

Grenada Protected Area System Plan Part 1

Identification and Designation Of Protected Areas

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0 1,000 Kilometers

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As with any plan, this plan is a continuation and, as more knowledge comes available about the incredible natural and cultural resources of Grenada, this plan will be modified to reflect that knowledge. It is my hope that this plan directly serves the needs of the Government and people of Grenada and indirectly others, globally, who care about protected areas and people's livelihoods in the Caribbean and the relationship between the two.

Grenada is richly endowed with natural and cultural resources that are recognized with pride by all Grenadians. From the elfin forest to the mangroves to the coral reefs, from waterfalls to heritage sites that reflect our culture through time, Grenadians have embraced these resources and shared them with our visitors. Their protection for today and tomorrow is a national goal and an international commitment.

Completion of Grenada's protected area system plan will be a cooperative effort between the Government of Grenada, non-government organizations both home and abroad and, most importantly, Grenadians. The implementation of the plan will require consensus and determination and the recognition of the important contribution that protected areas make to the quality of the environment and the quality of our lives.

Minister's Message

TABLE OF CONTENTS

Minister’s Message	4
1 INTRODUCTION	7
1.1 Purpose and Scope of Plan	8
1.2 International Commitments and Existing National Plans	10
2 BACKGROUND	12
2.1 Assessment and Analysis of Natural and Cultural Heritage	13
2.3 Representativeness of Existing System.....	14
2.3.1 Biodiversity.....	14
2.3.2 Heritage.....	17
2.3.3 Recreation and Tourism	17
2.4 Existing Legislation and Designation Categories	18
2.5 Identifying and Selecting Protected Areas	21
3 THE PLAN	24
3.1 Delivering Protected Areas	25
3.2 Critical Areas for Immediate Designation	27
3.3 Priority Areas of Interest	33
3.4 Study of Areas of Interest	36
3.5 Summary.....	39
4 PLAN REVIEW	40
Bibliography	42
APPENDIX 1	45
PROFILES OF STUDY AREAS OF INTEREST	45

TABLES

Table 1 - REPRESENTATION OF ENVIRONMENTS IN PROTECTED AREAS	15
Table 2 - COMPARISON IUCN CATEGORIES WITH PROTECTED AREA LEGISLATION	20
Table 3 - IMMEDIATE DESIGNATION-Crown/Private	31
Table 4 - PRIORITY AREAS OF INTEREST	34
Table 5 - STUDY AREAS OF INTEREST fFORLOCAL AREA PLANNING.....	37
Table 6 - REPRESENTATION OF ENVIRONMENT IN PROPOSED PROTECTED AREAS	38

LIST OF FIGURES

Figure 1	Location Map.....	9
Figure 2	Protected Area GAP Analysis Conservation Targets.....	16
Figure 3	Existing and Proposed Protected Areas and Areas of Interest.....	26
Figure 4	St. George's.....	28
Figure 5	Carriacou/Ronde	29
Figure 6	Southern Seascape.....	30
Figure 7	Conference Bay/Levera	35

In Appendix 1

Figure 8	Areas of Interest-South
Figure 9	Areas of Interest-NE
Figure 10	Mt. St. Catherine
Figure 11	Annandale AOI

1 INTRODUCTION

1.1 Purpose and Scope of Plan

Situated at a latitude of 12 degrees North in the Caribbean Sea, Grenada, Figure 1, has long been recognized for its natural beauty and cultural diversity. Including Carriacou and Petite Martinique and islands between, Grenada covers some 34,000 hectares of volcanic mountain tops at the southern end of the Lesser Antilles and is naturally diverse; on land, home to over 450 species of plants, 150 species of birds, 24 of which only breed in Grenada, 4 species of native terrestrial mammals and an unknown number of insects. There are 17 species of freshwater fish. In the sea, some 150 species of fish as well as reptiles, invertebrates and plants call Grenada's territorial waters home. Some 37 species, including the New Grenada Sea Catfish, are included on the International Union for Nature (IUCN) red list for endangered species and one, the Grenada Dove, is found nowhere else in the world and is classified as critically endangered. Hurricanes have a profound effect on many species and their habitats.

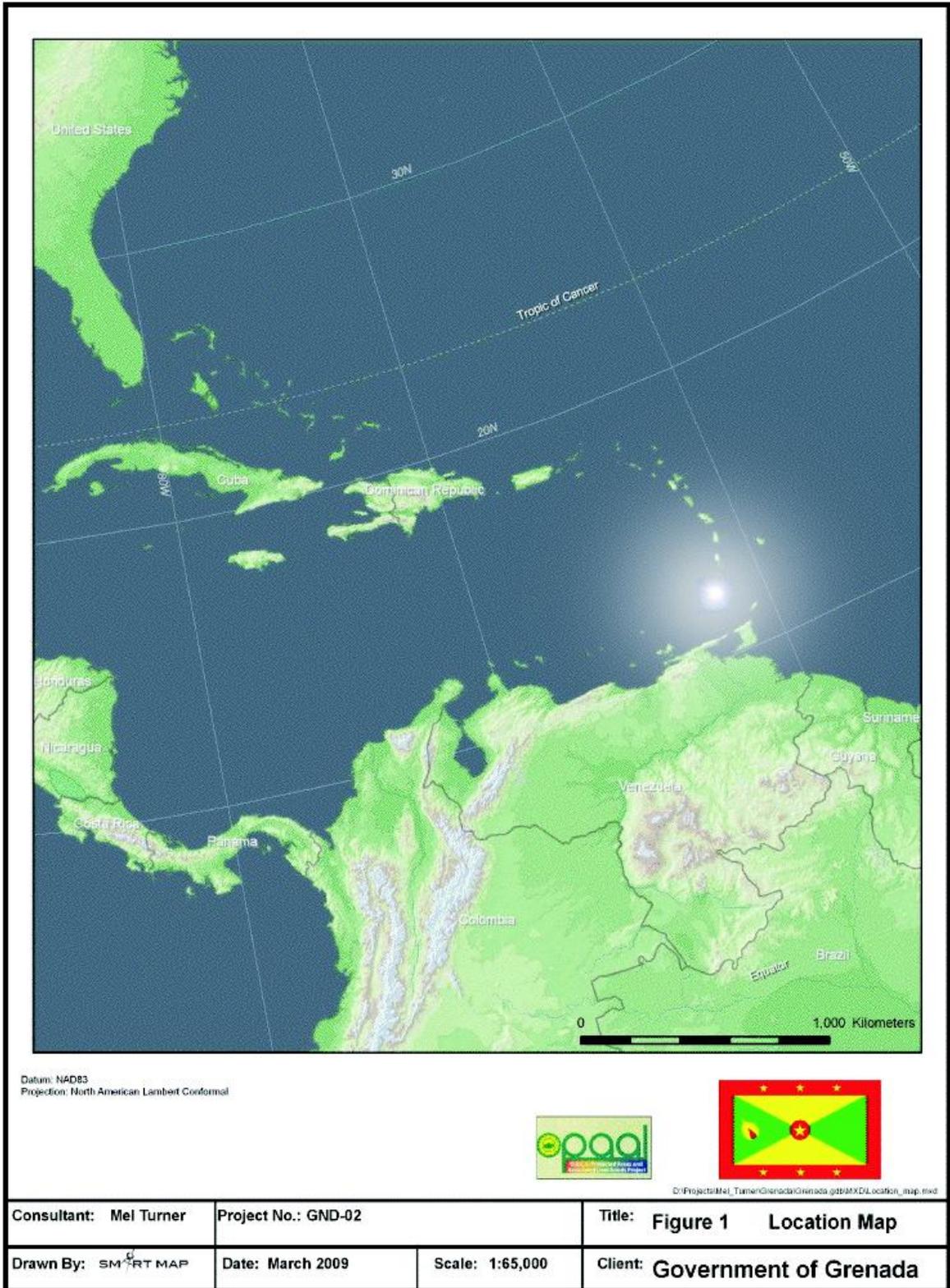
Over 90,000 people also call Grenada their home and they too have a diverse background and heritage.

Recognizing the significance of their natural and cultural diversity and the vulnerability of their ecological, social and economic values from world events and natural disasters, Grenada, at the 2006, 8th Meeting of the Conference of Parties to the Convention on Biological Diversity (COP 8) pledged, the Grenada Declaration, to effectively conserve¹ at least 25% of its near shore marine area and at least 25% of its terrestrial area by 2020 as a means to contribute to the sustainable livelihoods for its people and to contribute to protection of the world's biodiversity.

This commitment, though recently announced, is not new to Grenada: it began over 100 years ago when the Government of Grenada formally recognized the vital importance of protecting its forested lands in the Central Mountains and established, by the *Grand Etang Forest Reserve Act*, some 1700 hectares as the Grand Etang Forest Reserve. In an effort to coordinate with other land use demands and to ensure a comprehensive and inclusive program to nominate, evaluate, designate and formally review protected areas, Grenada has twice embarked, once in 1988 and now, on the preparation of a system plan for protected areas.

This system plan for protected areas is composed of two parts: the identification of sites that Government should consider for designation as protected areas (Part 1) and a separate, companion document, that outlines ways and means to manage and administer the sites designated (Part 2).

¹ This plan interprets *effective conservation* to mean designation of protected areas using the IUCN definition of a protected area, "a clearly defined geographical space, recognized, dedicated and managed, through legal or other effective means, to achieve the long-term conservation of nature with associated ecosystem services and cultural values" (Dudley, 2008).



The purpose of this part of the plan, Part 1, is to confirm Grenada's existing protected areas and identify nationally-significant marine and terrestrial environments that meet the criteria as potential protected areas and could be designated, in a phased approach, as protected areas by 2020, thus meeting the goals of the Grenada Declaration.

1.2 International Commitments and Existing National Plans

The development of a system plan of protected areas is a product of a series of national plans and commitments made as part of international conventions. In 1994, Grenada implemented its *National Environmental Action Plan* and ratified the Convention On Biological Diversity that committed signatories to study their diverse natural resources and develop programs and initiatives to conserve them including preserving terrestrial and marine habitats, to develop a national biodiversity strategy and to establish protected areas. This commitment led to the *Biodiversity Strategy and Action Plan* in 2000. During the preparation of that plan, Grenada prepared a *Tourism Master Plan* in 1997 and developed a forest policy that emphasized conservation² over harvesting. Concurrently in 2000, Grenada also committed to the St. George's Declaration of Principles for Environmental Sustainability, which led to the 2005 *National Environmental Policy and Management Strategy*.

All of these national plans addressed the need to further Grenada's protected area system through the establishment of additional areas and strengthening the legal and institutional support mechanisms to manage the system.

Twenty years ago, in 1988, the Government of Grenada formally recognized the need to establish a system of protected areas and invited technical assistance from the Organization of American States (OAS) to conduct a review of its protected area policies and an inventory of potential protected area sites. Based on an assessment and evaluation of the degree of representation of Grenada's natural and cultural resources including geomorphology, geologic history, natural vegetation, wildlife and human history and marine resources, the resultant comprehensive draft system plan and policy recommended 27 sites on Grenada and 16 sites on Carriacou for designation in a combination of national parks, protected seascapes, natural and cultural landmarks and multiple use areas in keeping with the IUCN protected area categories. In total, the area proposed for terrestrial representation and protection, including the established Grand Etang Forest Reserve, was 13% of the country. Although the plan remained a draft, it has been used as a guide for the last two decades to further Grenada's protected area initiatives, including site designation and legislation.

In 1996, the Caribbean Environmental Program (Technical Report No. 36) reviewed the 1988 OAS draft plan and made observations on the status and progress achieved on implementing the draft.

² The 2005 *National Environmental Policy and Management Strategy* defines conservation as “ the preservation and renewal, when possible, of natural resources; the use, protection and improvement of natural resources according to principles that will ensure optimal economic or social benefit on a sustainable basis”.

This system plan builds on the 1988 OAS system plan, the 1996 review, the recommendations of the series of associated national plans and policies and the COP 8 Grenada Declaration. If the Grenada Declaration is achieved, Grenada would rank in the top eight countries in the world in protected area percentage-designation of its marine environment and in the top 20 of the world for percentage designation of its terrestrial area. In the Caribbean region, only Belize would have a greater percentage.

2 BACKGROUND

2.1 Assessment and Analysis of Natural and Cultural Heritage

As with most small-island developing states, and many continental countries considered developed, Grenada has made modest gains in protecting and managing its nationally- significant natural and cultural resources. Although only five terrestrial protected areas have been established, they cover over 2200 hectares of Grenada's landscape and protect high elevation forest environments, critical Grenada dove habitat and Amerindian cultural resources. In the marine environment, some 500 hectares have been established in two marine protected areas, protecting coral reefs, beaches and recreation and tourism opportunities including yacht mooring, swimming and diving.

The Amerindian site at Pearls has been established as a protected area and several colonial sites, including Fort Frederick are being managed as cultural heritage sites. Some undesignated sites, such as Grand Bay on Carriacou and the three forts around St. George's, have potential for designation as World Heritage Sites.

Most important though, Grenada has developed the tools, including marine and terrestrial protected area legislation, made the commitments to international agreements and prepared studies and supporting documents on its natural and cultural heritage to position itself to act to designate and manage natural and cultural sites.

The 1988 *Plan and Policy for a System of National Parks and Protected Areas* (OAS system plan) and the 2000 *Biodiversity Strategy and Action Plan* both provide a fairly complete analysis and assessment of nationally-significant natural features including geology, vegetation, wildlife, fisheries and marine and coastal habitats as well as tourism. The plans note that some degradation of the natural environment is necessary for human survival and comfort but much can be controlled or avoided.

Although some species have become extinct, including the Grenada parrot and the Agouti, for the most part, the condition of the natural environment is such that viable areas can still represent defined ecosystems, protect defined species and their habitats and provide an opportunity to re-introduce native species if the tools available to Grenada are used and the actions they afford are implemented.

Culturally, the OAS system plan and the 1997 *Tourism Master Plan* provide an assessment of Grenada's cultural heritage and, to a lesser extent, its recreation resources.

2.2 Existing Protected Areas and Associated Plans

Although initiated in 1906 with the establishment of the Grand Etang Forest Reserve, Grenada currently has only seven protected areas designated by legislation:

- Grand Etang Forest Reserve
- Annandale Forest Reserve
- High North Forest Reserve

- Perseverance Protected Area
- Woburn/Clarks Court Bay Marine Protected Area
- Moliniere/Beausejour Marine Protected Area
- Unspecified Crown lands at Pearls are designated as a protected area

In 1996, Mt. Hartman was established as a national park and protected area, along with the Perseverance Protected Area, to protect the habitat of the Grenada dove. More recently, the Mt. Hartman National Park and Protected Area was cancelled with the intention to reconfigure the protected area boundaries to accommodate resort development. The protected area has yet to be re-established.

A Cabinet Conclusion was reached to establish Richmond Hill, Grand Bras, Mt. Gazo and Mt. Moritz as forest reserves and Lagoon Road as a park but these areas have yet to be gazetted. Mt. St. Catherine was also the subject of a Cabinet submission but more work needs to be done on land status and negotiation.

In 2001, Grenada established two marine protected areas under the *Fisheries Act*: Woburn/Clarks Court Bay and Moliniere/Beausejour. Sandy Island/Oyster Bay Marine Protected Area on Carriacou has been recently approved by Cabinet and is also expected to be established shortly.

In 2006, Annandale Forest Reserve was established. Previously, 99 years earlier, High North on Carriacou was established as a Forest Reserve. Under the *National Heritage Protection Act*, unspecified Crown land at Pearls was established as a protected area for Amerindian artefacts.

In total, the existing designated sites account for over 6% of the terrestrial environment and some 1% of the near-shore marine environment.

A management plan was approved in 2007 for Grand Etang/Annandale Forest Reserves (Turner, 2007) and draft plans have been prepared for Mt. Hartman National Park and Protected Area and Perseverance Protected Area (Jackson, 1998). No management plans have been prepared for the High North Forest Reserve or the Woburn/Clarks Court Bay and Moliniere/Beausejour Marine Protected Areas although zoning has occurred in the marine protected areas as part of their establishment. A management plan was prepared for the proposed Sandy Island/Oyster Bay Marine Protected Area in 2007.

2.3 Representativeness of Existing System

2.3.1 Biodiversity

Both the 1988 OAS system plan, and to a lesser extent the 1997 tourism plan, reviewed the existing system of marine and terrestrial protected areas and addressed the representativeness of the system to the natural environment including geology, geomorphology, flora and fauna as well as coastal and marine resources.

A more complete analysis, focusing on biodiversity as represented by terrestrial vegetation types, near-shore marine environments, freshwater systems and significant habitats, was conducted.

The Nature Conservancy in association with a series of protected areas management strategy workshops in 2006 and 2009. Of the 26 environments studied, only three terrestrial environments (cloud forest, transitional cloud forest and evergreen forest) met the intent of the Grenada Declaration. Representation of the other environments was very limited.

As with many protected areas in the world, higher elevations and their habitats are well represented.

Table 1 shows the relative representation of terrestrial and near-shore marine environments and conservation targets in existing protected areas. Figure 2 shows the geographical representation of these environments in Grenada.

Table 1 - Representation Environments in Protected Areas

Terrestrial Environments	% Representation
Transitional Cloud Forest	66
Cloud Forest	27
Evergreen Forest	25
Emergent Wetlands	22
Grenada dove habitat	11
Dry Deciduous Forest	1
Semideciduous Forest	2
Drought Deciduous Forest	1
Mixed Wood agriculture	1
Streams	5
Rivers	1
Fresh Water bodies	1
Marine Environment	%
Seagrass	10
Intertidal reef flat	5
Rocky shore	4
White sand beach	2
Shelf structure	2
Mangroves	1
Reef flat	1
Fore reef	2
Leatherback nesting site	0
Hawksbill nesting site	0
Black sand beach	0
Lagoonal habitat	0
Shallow terrace	0
Shoal	0

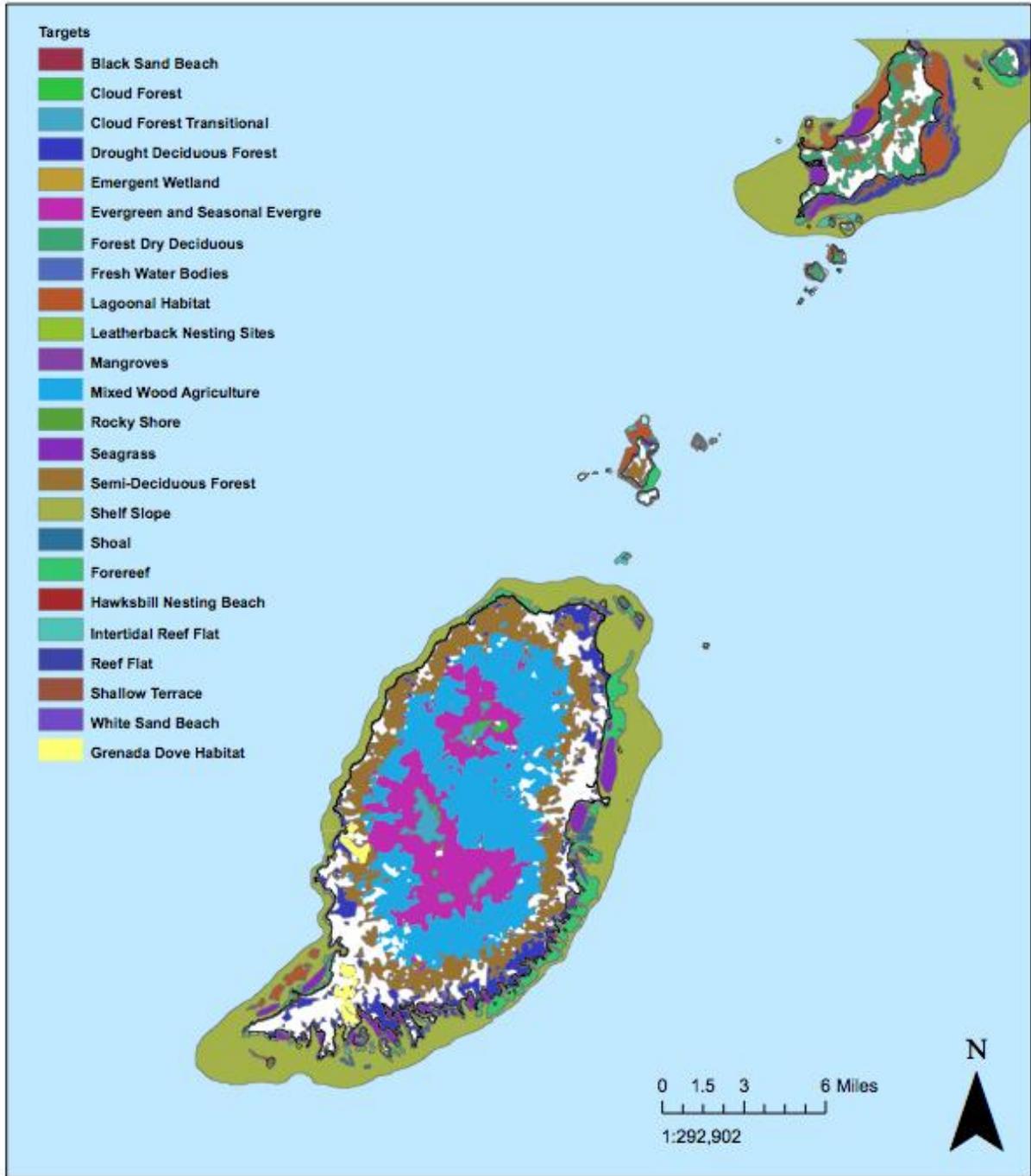


Figure 2 Protected Area Gap Analysis Conservation Targets

2.3.2 Heritage

Although richly endowed with Amerindian and post-contact cultural and heritage resources, only the unspecified Crown land at Pearls has been formally designated as a protected area and management of the undesignated sites has been inconsistent due to lack of resources. These sites not only have national and international significance, they offer the best opportunity to showcase and interpret Grenadian history.

Despite lack of formal designation, the Ministry of Tourism currently provides management services to the colonial heritage resources captured by Fort Frederick, Fort George and Fort Matthew. In addition, existing protected areas include heritage resources such as Fedon's Camp in Grand Etang Forest Reserve and the colonial estate that makes up part of the Annandale Forest Reserve.

2.3.3 Recreation and Tourism

Although recreation and tourism opportunities are found in the existing marine and terrestrial protected areas, none of the areas were designated with the protection of those opportunities as the main reason. Nor have the protection of recreation and tourism opportunities been addressed to the extent that biodiversity and heritage opportunities have enjoyed.

The 1997 *Tourism Master Plan* recognized the importance of beach, marine and natural/cultural heritage tourism to a national tourism strategy and the need for government to create terrestrial and marine national parks and protected areas and to develop associated recreation facilities to ensure that tourism development was consistent with the protection and conservation of Grenada's natural and cultural resources.

In addition, recreation opportunity for Grenadians is an inherent right. For centuries, successive populations have gone to beaches, rivers, mountains and hot springs seeking recreation and inspiration. More recently, and on occasion, development has presented restrictions to traditional recreation access. This inherent right needs to be protected so that it is always enjoyed. Currently, there are a number of sites that provide modest recreation opportunities for Grenadians including Concord Falls, Bathway, Grand Anse, Lagoon Park and the Botanical Gardens, River Sallee and Lake Antoine but no comprehensive plan has been initiated that protects these opportunities for future generations.

Within the existing terrestrial protected areas, hiking, picnicking, nature interpretation and hunting opportunities exist in Grand Etang, Annandale and High North Forest Reserves. Perseverance Protected Area provides opportunities for nature interpretation and the currently-undesignated Mt. Hartman has a visitor centre. Overall, recreation facility development has been limited although the approved Grand Etang/Annandale Forest Reserve management plan identifies a number of developments.

Within the two existing marine reserves, areas have been zoned for mooring and initiatives are underway to prepare management plans and provide facilities that will address recreation and tourism opportunities including diving and beach use as has already occurred in the management

plan for the proposed Sandy Island/Oyster Bay Marine Protected Area. Excellent diving opportunities exist in Moliniere/Beausejour Marine Protected Area including viewing underwater sculptures.

In addition to the three Forts, the Ministry of Tourism manages 10 sites that provide primarily tourism and recreation opportunities, including Lagoon Road and Annandale Falls. The Grenada Board of Tourism, with administrative and financial support from the government, provide management services at Grand Anse and Morne Rouge. As noted, none of these sites is formally designated as a protected area.

2.4 Existing Legislation and Designation Categories

World-wide, protected areas are commonly categorized by a country's legislation. The IUCN has identified six categories of protected areas ranging from strict preservation to protecting ecosystems and using natural resources in a sustainable manner. These categories are intended to give, globally, consistent direction and criteria to management of protected areas.

In Grenada, terrestrial and/or marine protected areas, including designation as national park, protected area, marine reserve (protected area), heritage conservation area and forest reserve, are designated under the *National Parks and Protected Areas Act (1991)*, the *Fisheries Act 1986*, the 2001 *Fisheries (Marine Protected Areas) Regulations*, the 2002 *Physical Planning and Development Control Act*, the 1990 *National Heritage Protection Act* and the 1947 *Forest, Soil and Water Conservation Act*, or, in some cases of forest reserves such as Grand Etang and Annandale, by separate acts of the Legislature.

The *National Parks and Protected Areas Act* grants authority for the Governor-General to proclaim government land, leased or purchased land or donated land, as a national park. In addition, the Minister responsible for the *Act*, currently the Minister of Agriculture, can declare government land to be a protected area for the purpose of:

- preserving the natural beauty, including flora and fauna
- creating a recreation area
- commemorating an historic event of national importance
- preserving a historic landmark or a place or object of historic, prehistoric, archaeological, cultural or scientific importance

The *Fisheries Act 1986* allows the Minister responsible for the *Act*, currently the Minister of Agriculture, to declare any area of fisheries waters³ and any adjacent or surrounding land as a marine reserve for the purpose of:

- affording special protection to the flora and fauna of the area and to protect and preserve the natural breeding grounds and habitats of aquatic life, with particular regard to flora and fauna in danger of extinction

³ means the waters of the Exclusive Economic Zone as defined in the *Marine Boundaries Act, No. 20 of 1978* and the territorial waters and internal waters as defined in the *Grenada Territorial Waters Act No.17 of 1978*.

- allowing for the natural regeneration of aquatic life in areas where such life has been depleted
- promoting scientific study and research
- preserving and enhancing the natural beauty

The accompanying 2001 *Fisheries (Marine Protected Areas) Regulations* further defines a marine reserve as a marine protected area⁴. The *Regulations*, in turn, allow a part of a marine protected area to be established as a:

- marine historical site (contains structures, artefacts or human remains and which needs to be protected for its historical or cultural value)
- marine park (reserved for public recreation)
- marine reserve (special management for the purpose of protecting the natural resources)
- marine sanctuary (open only for the purpose of scientific research)

or a combination of any. These designations generally serve as zones for management planning processes of marine reserves but they can also be specific to categorize a site.

The 2002 *Physical Planning and Development Control Act* includes an objective to protect and conserve the natural and cultural heritage of Grenada. The Minister responsible for the *Act*, currently the Minister of Finance, may give general policy direction to national or community plans to achieve that objective by designating a heritage conservation area or an environmental area.

The *National Heritage Protection Act* is directed at the protection of Amerindian and pre-Columbian artefacts and allows for designation of a protected area to restrict extraction and disturbance.

The *Forest, Soil and Water Conservation Act* allows Crown land to be established as a forest reserve.

Finally, separate legislation can be used to establish protected areas. This process has been used for designating forest reserves such as Grand Etang and Annandale.

Overall, Grenada's current legislation allows for protected area designation in keeping with IUCN categories. Table 2 shows the general comparisons between the IUCN categories and the protected area categories referenced in Grenada's existing legislation.

⁴ Once a direction is decided on protected area legislation, this minor lack of consistency between words (marine reserve and marine protected area) in the *Act* and *Regulations* can be addressed

Table 2 - Comparison of IUCN categories with Grenada Protected Area Legislation

IUCN CATEGORY ⁵	GRENADA PROTECTED AREA CATEGORY
Ia Strict Nature Reserve	<ul style="list-style-type: none"> • Marine Protected Area-marine sanctuary • National Park • Protected Area-preservation for scientific importance
Ib Wilderness Area	<ul style="list-style-type: none"> • National Park
II National Park	<ul style="list-style-type: none"> • National Park • Marine Protected Area-marine park
III Natural Monument or Feature	<ul style="list-style-type: none"> • Marine Protected Area-marine historical site • Heritage Conservation Area • Protected Area-preserving a historic event or historic or cultural object
IV Habitat/Species Management Area	<ul style="list-style-type: none"> • Marine Protected Area-marine reserve • Protected Area-preserving natural beauty
V Protected Landscape/Seascape	<ul style="list-style-type: none"> • Marine Protected Area-marine park • Protected Area-preserving natural beauty • Protected Area-creating a recreation area
VI Protected Area with sustainable use of natural resources	<ul style="list-style-type: none"> • Marine Protected Area-marine park • Marine Protected Area-marine reserve • Forest Reserve

⁵ see *Guidelines for Applying Protected Area Management Categories* (Dudley, 2008) for definition, objectives and features of IUCN categories

2.5 Identifying and Selecting Protected Areas

Like other countries in the world, the identification and selection of protected areas is based on a number of factors significant to the needs of protecting Grenada's natural and cultural resources including:

- meeting national and international commitments
- supporting viable populations of marine and terrestrial wildlife
- preserving representative examples and the ecological integrity of natural ecosystems
- preserving natural phenomena and rare, threatened or endangered wildlife and vegetation
- preserving significant cultural features
- providing opportunities for recreation, education and interpretation
- providing sustainable, associated livelihood opportunities

The 1988 OAS system plan identified, ranked, recommended and prioritized some 33 sites for designation as protected areas based on geologic, vegetation, wildlife and cultural representation. The 1998 *Planning for Sustainable Development: Carriacou and Petite Martinique* supported and confirmed the sites identified in the OAS plan.

Most recently, in 2006, as part of a partnership with The Nature Conservancy, a gap analysis conducted on representative marine and terrestrial ecosystems and specified wildlife habitats identified the degree of representation on existing and proposed protected areas and brought a structured and scientific, conservation approach to the selection process. The gap analysis, supported by numerous studies including the Grenada Dove Conservation Program, highlighted representative habitats and features and their degree of inclusion within designated protected areas. It also highlighted those habitats and features with little or no representation, thus providing a focus and target for protected area candidates and attempting to ensure that the system truly meets the biodiversity goals of Grenada.

To date, these assessments have focused on conservation values. Comprehensive assessments on heritage, recreation and tourism components of protected areas have been limited and no targets for those components, except for those identified in the OAS system plan and the *Tourism Master Plan*, have been established. To address this limitation and to update the gap analysis, a workshop was held in St. George's in February, 2009 to further refine the selection of protected area candidates.

These previous assessments, analyses and studies have led to a number of sites being considered for protected area designation; some sites, such as Mt. Gazo and Fort Frederick are currently managed as if they were already formally designated and some sites, such as Mt. St. Catherine and Grand Bras, have been surveyed in anticipation of formal designation. In total, a large number of sites are in various stages of designation. In summary:

- five terrestrial sites and one marine site have been surveyed and are awaiting finalization
- three "heritage sites" are under active management, considered as protected areas but have not been formally designated

- 10 “tourism sites”, including Annandale Falls, are under active management and considered as protected areas but have not been formally designated
- 10 sites have been recommended based on approved land use plans
- 13 areas of interest have been identified for consideration under future land use planning processes

The selection, and possible deletion, of protected areas must be in concert with overall land use planning for Grenada. The Physical Planning Unit, in its ongoing program to prepare local area plans, is gathering comprehensive inventories of natural and cultural values and recommending land uses, such as conservation and heritage, based on those values. This planning process also recognizes resources in the marine environment. The process, with extensive community involvement and consultation, has considerable merit in ensuring support for establishing protected areas. To date, the first plan, the *Greater Grenville Local Area Plan*, is substantially complete and a draft has been prepared for the Greater Sauteurs area. Focusing on urban and sensitive areas as priorities to drive the planning process, the process is expected to be complete for Grenada by 2015.

The selection of protected area candidates must also consider sustainable livelihoods. In developing countries, and developed countries, community and political support for designation of protected areas is often dependent on the area continuing to provide opportunities to use resources in a sustainable manner and/or provide permitted uses for complementary tourism. The designation of protected areas needs to ensure the appropriate category is selected to reflect the protected area’s purpose and subsequent management plans need to ensure the livelihood opportunities are available and sustainable. While ensuring conservation of Grenada’s biodiversity, a system of protected areas also needs to make a substantial and meaningful contribution to the Grenadian economy.

Finally, the selection of protected area candidates will need the positive engagement of private land owners. With over 85% of Grenada in private ownership, including all of the islands within proposed marine protected areas, realization of the Grenada Declaration will require significant contribution from private individuals, groups and corporations⁶.

The *National Parks and Protected Areas Act* allows the Governor General to add to a national park any land that has been leased to the Crown or purchased or donated. This is significant in that the government and private owners can enter into lease agreements to conserve habitats and provide access to recreation opportunity. Currently, Grenada does not have supporting legislation that would grant tax benefits to prospective donors of ecologically-significant lands. In addition, the use of conservation covenants is not utilized because of the lack of enabling legislation. Programs to address engagement of private landowners in their participation of protected area establishment is presented in Part 2 of the overall system plan.

Based on all the previous plans and the significant effort of both government and non-government agencies as well as the international community and Grenadians, the identification

⁶ As the foreshore and immediate upland is public land, as is the general marine environment, the Grenada Declaration’s application to marine protection is somewhat less complicated.

and selection of protected area candidates is substantially complete. As with any protected area system plan, the future will see new areas proposed and some existing areas cancelled as information becomes available and national priorities unfold.

With the completion of the inventory and selection phase, the emphasis now turns to the designation of at least 25% of Grenada's terrestrial and near-shore marine environments as protected areas by 2020.

3 THE PLAN

3.1 Delivering Protected Areas

As addressed in Section 2.5, considerable work has been done over the last two decades to identify and designate potential protected areas. Six areas, Mt. Hartman and Sandy Island/Oyster Bay have been approved by Cabinet and are awaiting designation. Several areas, including Fort Frederick, Fort Matthew and Fort George are actively managed as historic sites. The 1988 OAS system plan, the 1998 land use plan for Carriacou and Petite Martinique and The Nature Conservancy's efforts on conservation gap analysis have all reported on candidates that meet terrestrial and marine protected area criterion.

In some cases, sites such as Grand Etang, Levera, Belair and High North have been recognized by both signage and in tourism promotion as national parks when, in fact, they never have been designated. Some of the sites, such as Fort George and Fort Frederick, are actively managed and considered designated protected areas but they are not. Some of the sites have gone through rigorous land use planning processes but many have not.

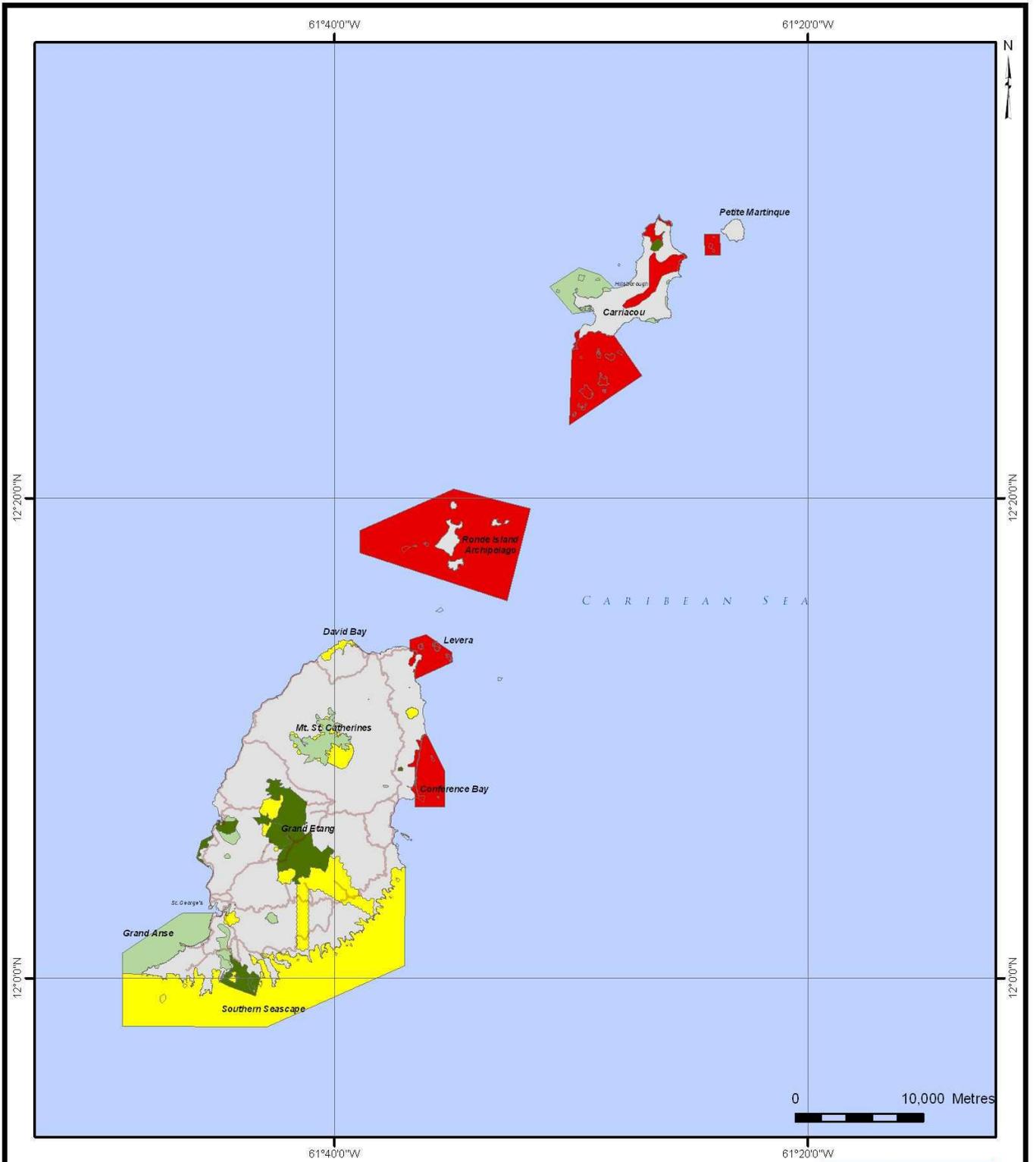
Recognizing the work done to date on the identification of possible protected area candidates by both Department of Forestry and National Parks' and Department of Fisheries' planning and general land use planning, the intention of successive governments on the establishment of protected areas and the belief of Grenadians on what is protected by designation, the plan proposes three phases to deliver a system of marine and terrestrial protected areas.

Firstly, those areas that have been historically considered and accepted by Grenadians as protected areas, those areas previously approved and surveyed for protected area status, and those existing protected areas with approved management plans recommending other designations, should be designated as soon as possible.

Secondly, protected area proposals should be prepared for those areas that have been identified by other completed and accepted land use studies and by this plan as priority areas of interest due to competing land use pressures. These proposals should be initiated as soon as possible to ensure that protected area opportunities are not lost.

Finally, in an effort to encourage full public consultation and gain public support, the remaining areas that are not threatened at this time and have been identified by this plan should be studied and assessed along with other land use demands as part of the Physical Planning Unit's local area planning process.

Figure 3 shows the existing and proposed protected areas and study areas of interest.



Datum: NAD83
 Projection: WGS 84
 Utm Zone 20 North

Legend

- Designated Protected Area
- Priority Area of Interest (AOI)
- Local Area Planning (AOI)
- Immediate Designation



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Consultant: Mel Turner	Project No.: GND-02	Title: Figure 3 Protected Areas	
Drawn By: SMART MAP	Date: March, 2009	Scale: 1:75,000	Client: Government of Grenada

3.2 Critical Areas for Immediate Designation

The following Crown sites, which have been historically considered and accepted by Grenadians as protected areas but are not designated, which are critical to the importance to Grenada's endangered species and habitats, which have been previously been approved and surveyed for protected area status and those existing protected areas with approved management plans recommending other designations, should be designated immediately:

Under the *National Parks and Protected Areas Act (1991)*:

- Designate that portion of the Grand Etang and Annandale Forest Reserve identified in the approved management plan (Turner, 2007) as Grand Etang National Park and retain the remnant portion as Grand Etang Forest Reserve and Annandale Forest Reserve
- Revise the boundary of Perseverance Protected Area by:
 - deleting the sections currently used for landfill and housing purposes
 - adding the Crown lands in the Beausejour/Perseverance estates that encompass the Grenada Dove Habitat as shown in Figure 4
 - changing the designation of the revised Perseverance Protected Area to Perseverance National Park
- Re-designate the recently-revised boundaries of Mt. Hartman as a national park (Figure 4)
- Designate Richmond Hill, including the Botanical Gardens, Lagoon Park and the immediate foreshore described as public domain by the Grenada Ports Authority and Fort George, Fort Frederick, Fort Matthew and Annandale Falls as national parks (Figure 4)
- Designate Grand Anse as a national park, including Camerhogne, Quarantine Point, other adjacent significant Crown lands and the marine foreshore component from Point Salines to Martins Bay. (Figure 4)

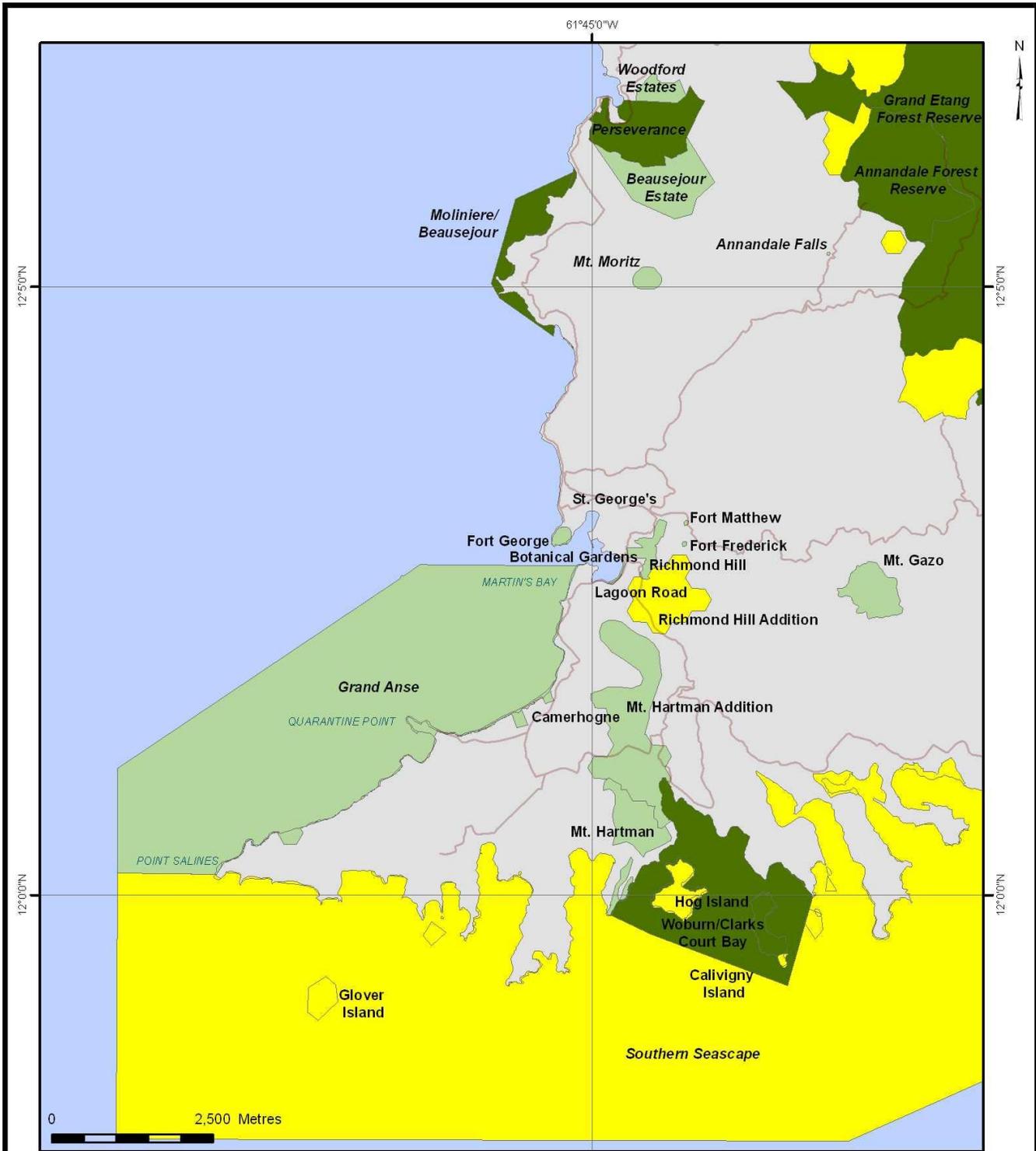
Under the *Fisheries Act*:

- Designate Sandy Island/Oyster Bay Marine Reserve (Figure 5)

Under the *Forest Soil and Water Conservation Act*:

- Complete the designation of Mt. St. Catherine, Mt. Gazo, Grand Bras and Mt. Moritz as forest reserves (Figure 6)

Once management plans have been prepared and approved for these forest reserves as well as High North Forest Reserve on Carriacou, all or portions of these forest reserves not proposed for the commercial development of forest and non-forest products could be considered for re-designation as national parks.



Datum: NAD83
 Projection: WGS 84
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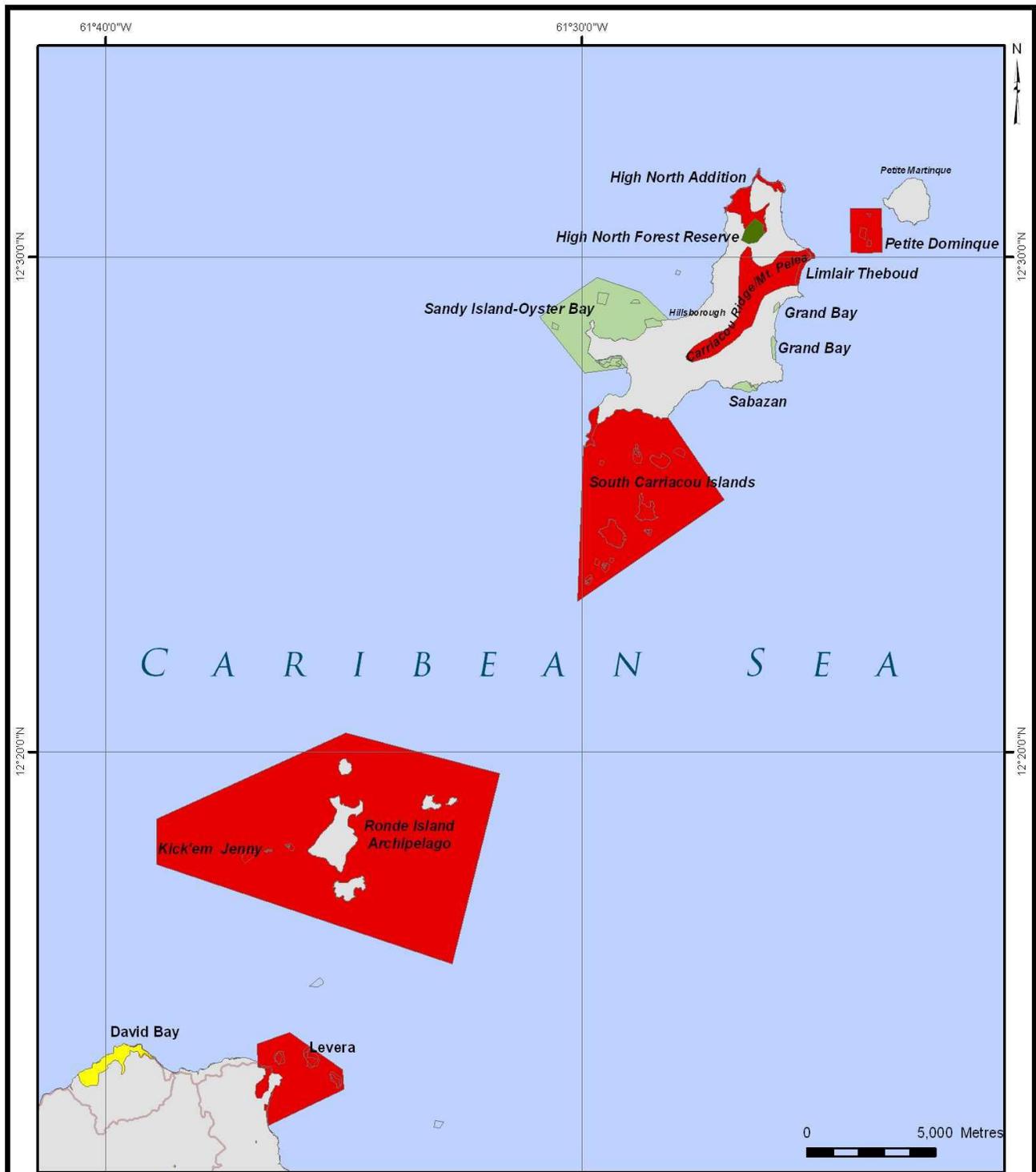
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- Priority Area of Interest (AOI)
- Local Area Planning (AOI)
- Immediate Designation



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Consultant: Mel Turner	Project No.: GND-02	Title: Figure 4 St. George's	
Drawn By: SMART MAP	Date: March, 2009	Scale: 1:80,000	Client: Government of Grenada



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 Datum: NAD83
 Projection: WGS 84
 UTM Zone 20 North

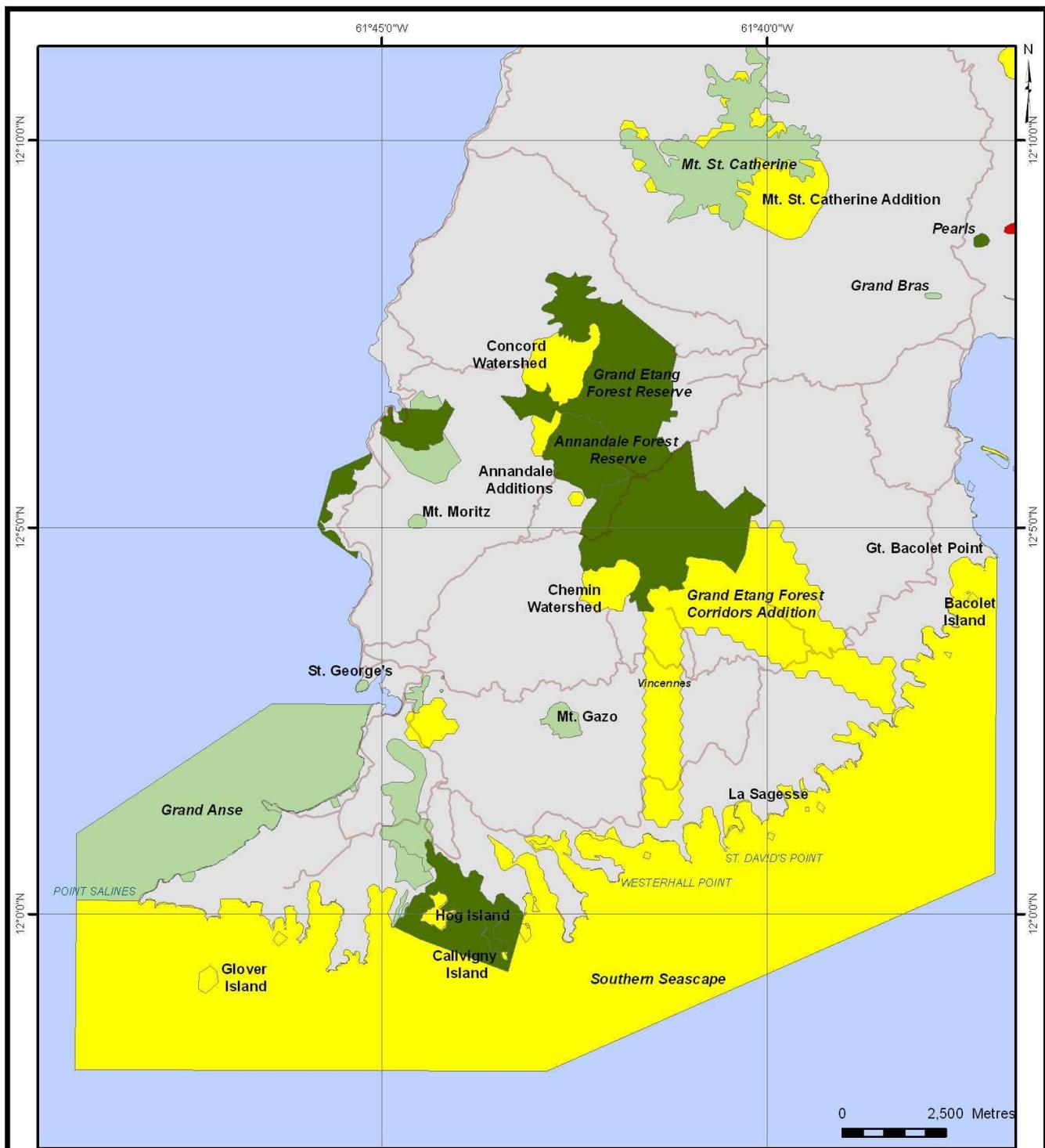
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- Designated Protected Area
- Priority Area of Interest (AOI)
- Local Area Planning (AOI)
- Immediate Designation



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Consultant: Mel Turner	Project No.: GND-02	Title: Figure 5 Carriacou/Ronde	
Drawn By: SMART MAP	Date: March, 2009	Scale: 1:75,000	Client: Government of Grenada



Datum: NAD83
Projection: WGS 84
Utm Zone 20 North

Legend

- Designated Protected Area
- Local Area Planning (AOI)
- Priority Area of Interest (AOI)
- Immediate Designation



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Consultant: Mel Turner	Project No.: GND-02	Title: Figure 6 Southern Seascape	
Drawn By: SMART MAP	Date: March, 2009	Scale: 1:125,000	Client: Government of Grenada

Five other sites, all privately owned, also merit immediate attention due to their critical importance, both for the Grenada Dove and their reflection of Grenada’s history.

- Firstly, discussions should occur with the Roman Catholic Church in an effort to reach an agreement to establish Caribs’ Leap as a national park.
- Secondly, discussions should occur with private landowners within the Beausejour/Perseverance estates and the Woodford estate area of interest, Figure 4, as well as the Mt. Hartman Addition (Petit Bouc/Woodlands/Café), Figure 4, in an effort to reach agreements that would add habitat for the Grenada Dove to the existing Perseverance Protected Area (proposed Perseverance National Park) and the proposed Mt. Hartman National Park.
- Finally, negotiations should commence with the owners of the archaeological and fossil sites at Grand Bay and the archaeological site at Sabazan on Carriacou, Figure 5, with the intent of establishing these significant sites as national parks.

Table 3 summarizes the proposed protected areas that should be designated immediately. Once established, the boundaries of the sites should be placed on all government maps.

Designation of these sites by 2010 would see the amount of terrestrial area under protected area status reach 10% and the area under marine protected area status reach 11%, thus meeting the interim step of the Grenada Declaration.

Table 3 - IMMEDIATE DESIGNATION-Crown

AREA	PARISH	DESIGNATION
Portion of Grand Etang/Annandale Forest Reserve in 2007 Management Plan	St. John St. Andrew St. George St. David	National Park
Perseverance Protected Area boundary and adjacent Crown lands in Beausejour/Perseverance Estates	St. George	National Park
Mount Hartman	St. George	National Park

Richmond Hill, Botanical Gardens, Lagoon Park, Lagoon foreshore, Fort George, Fort Matthew and Fort Frederick	St. George	National Park
Annandale Falls	St. George	National Park
Grand Anse including Camerhogne, Quarantine Point, significant lands and marine foreshore from Martins Bay to Point Salines	St. George	National Park
Sandy Island/Oyster Bay	Carriacou	Marine Reserve
Mt. St. Catherine	St. Mark, St. Andrew St. John	Forest Reserve
Mt. Gazo	St. George	Forest Reserve
Grand Bras	St. Andrew	Forest Reserve
Mt. Moritz	St. George	Forest Reserve

IMMEDIATE DESIGNATION-Private

Carib's Leap	St. Patrick	National Park
Beausejour/ Woodford Estates	St. George	National Park Addition

Mt. Hartman Addition including Woodlands, Petit Bouc and Cafe	St. George	National Park Addition
Grand Bay	Carriacou	National Park
Sabazan	Carriacou	National Park

3.3 Priority Areas of Interest

Previous land and marine use studies have been conducted, at considerable country and donor expense, over the last decade and enjoy general government support. Although these studies, collectively, have identified areas of nationally-significant protected area potential, little action has been taken and existing land use pressures from residential, tourism and industrial development have the potential to threaten future protected area designation and conservation opportunities that can be lost forever. To address that concern, voiced many times in discussions with individuals and groups during the preparation of this system plan, these areas can now be subject to land status and the preparation of a detailed protected area proposal with both a defined purpose and boundary.

Three areas fall into this category: Carriacou, Conference Bay and Levera.

In Carriacou, the 1998 *Planning for Sustainable Development* plan, supported by the 1988 OAS system plan for protected areas and the 1997 *Tourism Master Plan*, contributed to the identification of significant conservation, heritage and recreation values in both the terrestrial and marine environments. Efforts should now focus on the preparation of individual national park, marine protected area and forest reserve proposals for each of the identified protected area candidates as well as the Ronde Island Archipelago, including Kick'em Jenny (Figure 5).

In Grenada, the *Greater Grenville Area Land Use Plan* prepared by the Physical Planning Unit has identified that some 150 hectares of Conference Bay seafront from Telescope Point north to Artiste Point should be dedicated for conservation purposes. This recommendation represents the southern component of the OAS system plan's Northern Seascape proposal. The proposed protected area should now be subject of a land status and negotiations should occur with respective owners leading to designation of lands as a national park. The foreshore component, some 1500 hectares, should also be incorporated into the proposed national park and the overall proposal, once completed, should be forwarded for approval and designation.

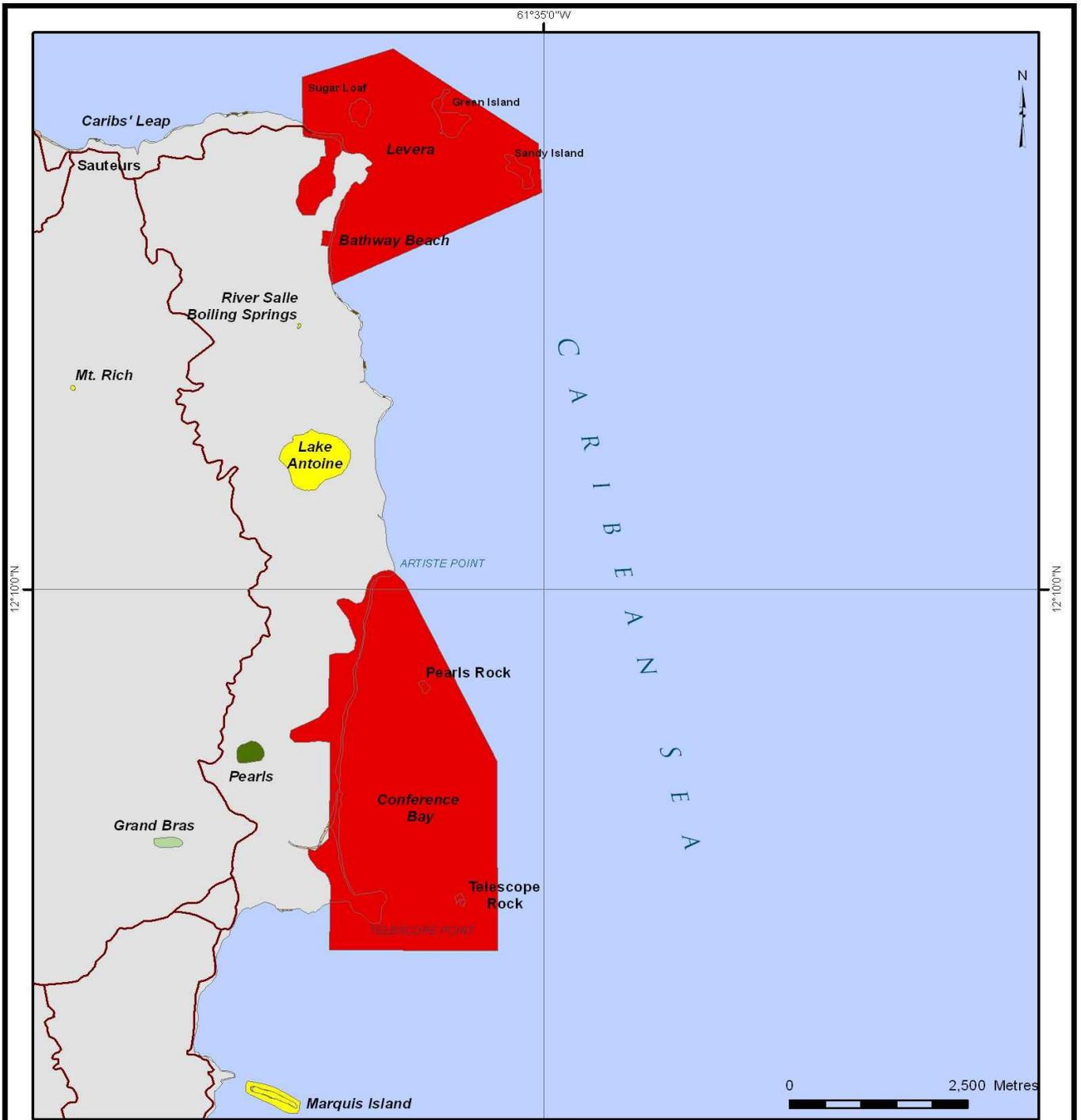
“Levera National Park” is found in almost every tourism publication yet it does not exist. Although the Government embarked on a land assembly of the private lands adjoining the lake and fronting the beach, as well as Bathway Beach, some time ago, the park was never established and the land remains in private ownership. In an effort to bring closure to this long-standing initiative, the Government should conclude negotiations with the adjacent owners, both of which support the establishment of a national park surrounding the lake and fronting Levera Beach, and designate the area, as well as Bathway Beach and the immediate foreshore, as a national park.

Both of these proposals are shown in Figure 7.

Table 4 lists the priority areas of interest.

Table 4 - PRIORITY AREAS OF INTEREST

AREA OF INTEREST	PARISH	PROPOSED DESIGNATION
Levera	St. Patrick	National Park
Conference Bay	St. Andrew	National Park
Ronde Island Archipelago		Marine Protected Area
High North Addition	Carriacou	Forest Reserve Addition
Belair/Carriacou Ridge/ Mt. Pelea	Carriacou	Forest Reserve
Limlair Theboud	Carriacou	National Park
Petite Dominique	Carriacou	Marine Protected Area
South Carriacou Islands	Carriacou	Marine Protected Area



Datum: NAD83
 Projection: WGS 84
 Utm Zone 20 North

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Legend

- Designated Protected Area
- Priority Area of Interest (AOI)
- Local Area Planning (AOI)
- Immediate Designation



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Consultant: Mel Turner	Project No.: GND-02	Title: Figure 7 Conference Bay/Levera	
Drawn By: SMART MAP	Date: March, 2009	Scale: 1:75,000	Client: Government of Grenada

As with the forest reserves identified in Section 3.2, upon approval of management plans, some areas of forest reserve, such as Belair or High North, could be considered for designation as national park or protected area.

Depending on the final boundaries of the protected area proposals, completion of this phase should see the terrestrial area reach 13% and the marine area reach 24%.

3.4 Study of Areas of Interest

The Physical Planning Unit's program for the preparation of local area plans, now completed for Greater Grenville and currently underway for Greater Sauteurs, will guide the establishment of future terrestrial and marine protected areas.

Although the focus of the local area planning process is on land use, the process itself considered the near-shore marine resources and, in the current planning process underway for Greater Sauteurs, identifies a marine protected area at Levera. This relationship of the marine environment with adjacent land use in the terrestrial environment should continue to be addressed and the areas proposed by this plan as marine protected areas should continue to be considered and addressed by the local area planning process. In review of both the *Greater Grenville Local Area Plan* and the draft local area plan for Greater Sauteurs, the areas recommended for both marine and terrestrial protected area status mirrored those previously identified by the OAS' system plan, the *Tourism Master Plan* and the work done by The Nature Conservancy and others, thus confirming the process for both identification and for generating community support.

This system plan recommends that 14 areas of interest be considered based on analysis conducted on natural and cultural resources from previous planning studies and current reviews. In an effort though to ensure that all land use options have been considered in a recognized and community-supported planning process, these areas of interest should be reviewed in the context of best land use and the local area planning process.

Table 5 outlines the Areas of Interest that should be subject to the Physical Planning Unit's local area planning process.

Table 5 - STUDY AREAS of INTEREST for LOCAL AREA PLANNING

AREA OF INTEREST	PARISH	PROPOSED DESIGNATION
Richmond Hill Addition	St. George	St. George's National Park Addition
Mt. St. Catherine Addition	St. Mark, St. John St. Andrew	Mt. St. Catherine Forest Reserve Addition
Concord Watershed	St. David	Grand Etang Forest Reserve Addition
Annandale Addition	St. George	Annandale Forest Reserve Addition
David Bay	St. Patrick	Forest Reserve
Southern Seascape	St. David St. George	Marine Protected Area
Chemin Watershed	St. David	Grand Etang Forest Reserve Addition
Marquis Island	St. Andrew	National Park
Mt. Rich	St. Patrick	National Park
Grand Etang Forest Corridors	St. David	Forest Reserve
La Sagesse	St. David	National Park
Lake Antoine	St. Patrick	National Park
River Sallee	St. Patrick	National Park

The natural and cultural resource values of existing protected areas, the accepted sites considered as protected and the priority areas of interest have all been well documented in management plans, the OAS system plan, the *Planning for Sustainable Development: Carriacou and Petite Martinique* and the *Greater Grenville Local Area Plan* and further defined in TNC gap analysis. However, the values of the 13 sites proposed for consideration as protected areas through the Physical Planning Unit's local area planning process need further identification. Brief profiles, outlining each of these site's natural and cultural resource values, have been created to assist in the future local area planning processes. These profiles are in Appendix 1.

Once areas of interest have been considered for protected area status as part of the overall local area planning process, a detailed protected area proposal should be prepared for each recommended site and presented for approval.

The local area planning process is expected to be completed in 2015. To ensure opportunities are not lost prior to and during the initiation of any local area plan, notations of interest should be established on Crown lands within the identified areas of interest.

Should designation of these areas occur after acceptance as part of the local area planning process, and combined with the accepted and priority sites identified in Sections 3.2 and 3.3, the representation of terrestrial and near-shore marine environments a shown in Table 1 would grow to representations shown in Table 6. Depending on the final areas selected as part of the outcomes of the planning process, the terrestrial area in protected area designation should reach 25% and the marine protected areas, 40%.

Table 6 - Representation of Environments in Protected Areas

Terrestrial Environments	Existing % Representation	Proposed % Representation
Transitional Cloud Forest	66	100
Cloud Forest	27	100
Evergreen Forest	25	49
Emergent Wetlands	22	48
Grenada dove habitat	11	71
Dry Deciduous Forest	1	27
Semideciduous Forest	2	15
Drought Deciduous Forest	1	19
Mixed Wood agriculture	1	10
Streams	5	17
Rivers	1	2
Fresh Water bodies	1	74

Marine Environment	Existing %	Proposed %
Seagrass	10	68
Mangroves	1	54
Intertidal reef flat	5	77
Leatherback nesting site	0	53
White sand beach	2	41
Rocky shore	4	43
Reef flat	1	33
Hawksbill nesting site	0	53
Shelf structure	2	40
Fore reef	2	53
Black sand beach	0	68
Lagoonal habitat	0	38
Shallow terrace	0	35
Shoal	0	36

3.5 Summary

The establishment of a system of terrestrial and marine protected areas as recommended in this plan will substantially meet the commitments that Grenada made to its international partners, and more importantly, to Grenadians and their livelihoods.

But more is still needed. Although most of the environments identified in the gap analysis will be represented in excess of the Grenada Declaration as shown in Table 6, the contribution of existing and proposed protected areas to the protection of habitats of threatened species identified on the IUCN red list is not known due to the lack of inventory of those habitats and the uncertainty of the list itself.

Prior to the review of the system plan, studies need to be conducted on those species, their habitats identified and the coverage of those habitats within the protected area system evaluated.

Barely 25% of terrestrial area has been proposed for protected area status. It is unlikely that all of the terrestrial sites or their aerial extent identified as areas of interest will become protected areas and, as such, the 25% commitment of the Grenada Declaration will not be achieved by this plan. Subsequent studies, though, on specific habitats and associated recommendations, as noted, along with the preparation and approval of management plans which address additions, should cover any shortfalls.

Part 2 of the system plan outlines the ways and means to manage and administer the sites addressed in this Part 1.

4 PLAN REVIEW

The review of the system plan will be dependent on the acceptance of the sites referenced in 3.2 and their designations, on the completion of the studies of those priority potential protected areas referenced in 3.3, completion of the local area plans by the Physical Planning Unit by 2015 and increased knowledge of Grenada's natural and cultural resources.

Pending resolution of the legislation and institutional arrangement issues and any resulting amendments as addressed in Part 2 of the system plan, the plan review should be conducted by the National Parks Advisory Council and the Management Committee for marine reserves and should focus on the progress made in designation of terrestrial and marine sites as well as impediments encountered.

The review should consider recommendations in management plans that deal with changes to protected area designation, such as upgrading forest reserves to national parks or the reverse, establishment of new protected areas and national land use decisions that preclude designation of proposed protected areas because of higher priority needs. A formal plan review should occur every 7 years and should be conducted in a public forum.

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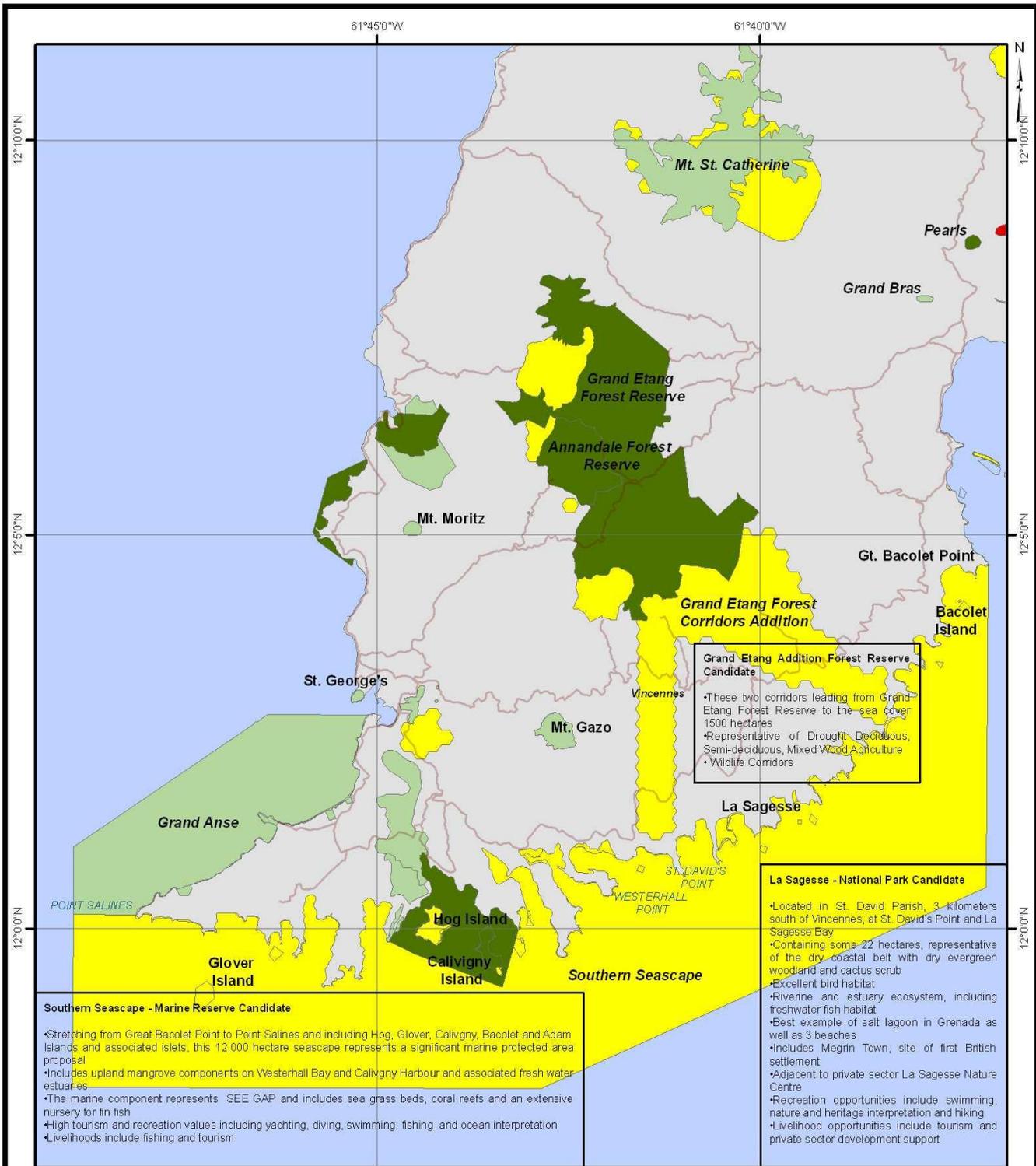
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APPENDIX 1

PROFILES OF STUDY AREAS OF INTEREST



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 Projection: WGS 84
 UTM Zone 20 North

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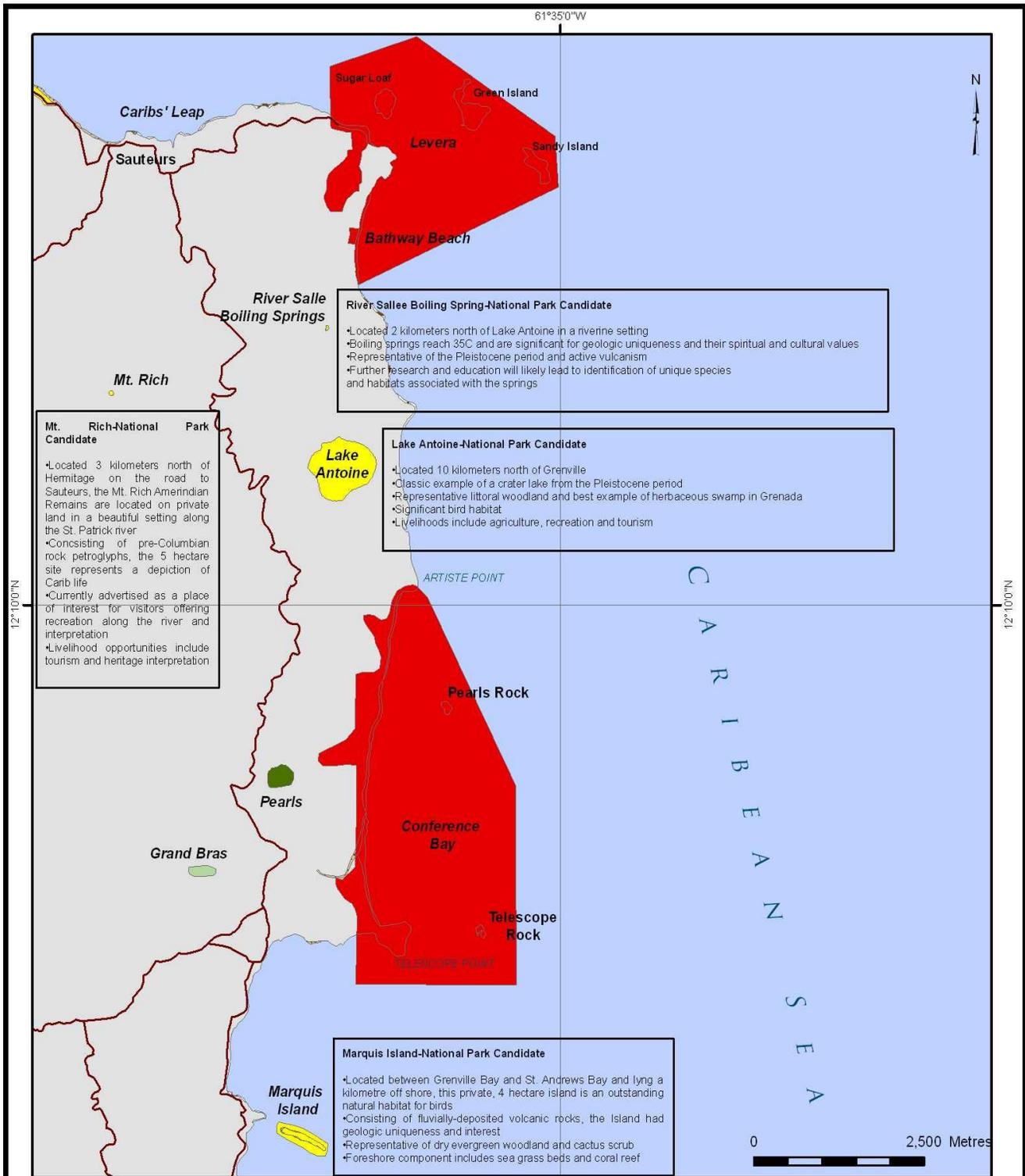
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- Designated Protected Area
- Priority Area of Interest (AOI)
- Local Area Planning (AOI)
- Immediate Designation



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Consultant: Mel Turner	Project No.: GND-02	Title: Figure 8 Areas of Interest - South	
Drawn By: SMART MAP	Date: March, 2009	Scale: 1:125,000	Client: Government of Grenada



Datum: NAD83
 Projection: WGS 84
 Utm Zone 20 North

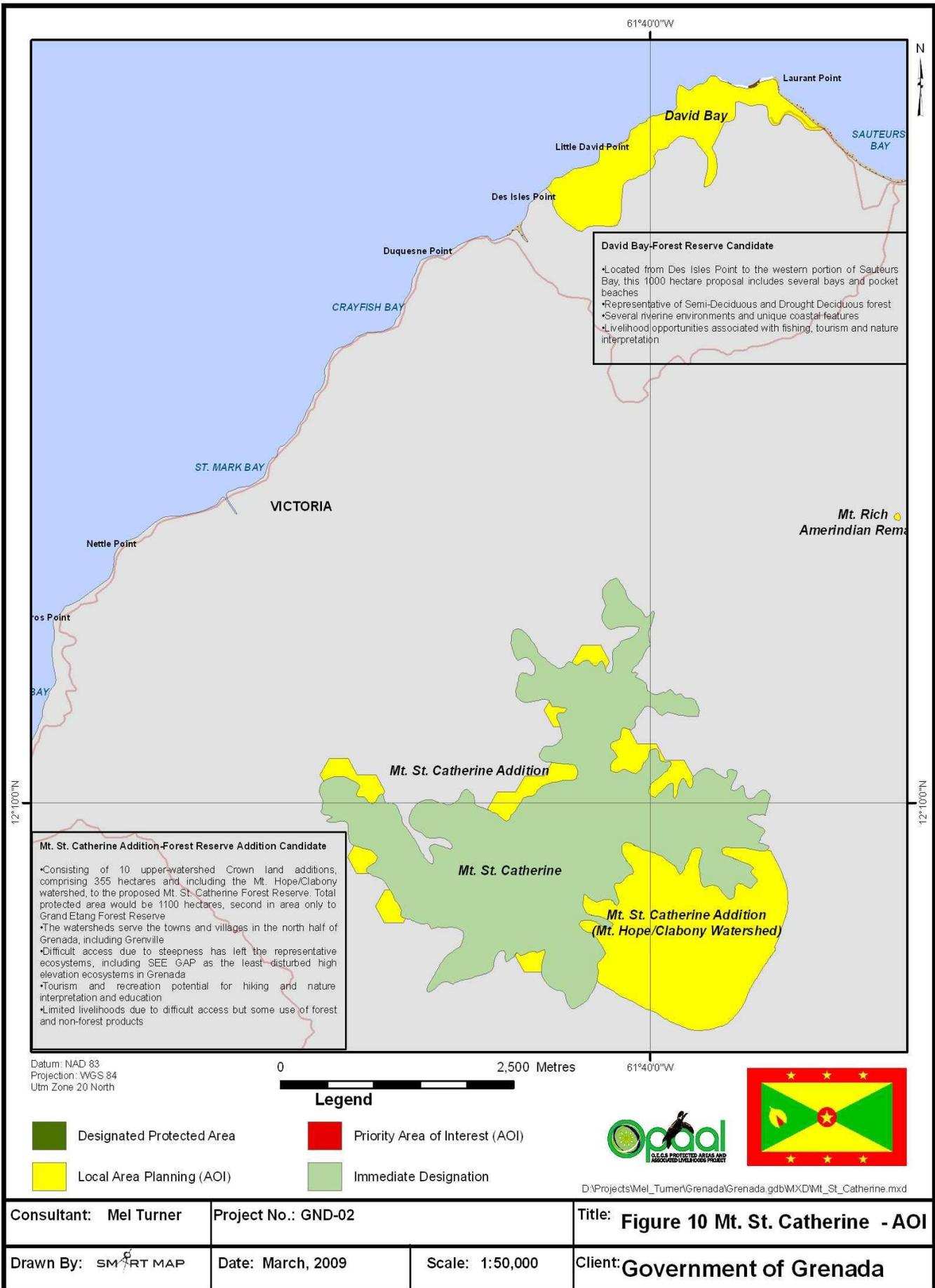
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- Local Area Planning (AOI)
- Immediate Designation



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Consultant: Mel Turner	Project No.: GND-02	Title: Figure 9 Areas of Interest - NE	
Drawn By: SMART MAP	Date: March, 2009	Scale: 1:75,000	Client: Government of Grenada



David Bay-Forest Reserve Candidate

- Located from Des Isles Point to the western portion of Sauteurs Bay, this 1000 hectare proposal includes several bays and pocket beaches
- Representative of Semi-Deciduous and Drought Deciduous forest
- Several riverine environments and unique coastal features
- Livelihood opportunities associated with fishing, tourism and nature interpretation

Mt. St. Catherine Addition-Forest Reserve Addition Candidate

- Consisting of 10 upper-watershed Crown land additions, comprising 355 hectares and including the Mt. Hope/Clabony watershed, to the proposed Mt. St. Catherine Forest Reserve. Total protected area would be 1100 hectares, second in area only to Grand Etang Forest Reserve
- The watersheds serve the towns and villages in the north half of Grenada, including Grenville
- Difficult access due to steepness has left the representative ecosystems, including SEE GAP as the least-disturbed high elevation ecosystems in Grenada
- Tourism and recreation potential for hiking and nature interpretation and education
- Limited livelihoods due to difficult access but some use of forest and non-forest products

Datum: NAD 83
 Projection: WGS 84
 Utm Zone 20 North

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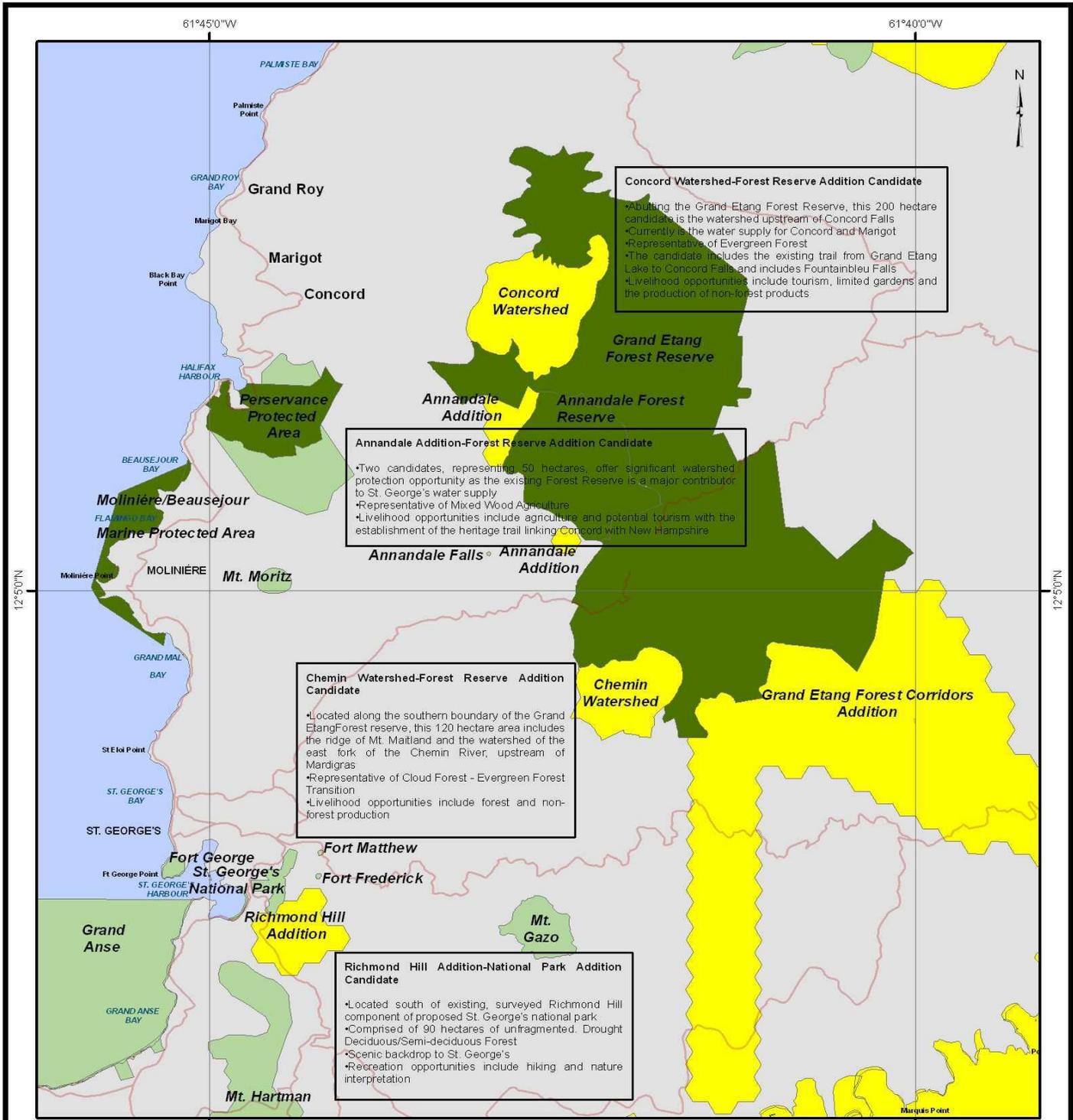
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- Designated Protected Area
- Priority Area of Interest (AOI)
- Local Area Planning (AOI)
- Immediate Designation



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Consultant: Mel Turner	Project No.: GND-02	Title: Figure 10 Mt. St. Catherine - AOI	
Drawn By: SMART MAP	Date: March, 2009	Scale: 1:50,000	Client: Government of Grenada



Concord Watershed-Forest Reserve Addition Candidate

- Abutting the Grand Etang Forest Reserve, this 200 hectare candidate is the watershed upstream of Concord Falls
- Currently is the water supply for Concord and Marigot
- Representative of Evergreen Forest
- The candidate includes the existing trail from Grand Etang Lake to Concord Falls and includes Fountainbleu Falls
- Livelihood opportunities include tourism, limited gardens and the production of non-forest products

Annandale Addition-Forest Reserve Addition Candidate

- Two candidates, representing 50 hectares, offer significant watershed protection opportunity as the existing Forest Reserve is a major contributor to St. George's water supply
- Representative of Mixed Wood Agriculture
- Livelihood opportunities include agriculture and potential tourism with the establishment of the heritage trail linking Concord with New Hampshire

Chemin Watershed-Forest Reserve Addition Candidate

- Located along the southern boundary of the Grand Etang Forest Reserve, this 120 hectare area includes the ridge of Mt. Maitland and the watershed of the east fork of the Chemin River, upstream of Mardigras
- Representative of Cloud Forest - Evergreen Forest Transition
- Livelihood opportunities include forest and non-forest production

Richmond Hill Addition-National Park Addition Candidate

- Located south of existing, surveyed Richmond Hill component of proposed St. George's national park
- Comprised of 90 hectares of unfragmented, Drought Deciduous/Semi-deciduous Forest
- Scenic backdrop to St. George's
- Recreation opportunities include hiking and nature interpretation

Datum: NAD83
Projection: WGS 84
Utm Zone 20 North

0 2,500 Metres

Legend

- Designated Protected Area
- Priority Area of Interest (AOI)
- Local Area Planning (AOI)
- Immediate Designation



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Consultant: Mel Turner	Project No.: GND-02	Title: Figure 11 Annandale - AOI	
Drawn By: SMART MAP	Date: March 2009	Scale: 1:65,000	Client: Government of Grenada

NOTES