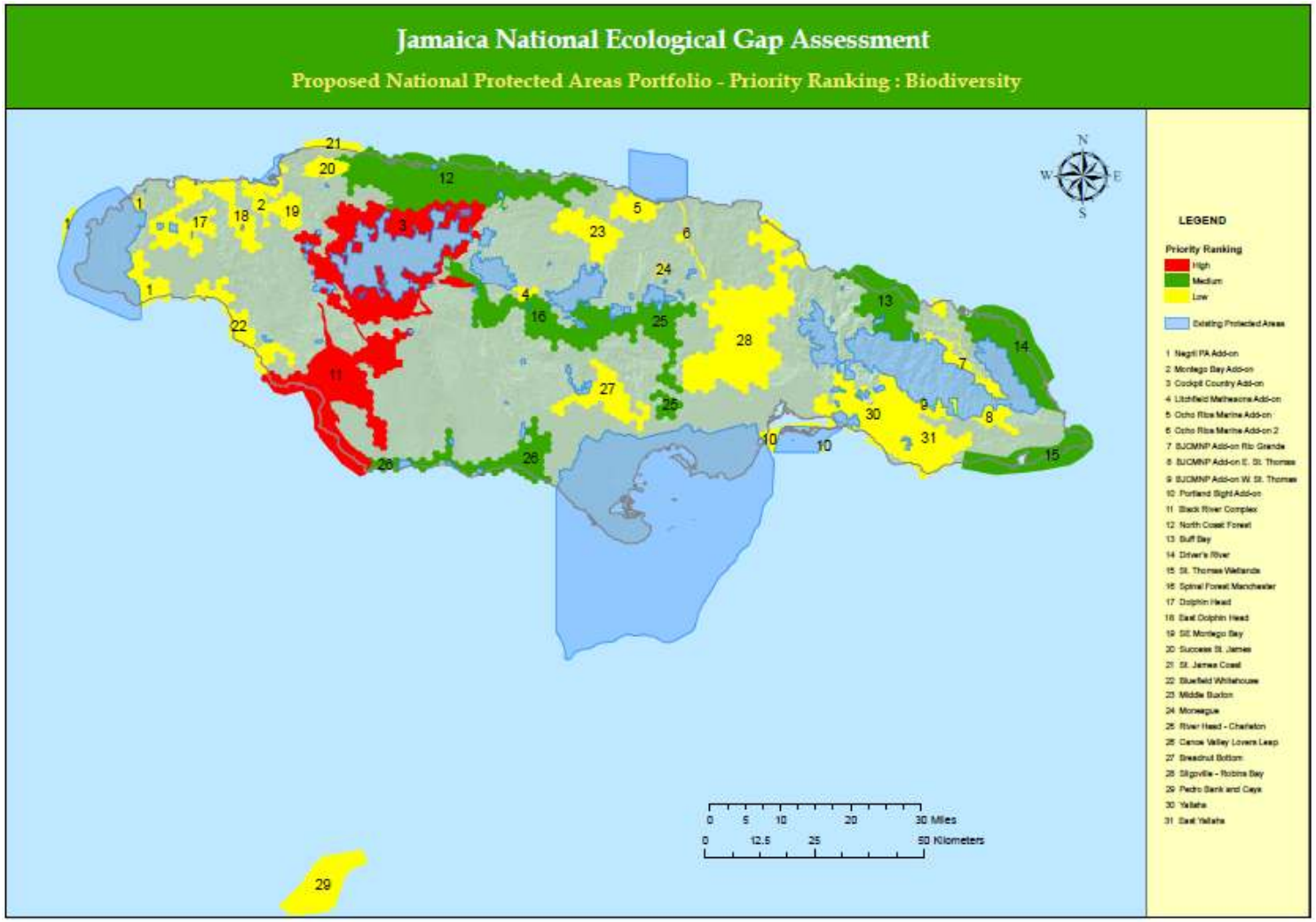
Freshwater gaps are large rivers, wetlands, ponds and lakes as well as freshwater caves that occur in the eastern part of the island and high-altitude streams in the western part that have no representation in any of Jamaica's protected areas. John (2006) states "…the island's rivers, wetlands and ponds are yet to be regarded as whole systems. This accounts for the fact that no protected areas in Jamaica cover complete river systems from headwaters to the coast. The main ecological gap in the design of Jamaica's protected areas is that of connectivity." Longitudinal (or linear) and lateral connectivity are critical for the sustainable health of freshwater systems.

With regard to the management of Jamaica's current protected areas, the major gaps that exist relate to a lack of focus on conservation actions that directly impact biodiversity, such as threat abatement and enforcement. These gaps are fuelled by overall inadequate investment of monetary and human resources in conservation. At the policy level, the complications of multiple-agency management combined with the lack of a harmonised system of classification to guide the management of protected areas, are contributing to inefficiencies and shortcomings in overall performance.

The map in Figure 6 (NEGAR Map 13) illustrates the recommended conservation portfolio of protected areas for Jamaica – focusing on the areas of highest biodiversity - that meets biological conservation goals as well as the country's commitment to protect at least ten per cent of its biodiversity.

[20] Explained in the NEGAR, see page 18.

Figure 5 Conservation Portfolio Prioritised for Biodiversity Ranking (NEGAR)



Source: The National Ecological Gap Assessment Report (NEGAR)

The final complementary network of protected areas (Map 2) was developed through refinement of modelling results, using expert knowledge, to ensure that critical gaps were addressed, conservation goals met, (NEGAR Map 16, Tables 8-9), and a ridges-to-reef configuration achieved.

The portfolio map demonstrates the complementarity of the proposed conservation areas with existing protected areas. The addition of Martha Brae and Falmouth areas provides a connecting corridor from the upper mountains of Cockpit Country to the Northern Coast that, if effectively conserved, can ensure the functionality of ecosystems from freshwater headwaters to the marine environment. In the South, the same can be observed with the conservation of the upper reaches and marine drainage areas of the Black River. Equally important is the Rio Grande area abutting the Blue Mountains inland, as well as Anchovy, Long Bay and Manchioneal on the coast.

Recognising that the recommended additions to protected areas were fairly extensive and that resources would likely continue to be limited into the medium to long term, a prioritization exercise was conducted. The aim was to provide guidance to any entity or individual regarding the most important places to receive early actions and emphasis. The group agreed to use:

i) relative biodiversity importance (level of biodiversity present, rareness, endemism, ecosystem services);

ii) threat level and feasibility (including land ownership, ease of establishment and management of protected area status) as means to prioritize the sites;

iii) with biodiversity relevance being the most important ranking. (See NEGAR Appendix 6 for the tables showing the results of the prioritization exercise.)

Based on the three rankings done according to relative importance of the biodiversity known to be within the area, the threat of destruction of the area, and the feasibility of protecting the area, an overall ranking was achieved.

Highest biodiversity priority sites, and those recommended for immediate focus are: Cockpit Country forest reserves and environs; the Black River complex which encompasses the coast and near-shore from Treasure Beach to Whitehouse; the lower and upper Black River Morass; Drivers River; Spinal Forest Manchester; and Canoe Valley to Lovers Leap. (See NEGAR Map Z sites 3, 11, 14, 16, and 26, respectively.)

Finally, the NEGAR included a suite of recommendations with the aim of filling the identified gaps and challenges: Strategies for Jamaica's Protected Areas System, Strategies for Enabling Jamaica's Protected Areas Policy and Strategies to Improve Protected Area Conservation Capacity. (See NEGAR pages 29-31.)

Appendix 6 Protecting Heritage and Culture: Its Role in The Protected Areas System Plan and Impact on National Development - Summary

The protection of the country's natural and cultural heritage is an integral part of the protected area system, with the cultural component being reflected in both tangible and intangible forms. These aspects of our history and culture have contributed to the development of Jamaica as a unique nation.

The report entitled *"Protecting Heritage and Culture: Its Role In The Protected Areas System Plan and Impact on National Development*" identified three overarching gaps which will be addressed in the action plan. Key requirements in the areas of policy reform, funding and public awareness/education are listed below:

1. Policy, Legislative and Institutional Reform

- Adaptive reuse as a national policy in the protection of historical sites/areas should be the fundamental principle in preserving a protected area through the rejuvenation of its economic base. Three distinct economic activities can be employed under this principle:
  a.) **Tourism** - the ability to use attractive historic environment to draw tourism revenue should be pursued in order to finance restoration and maintenance of historic areas
  b.) **Services** - historical sites, particularly buildings, should be rented/leased to professional associations who would be inclined to maintain these buildings at certain standards.
  c.) **High-tech Facilities** - based on the premise that many new types of activities do not require elaborate physical arrangements and can use small spaces, historic buildings can be used to house organisations engaged in computer related activities and academic think-tanks, among other things.

- There is a need for a national policy for quantifying or putting a value on heritage. This would assist greatly in assessing the contribution of culture and heritage in overall national development.

- Amendment of the Heritage Trust Act to make provisions to protect artefacts and to strengthen the authority of the JNHT.

- Establishment of a conservation arm of JNHT for individuals or private organisations to contribute to restoration and preservation of historical assets.

- Develop a national culture statistical programme since data analysis is critical to new policy development.

- Establishment of heritage centres to assist with the transfer of cultural heritage from the elders to the youth in a more structured and systematic manner.

- Development of the eco-tourism and heritage tourism product to assist in the economic sustainability of critical cultural and historic assets and biodiversity.

2. Funding

- There is a need to engage international sponsors and donor agencies to assist with maintaining heritage/cultural sites. One way of doing this is getting a historic site /monument on the UNESCO's World Heritage List

- The JNHT should make available a financial package to assist land/site owners to restore built environment/tangible heritage.

- The National Housing Trust should make special loans available to owners of old homes and buildings of historical significance for preservation and restoration of these.

3. Public Awareness, Education and Development

- Introduce/expand training of students and trainers in restoration looking at construction techniques, materials and preservation of such materials.

- Devise a public education and awareness campaign regarding the importance of heritage sites and monuments.

The report also examined the critical issue of the management of the protected sites and in this respect adopted an approach proposed by NEPA for protective areas and recommended co-management as the preferred strategy ,even while acknowledging that it is 'dependent on the level of stakeholder interest and underlying agendas'.

It is being recommended that two types of co-management arrangements be adopted in the Jamaican context depending on the circumstance/s at each heritage site:

- Delegated co-management should be considered the first option where there is an established NGO or CBO or private landowner in the area of interest. For example, in the case of the Portland Bight Protected Area, C-CAM could be delegated to manage the heritage sites.

- Collaborative co-management can be adopted where there is no organized NGO or CBO but as an interim step until a CBO that can participate in collaborative co-management is fully established.

The general management objectives are as follows:

- Protect all aspects of heritage.
- Establish strong community involvement in management approach and activities
- Provide opportunities for research, education and public appreciation
- Optimise the economic potential, including heritage tourism and adaptive reuse of the built environment

With regard to the selection of protected heritage sites, while the report recognised that the JNHT had established two categories of protected heritage sites mainly by declaring: (i) National Monuments and (ii) Protected National Heritage; it was recommended that another category entitled **Protected Cultural and Historical Assets** be included in the overall national system plan. The term assets relates to both tangible and intangible heritage.

Appendix 7 Legal Framework Review – Summary

The 2004 report which evaluated Jamaica's policy and legal framework in preparation for the development of the Master Plan identified a number of key issues that would need to be addressed going forward with regard to the policy and legal framework. One of those issues related to the need to clearly define what is a protected area. In addition, the formation of the National Environment and Planning Agency (NEPA) and its mandate in respect of management of protected areas is still to be clarified in terms of its legal mandate. The operation of the National Park Trust Fund established in January 1991 as Jamaica's first debt for nature swap with the intent of being the primary source stories of funding of parks is another issue which would need to be addressed in the Master Plan. Private lands and the rights of private landowners will be another legal challenge – because while the Cabinet supports the encouragement of private landowners to protect their property and calls for economic incentives to support private involvement in park management and conservation, the question of the rights of private landowners and the role of private conservation within the protected area is of great importance and is largely unresolved in a legal sense. This will need to be addressed as part of any revision of the policy and legal framework to manage protected areas.

Additionally, while memorandum of understanding have been developed to address inter jurisdictional conflicts, any legislative reform related to protected areas would need to harmonise and strengthen the existing legislative framework and in so doing seek to eliminate inter jurisdictional conflicts where these exist.

In many respects the issue is really not all about the existence of laws or lacks thereof, but perhaps more importantly the enforcement of the laws. This has been identified as an area of significant weakness and will have to be addressed within the Master Plan. A number of key areas have been identified as affecting effective enforcement. These are:

1. shortage of financial resources;
2. low levels of fines;
3. delays in court hearings; and
4. inadequate monitoring for compliance.

Following on the 2004 report, a Focus Group Meeting of all key stakeholders, including NEPA, JNHT and the Forestry Department, was held where it was agreed that the Master Plan would address the following policy and legal reform issues.

1. All policies with shared or similar objectives which involve the protected areas should be considered in the development of a protected area policy.
2. Based on the fact that a date for the completion of the NEPA Act was not something that could be counted on, umbrella legislation governing the protected areas system should be developed.
3. A Legal Working Group will oversee the development of the Protected Areas Act.
4. The overarching Protected Areas legislation would seek to:

a. List the different categories of protected areas under one umbrella Act;
b. Vest one entity with the mandate / ownership of the PA legislation though not the actual protected areas as these would remain with the entity managing them
c. Address cross-jurisdictional issues
d. Institutionalise the PAC and outline its role and the method of appointment
e. Address the issue of financing the operations of the protected areas

Appendix 8 Management Effectiveness and Capacity Assessment - Summary

The Methodology

Management effectiveness evaluation is the assessment of how well protected areas are being managed – primarily the extent to which they are protecting valued resources and achieving conservation goals and objectives. In protected areas management, the term "management effectiveness" embodies three main theme, namely:

- Design issues relating to both individual sites and protected area systems;
- Adequacy and appropriateness of management systems and processes; and
- Delivery of protected area objectives including conservation of valued resources.

Management effectiveness is a central pillar of the System Plan. Globally assessment of management effectiveness and capacity building is an integral component of management and over the years a number of lessons have been learnt with regards to these assessments. They are as follows:

1. Management effectiveness assessments typically inform action;
2. Capacity development plans are typically based on conventional wisdom;
3. Well prioritised plans are more likely to be implemented;
4. Do not over plan-start simple, measure success and grow plans over time; and
5. Foster broad ownership.

In conducting the management assessment for Jamaica, the WWF's Rapid Assessment and Prioritization of Protected Areas Management (RAPPAM) methodology was used. It provides protected areas agencies with a country-wide overview of the effectiveness of protected area management, threats, vulnerabilities and degradation.

The RAPPAM methodology is designed for broad-level comparisons among many protected areas that together make a protected areas network or system. It can:

- Identify management strengths and weaknesses;
- Analyse the scope, severity, prevalence and distribution of a variety of threats and pressures;
- Identify areas of high ecological and social importance and vulnerability;
- Indicate the urgency and conservation priority for individual protected areas; and
- Help to develop and prioritize appropriate policy interventions and follow-up steps to improve protected area management effectiveness.

Site Level Management Effectiveness

Management effectiveness was assessed in the areas planning inputs, processes and outputs. With respect to the overall planning this was evaluated in terms of objectives and legal security and the design of protected areas.

A review of all of the objectives established by the protected areas across the country revealed variations in performance. In some cases objectives were thought to be adequate for management of the site, while in others there were clear deficiencies and objectives were unclear and the staff involved in the management of the site who were not fully aware of the issues. In terms of the legal security the issues revolved around unsettled land disputes, boundary demarcation and enforcement of the law. Generally, there has been inadequate law enforcement in most areas and this is considered a significant gap and a critical requirement for protected areas management.

Site design was generally regarded as good. However, while in most areas management objectives may have been established in many cases management plans, a fundamental building block for effective protected areas management were not in place. This is considered a significant weakness in the system based on the requirements for managing protected areas. Additionally, in many areas of their protected areas where there is private land ownership their incorporation in the management plan poses a significant challenge and leaves large sections of protected areas outside of the prescribed management activities and recommendation for good practice.

In summary, planning has the following major challenges- staffing, zoning, boundary issues and inadequate financial resources.

The analysis of the inputs required to manage protected areas successfully involved a review of communication capabilities, infrastructure, facilities and financing. The most critical deficiency was considered to be financing which is necessary to support the staffing and other needs.

The analysis of process involved management planning, decision making and research and monitoring each of which had a subset of activities which supported the process. As stated earlier, most protected areas did not have a management plan and in some cases where these plans existed they were outdated. With respect to decision making processes these were considered to be strong with a significant element of participation from stakeholders. However, the decision-making process was hampered by a lack of adequate data and the absence of adequate research and monitoring data. This is considered a significant weakness which adversely impacts effective system management, in other words, management effectiveness.

Ten criteria were evaluated for outputs. These criteria were: threat prevention, site restoration, wildlife management, community outreach, visitor management, infrastructure, management planning, staff evaluation, training and research and monitoring. The following were regarded as the most critical requiring improvements; training, management planning and site restoration.

In summary or the results of the evaluation of management effectiveness at the site level were mixed however clear weaknesses have been identified all of which are critical to the effective management of protected areas and must be addressed as part of the development of the master plan.

System Level Management Effectiveness

System level issues are considered to be those with respect to fostering conditions which enable effective management at all levels. The factors which contribute to this include protected area system

level design, policies and the policy environment. In respect of the policy environment a number of strengths including the development of policy, fostering dialogue and participation and the effort for educational outreach were identified. The weaknesses were:

- sufficient commitment and funding to effectively administer the PA system;
- deficiencies in sustainable land use;
- conservation mechanisms; and
- effective law enforcement.

With respect to protected areas policy the review found that while there was a clear vision for the protected area system in Jamaica the policy framework had some inadequacies. For example, there was a general finding that the area of the land projected to maintain natural processes at the landscape was inadequate.

Overall, the most critical institutional factors that require major improvement are:

- demonstrated commitment;
- comprehensive inventory;
- inadequate training programmes;
- lack of routine evaluation;
- insufficient system wide law enforcement;
- inadequate system wide funding; and
- conservation mechanisms e.g. incentives for private land users.

Capacity Requirements

At the site level key capacity requirements include staffing training and infrastructure. At the system levels capacity development identified as a key critical success factor. In this regard, eight (8) strategic directions for capacity development were established which were as follows.

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 need to provide a capacity development plan, which subdivided capacity needs into three main categories; human capacity, that is the number of personnel at the site and skills and knowledge, institutional capacity which included infrastructure, institutional structures and inter institutional collaborative mechanisms and societal capacity including laws, policies, incentives, public awareness and stewardship was identified. A five year capacity development action plan was developed and is informing the Master Plan.

Appendix 9 Financial Sustainability - Summary

The financing of protected areas has been identified as a key deficiency but a fundamental requirement in the development of the country's protected areas management system. Jamaica's struggles in securing adequate financing for protected areas is not unique but is replicated worldwide. The report on a *Financial Sustainability Plan for the Protected Areas of Jamaica* noted that 'current funding for PAs worldwide is mostly public and philanthropic. The findings of the report outlined a comprehensive approach to the issue involving two strategic elements – the creation of an enabling environment to facilitate financial sustainability and appropriately addressing the supply and demand aspects of the conservation finance equation.

Using the tool Scorecard for Protected Areas Financial Sustainability which was developed by the UNDP to track progress on the support efforts for protected areas an evaluation was performed.

Based on a review of the three fundamental components of a functioning financial system at site and systems level that is, (i) legal, regulatory and institutional frameworks, (ii) business planning and tools for cost-effective management and (iii) tools for revenue generation, the overall result gave Jamaica a 25% accomplishment well below the average for other Central American and Caribbean countries of 34%. The writer – Jose Galindo indicated that the result *'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 managed under the leadership of four different agencies'.*

The results from the scoreboard (supported in part by the findings of the Management and Effectiveness Assessment) pointed to the need to strengthen both institutional framework and conservation planning tools, in order to facilitate the shift from individual PA management into a PA system that is managed under the leadership of four different agencies almost as a prerequisite to developing a system of financial sustainability. At the very least it is apparent that both will need to be addressed simultaneously.

Gaps- Legal, Regulatory and Institutional Framework

The finding of the scoreboard analysis pointed to the need to address the following issues in the Master Plan.

- 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;
- 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; and
- No incentives and adequate policy tools to allow them to charge fees and generate additional resources for PA conservation.

Gaps - Business Planning Tools

The financial Sustainability Plan Report noted the importance of 'financial planning, accounting and business planning when undertaken on a regular and systematic basis and indicated that the country was particularly challenged in this regard in the absence of basic conservation planning tools, and within a context where there is still a limited planning culture. Against this background the following gaps were identified:

- Absence of practical information and accounting systems that could inform decision making and resource allocation across the JPAS;
- Lack of specific capacity building and training for cost effective protected areas management;
- Lack of accurate knowledge of revenues and expenditure levels, patterns and investment requirements; and
- Weakness in good financial planning that allows for make strategic financial decisions and strengthens the ability to attract and retain new or non-traditional funding partners, especially key stakeholders from the private sector.

Gaps - Tools for Revenue Generation

The report pointed to '*diversification of revenue sources as a powerful strategy to reduce vulnerability to external shocks and dependency on limited government budgets'*. In regards to revenue generation the following gaps were identified.

- Lack of effective revenue collection systems;
- Absence of system to charge for environmental services and
- Insufficient development of a strong business approach to protected areas management in the tourism sector to significantly increase the number of visitors who are searching for a more diverse vacation experience.

Financial Needs Assessment

The Financial Needs Assessment (FNA) constitutes the starting point of the financial planning process. It's 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.

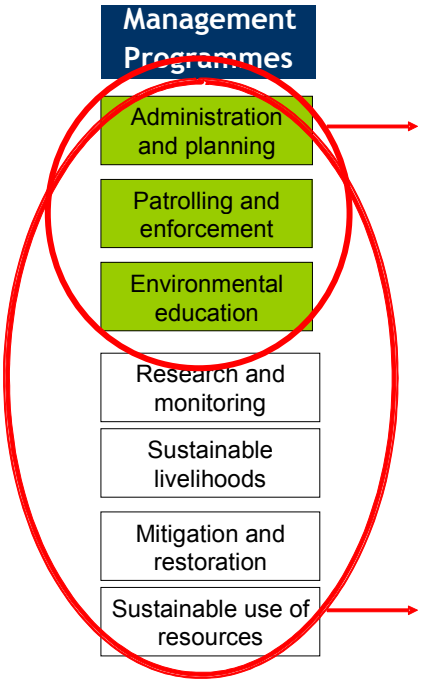
In conducting the FNA for Jamaica, twenty four PAs were examined as detailed in Table 5 below.

Table 5 - Protected Areas included in FNA

Protected Areas		Agency	Type
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	Palisadoes-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 (22 Forest Reserves)	Forestry Department	Terrestrial
13	Forestry Department: South East (52 Forest Reserves)	Forestry Department	Marine/Terrestrial
14	Forestry Department: North West (Cockpit) (88 Forest Reserves)	Forestry Department	Terrestrial
15	Forestry Department: South West (33 Forest Reserves)	Forestry Department	Marine/Terrestrial
16	Port Royal and Palisadoes (Kingston)	JNHT	Buildings of Architectural and Historic Interest Fort
17	Black River (St. Elizabeth)	JNHT	Wetland

18	Spanish Town (St. Catherine)	JNHT	Historic site
19	Titchfield Hill (Portland)	JNHT	Forts and Naval and Military Monuments
20	Falmouth (Trelawny)	JNHT	Historic Site
21	Seville (St. Ann)	JNHT	Buildings of Architectural and Historic Interest
22	Rio Nuevo Taino Site (St. Mary)	JNHT	Historic site
23	Mountain River Cave (St. Catherine)	JNHT	Cave
24	Mason River Reserve (Clarendon)	JNHT	Inland bog

Additionally, management programmes executed based certain scenarios (Figure2) which reflect management priorities in the short and medium term were part of the 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.



BASIC:

Minimum requirements to ensure PA management:

- **Confirms GOJ's presence**
- **Guarantees PAs' Integrity**
- **Facilitates Stakeholder Participation**

IDEAL:

- **Considers full operation of programmes aiming at promoting human development and sustainable use of resources.**

Figure 2 Management programmes for 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 6).

Table 6: Estimated Annual Costs (USD) for JPAS – the Basic & Ideal Scenarios

	Basic	Ideal
Sites 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**

The assessment identified potential sources of funding from the following; (i) public, (ii) private, (iii) international, and (iv) self-generated. It was found that the greatest potential for funding in the short to

medium term is as outlined below and the report noted that many were already being implemented but required improvements.

At a basic level of operation it was estimated that Jamaica requires approximately US$8,500,000 to finance protected areas over a ten-year period and US$17,000,000 over the same period if an ideal management scenario is applied. Funding for protected area management has consistently fallen short of the requirements for even the basic level of operations. For example, the combined annual budget for protected areas of the four government agencies responsible protected area management totalled US$4,097,712 in 2007 and in 2007 – 2008, support for protected areas from existing trust funds[21] totalled US$1,065,856 (United Nations Development Programme, 2007).

Mechanisms for Funding PAs

Funding mechanisms can be categorized on a spectrum from public to private sources. IUCN proposes to group these mechanisms into three categories according to how funds are primarily raised and used.

1. Mechanisms and approaches which are concerned with attracting and administering external flows, including government and donor budgets, 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;
3. Mechanisms which employ market-based charges for PA goods and services, including resource use fees, tourism charges and payments for ecosystem services.

The report noted that there is at present no annual breakdown for current sources of funding for protected areas in the country, nor is there a department that is dedicated to keep track on this important information. However, there are currently three major sources of funding for the management of PAs which are; governmental budgets, international cooperation and self-generated funds.

In a series of three workshops and a number of in-depth interviews, stakeholders identified 32 funding mechanisms from public, private, international and self-generated sources. Of the these, 18 potential mechanisms that seemed promising were selected for further review using a rapid feasibility assessment considering issues such as the legal and political feasibility; the complexity of implementing the mechanism; and financial return.

Table 7 summarises potential funding mechanisms for a 10-year JPAS plan. Of the major potential sources of funding, those relating to the private sector represent only around 3% of the potential revenues. The other three sources (GoJ mechanisms, international sources, and self-generated sources)

[21] Jamaica National Parks Trust Fund, Forest Conservation Fund, Environmental Foundation of Jamaica, and Tourism Enhancement Fund.

account for 97% of total additional funding almost in equal parts providing a balanced portfolio. The most viable potential funding source with almost 27% of the total contribution is related to tourism fees.

In terms of implementation, two key assumptions are that there would be at least a twelve-month preparation and start up process and the four agencies responsible for PAs management would receive increased budget allocations 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.

These mechanisms will need very strong political support and these call for the need to elevate the profile of PAs at the highest level. Coordinated action between the four agencies is strongly needed in order to build the economic case for PAs. The report also found that it will be 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 PAs. Without this, it will be very difficult to effectively address existing opportunities and further promote new financial sustainability programmes.

Table 7: Potential Funding Mechanisms for JPAS 10-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, monitor visitors' impact on PAs and improve services and information to visitors. The net impact of this tax equals US$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	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
	feeds the TEF instead.	
3. Debt for Nature Swap	This is a mechanism by which public debt is purchased at 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 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. 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 islands 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 (13500 people) with an amount per donations of US$30.
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 1000 to 5000 credit cards; average revenue of US$60 per CC per year
7. Tourism fees	This considers exploring options to	Average revenue of US$2 per visitor

Source of Funding	Description	Assumptions and Targets
	implement the most adequate mechanism such as entrance fee, tour operator fee or hotel fee[22] to generate revenue from visitors. This would also include increasing and further enforcing payment of current visitor fees.	combining different user fees; considering only 1.7 Million tourists not including cruise visitors; 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 organization.	Annual amount of contract is $200,000
10. Dedicated Funding-raising Campaigns/ Events	Special events organized on a yearly basis to raise awareness and support from private sector	Target 1 event per year to garner $100,000
11. Tourism Enhancement Fund (TEF)	Tourism Enhancement Fund collects US$10.00 from incoming airline passengers and US$2.00 from cruise passengers[23]. Approximate size of TEF is US$20 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.
12. Multilateral and bilateral	Multilateral and bilateral sources of current environmental investment in	Current allocation to PAs is unknown. Target set for this source considers a

[22] The combined effect of the hotel tax and visitor fee equals US$3 per visitor, this suggest a decline close to 1% in visitation according to Peter Edwards paper. Edwards, P.E.T. 2008. Sustainable financing for ocean and coastal management in Jamaica: The potential for revenues from tourist user fees

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

Source of Funding	Description	Assumptions and Targets
	Jamaica accounts for US$6.5 million per year.[24]	conservative 7% of current investment amount during the first five years and a 10% from year 5 on.
13. Global Environment Facility (GEF)	Total amount available from the Resource Allocation Framework (RAF) 4 to biodiversity is US$5.1 million[25] 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.

Sustainable financing has been identified in many of the previous assessment reports as a key enabling condition which needs to be established but can only be supported by a coherent and effective policy, institutional and planning framework. The GEF Financial Sustainability Project is the means by which the feasibility and potential earning of the recommended sources will be assessed and the most feasible mechanisms implemented.

[24] Philipe Taiev, 2005. Securing funding from international development agencies.
[25] Interview with NEPA

Appendix 10 NEGAR Conservation Goals

Conservation Goals for Marine Targets

Marine Conservation Targets	% Goals
Coarse-Filter Targets	
Sandy shores	20%
Rocky shores	20%
Mangroves	50%
Estuarine areas	20%
Seagrass beds	30%
Corals and Coral reef	10–30%*
Soft bottom communities	20%
Cays	30%
Offshore banks	10%
Fine-Filter Targets	
Seabird nesting and roosting areas	50%
Overwintering shorebird areas	30%
Turtle nesting beaches	50%
Manatees	50%

* A 10% goal was assigned to Pedro Bank coral and coral reef target due to its very large size relative to the other stratified reef targets and the conservation feasibility of managing such an extensive area.

Conservation Goals for Freshwater Targets

Freshwater Conservation Targets	Total	% Goals
Coarse-Filter Targets		
Streams	0–100 Km	50%
Streams 100–500 Km 25%	100–500 Km	25%
Streams	500–1000 Km	15%
Streams	> 1000 Km	10%
Lake/Ponds	845 ha	25%
Eastern Wetlands	221 ha	50%
Western Wetlands	12,894 ha	25%
Eastern Springs	109	10%
Western Springs	417	10%
Eastern Caves	9	50%
Western Caves	214	10%
Fine-filter (species-based) Targets		
Cubanichthys pengellyi	N/A	50%

Freshwater Conservation Targets	Total	**% Goals**
Gambusia melapleura	N/A	50%
Gambusia wrayi	N/A	30%
Limia melanogaster	N/A	25%
Pseudemys terrapin	N/A	25%

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*Goals determined using target abundance such that rare abundance = 50% goal, uncommon abundance = 25%
goal, common = 15% goal and very common = 10% goal.

Conservation Goals for Terrestrial Targets

Terrestrial Conservation Targets	**% Goals**
Coarse-Filter Targets	
Forest Dry alluvium	90%
Forest Dry limestone	80%
Forest Dry shale	90%
Forest Mesic alluvium	90%
Forest Mesic limestone	40%
Forest Mesic shale	80%
Forest Very Dry alluvium	90%
Forest Very Dry limestone	80%
Forest Very Dry shale	90%
Forest Very Wet alluvium	90%
Forest Very Wet limestone	90%
Forest Very Wet shale	90%
Forest Wet alluvium	90%
Forest Wet limestone	40%
Forest Wet serpentine	90%
Forest Wet shale	80%
Mangroves	90%
Montane Cloud Forest	90%
Montane Summit Savanna	90%
Threatened Plants	100%
Wetlands	90%
Fine-Filter Targets	
Bats: Phyllonycteris aphylla	100%
Black-billed Parrot	90%
Black-throated Blue Warbler	75%
Caves: bats	95%
Caves: guano	50%
Frog Species: Eleutherodactylus alticola	100%
Frog Species: Eleutherodactylus andrewsi	75%

Terrestrial Conservation Targets	% Goals
Frog Species: Eleutherodactylus cavernicola	100%
Frog Species: Eleutherodactylus cundalli	50%
Frog Species: Eleutherodactylus fuscus	75%
Frog Species: Eleutherodactylus grabhami	75%
Frog Species: Eleutherodactylus griphus	100%
Frog Species: Eleutherodactylus jamaicensis	75%
Frog Species: Eleutherodactylus junori	100%
Frog Species: Eleutherodactylus luteolus	50%
Frog Species: Eleutherodactylus nubicola	100%
Frog Species: Eleutherodactylus orcutti	100%
Frog Species: Eleutherodactylus pentasyringos	75%
Frog Species: Eleutherodactylus sisyphodemus	100%
Frog Species: Osteopilus brunneus	75%
Frog Species: Osteopilus crucialis	75%
Frog Species: Osteopilus marianae	75%
Frog Species: Osteopilus wilderi	50%
Hutia: Geocapromys brownii	90%
Iguana: Cyclura collei	100%
Limpkin: Armus sp.	100%
Northern Waterthrush: Seiurus noveboracensis	100%
Plain Pigeon: Patagioenas inornata	100%
Ring-tailed Pigeon: Patagioenas caribaea	100%
Ruddy Quail Dove: Geotrygon Montana	75%
Swallowtail: Papilio homerus	100%
Threatened Plants	100%
West Indian Whistling Duck: Dendrocygna arborea	90%
Yellow-billed Parrot: Amazona collaria	90%
Yellow boa: Epicrates subflavus	75%