



UNITED NATIONS ENVIRONMENT PROGRAMME

Programme des Nations Unies pour l'environnement Programa de las Naciones Unidas para el Medio Ambiente
Программа Организации Объединенных Наций по окружающей среде برنامج الأمم المتحدة للبيئة

联合国环境规划署



PROJECT DOCUMENT

SECTION 1: PROJECT IDENTIFICATION

1.1 Project title:	Pine Islands – Forest/Mangrove Innovation and Integration (Grand Bahama, New Providence, Abaco and Andros)
1.2 Project number:	GEF ID: 4847/GEF Agency ID: 00839
1.3 Project type:	FSP
1.4 Trust Fund:	GEF
1.5 Strategic objectives (GEF-5):	BD-2, LD-3, SFM/REDD-1
1.6 UNEP priority:	Ecosystem Management

The project will contribute to UNEP Programme of Work (POW) relating to Ecosystem Management through:

- Expected Accomplishment (a) Enhanced capacity of countries and regions to integrate an ecosystem management approach into development planning processes; **Output 1.** Methodologies, partnerships and tools to maintain or restore ecosystem services and integrate the ecosystem management approach with the conservation and management of ecosystems; and
- Expected Accomplishment (c) Strengthened capacity of countries and regions to realign their environmental programmes to address degradation of selected priority ecosystem services; **Output 2:** Biodiversity and ecosystem values are assessed, demonstrated and communicated to strengthen decision-making by governments, businesses and consumers.

1.7 Geographical scope:	The Bahamas
1.8 Mode of execution:	External
1.9 Project executing organization:	Ministry of Environment, BEST Commission, Forestry Unit
1.10 Duration of project:	48 months
1.11 Cost of project	

	Amount	%
Cost to the GEF Trust Fund	\$2,853,425	27.0%
Co-financing - Cash		
Ministry of Environment & Housing – Forestry Unit	\$150,000	1.42%
Ministry of Public Works & Urban Development - DPP	\$20,000	0.19%
Bahamas Agriculture & Industrial Cooperation	\$400,000	3.79%
Department of Lands & Surveys	\$20,000	0.19%
Sub-total	\$590,000	5.59%

Co-financing - In-kind

ICC	\$400,000	3.79%
USGS	\$200,000	1.90%
Ministry of Environment & Housing – Forestry Unit	\$2,161,140	20.49%
Ministry of Public Works & Urban Development - DPP	\$732,000	6.94%
Bahamas Agriculture & Industrial Cooperation	\$1,475,000	13.98%
Department of Lands & Surveys	\$788,500	7.47%
Bahamas National GIS Centre	\$657,500	6.23%
BEST Commission/ Ministry of The Environment & Housing/ Government of The Bahamas	\$651,118	6.17%
UNEP	40,000	0.38%
Sub-total	7,105,258	67.36%
Co-financing Total	\$7,695,258	72.95%
GRAND TOTAL	\$10,548,683	100.0%

1.12 Project summary

This project aims to build on recent advancements in the forestry sector by integrating biodiversity values, ecosystem services values and precepts of sustainable forest management and land-use into enhanced land-use planning in The Bahamas. The proposed project will address a number of environmental priorities through the following components:

1. Component 1: The institutional systemic support & associated capacity building
 - a. The establishment of a forestry assessment and monitoring system which reduces the technical gap by contributing biodiversity and ecosystem services values into an updated inventory of forest ecosystems in the Pine Islands while sustainably monitoring Bahamian forest change in the long term;
 - b. Integration of Sustainable Land-Use and Sustainable Forest Management principles into National Land-Use Planning thru development of 2 sub-national plans for Andros and New Providence, in accordance with Planning and Subdivisions Act 2010.
2. Component 2: The expansion and improved management of forest and mangrove sector:
 - a. Facilitation of the establishment of the National Forestry Estate thru the gazettelement of 3 categories of Forest Reserves, Protected Forests and Conservation Forests. In addition, incremental support will be provided for the development of the National Forest Plan for the Forest Estate, and the targeted management planning for 15% of planned Conservation Forest comprising of 22,410 ha on two (2) pilot areas on Abaco and Andros using SFM/REDD+ principles of community co-management that is expected to increase the carbon sequestration up to 5,661,077 tCO₂ eq.
 - b. Rehabilitation of Mangrove Ecosystem in Davis Creek, Andros comprising of 50 ha to restore ecosystem services and increase carbon sequestration up to 14,563 tCO₂ eq.
3. Component 3: Sustainable Livelihoods:
 - a. Developing the concept of multi-functional conservation by enabling coastal communities thru effective provisioning of forest ecosystem services while promoting sustainable practices and community management of same. The two pilot projects are:
 - i. Native palm cultivation to support Indigenous Craft Industry on Andros and Grand Bahama
 - ii. Cascarilla bark Cultivation and Processing of Cascarilla Oil in Acklins and Crooked Islands

TABLE OF CONTENTS

SECTION 1: PROJECT IDENTIFICATION	3
ACRONYMS AND ABBREVIATIONS	5
SECTION 2: BACKGROUND AND SITUATION ANALYSIS (BASELINE COURSE OF ACTION)	7
2.1. Background and context	7
2.2. Global significance	13
2.3. Threats, root causes and barrier analysis	13
2.4. Institutional, sectoral and policy context	15
2.5. Stakeholder mapping and analysis	17
2.6. Baseline analysis and gaps	19
2.7. Linkages with other GEF and non-GEF interventions	26
SECTION 3: INTERVENTION STRATEGY (ALTERNATIVE)	27
3.1. Project rationale, policy conformity and expected global environmental benefits	27
3.2. Project goal and objective	29
3.3. Project components and expected results	30
3.4. Intervention logic and key assumptions	48
3.5. Risk analysis and risk management measures	49
3.6. Consistency with national priorities or plans	50
3.7. Incremental cost reasoning	51
3.8. Sustainability	52
3.9. Replication	52
3.10. Public awareness, communications and mainstreaming strategy	52
3.11. Environmental and social safeguards	53
SECTION 4: INSTITUTIONAL FRAMEWORK AND IMPLEMENTATION ARRANGEMENTS	53
SECTION 5: STAKEHOLDER PARTICIPATION	54
SECTION 6: MONITORING AND EVALUATION PLAN	55
SECTION 7: PROJECT FINANCING AND BUDGET	56
7.1. Overall project budget	56
7.2. Project co-financing	56
7.3. Project cost-effectiveness	57
APPENDICES	58
Appendix 1: Budget by project components and UNEP budget lines (sep EXCEL file)	
Appendix 2: Co-financing by source and UNEP budget lines (sep EXCEL file)	
Appendix 3: Incremental cost analysis	59
Appendix 4: Results Framework	64
Appendix 5: Workplan and timetable	72
Appendix 6: Key deliverables and benchmarks	82
Appendix 7: Costed Monitoring & Evaluation plan	89
Appendix 8: Summary of reporting requirements and responsibilities	91
Appendix 9: Decision-making flowchart and organogram	93
Appendix 10: Terms of Reference	94
Appendix 11: Co-financing commitment letters from project partners (sep file)	97
Appendix 12: Endorsement letter of GEF National Focal Points	98
Appendix 12: Procurement Policy	99
Appendix 13: Tracking Tools (separate EXCEL files)	102
Appendix 14: Forestry Estate Maps	103
Appendix 17: Ex-Ante Carbon-balance Tool (EX-ACT) for Project (separate EXCEL file)	

ACRONYMS AND ABBREVIATIONS

AGB	Above ground biomass
ANCAT	Andros Conservancy and Trust
BAIC	Bahamas Agriculture and Industrial Corporation
BAMSI	Bahamas Agriculture Marine Science Institute
BEST Commission	Bahamas Environment, Science and Technology Commission
BD	Biodiversity
BNGISC	Bahamas National G.I.S. Centre
BNPAS	Bahamas National Protected Area System
BPAF	Bahamas Protected Areas Fund
BNT	Bahamas National Trust
BREEF	Bahamas Reef Environment Educational Foundation
BSCA	Bahamas Sportfishing and Conservation Association
CBD	Convention on Biological Diversity
CITES	Convention on International Trade in Endangered Species of Wild
DLG	Department of Local Government
DLS	Department of Lands & Surveys
DMR	Department of Marine Resources
DPP	Director of Public Prosecutions
EX-ACT	EX-Ante Carbon balance Tool – Tier One Edition
FAO	Food and Agriculture Organization of the United Nations
FOE	Friends of the Environment
FU	Forestry Unit
FSP	Full-Sized Project
GBPA	Grand Bahama Port Authority
GEF	Global Environment Facility
GHG	Green House Gases
GIS	Geographic Information Systems
GO	Non-Governmental Organization
GOB	Government of The Bahamas
HCA	Hawksbill Creek Agreement
ha	Hectare
IA	Implementing Agency
IAS	Invasive Alien Species
ICC	International Conservation Corps
IPCC	Intergovernmental Panel on Climate Change
LD	Land Degradation
MEH	Ministry of Environment and Housing
METT	Management Effectiveness Tracking Tool
MoT	Ministry of Tourism
NBSAP	National Biodiversity Strategy and Action Plan
NCC	National Coordinating Committee
NCSA	National Capacity Needs Self Assessment
NEA	National Executing Agency
NEMAP	National Environmental Management and Action Plan
NISP	National Implementation Support Programme
NISS	National Invasive Species Strategy

NTFP	Non-Timber Forest Products
NPC	National Project Coordinator
PIF	Project Identification Form
PIR	Project Implementation Review
PoP	Partners of the Project
PoWPA	Programme of Work on Protected Areas
PPG	Project Preparation Grant
PST	Project Site Team
Ramsar Convention	Convention on Wetlands of International Importance
RBDF	Royal Bahamas Defense Force
SABHCA	South Abaco Blue Conservation Area
SFM	Sustainable Forest Management
SFP	Sustainable Finance Plan
SIDS	Small Island Developing States
STM	Sustainable Tourism Model
SNCCC	2 nd National Communication of the Commonwealth of The Bahamas
TNC	The Nature Conservancy
TM	Task Manager
TPC	Town Planning Committee
UNDP	United Nations Development Program
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
USGS	United States Geological Society
WSC	Water And Sewerage Corporation of The Bahamas
WB	World Bank

SECTION 2: BACKGROUND AND SITUATION ANALYSIS (BASELINE COURSE OF ACTION)

2.1. Background and context

1. The Bahamas is the largest small-island archipelago in the tropical Atlantic, similar in size and complexity to the entire Lesser Antilles. Comprising over 700 low-lying islands and cays, The Bahamas has a land area of 13,957 sq. km. (5,388 sq. mi.), a total land and sea area of 300,000 sq. km. and a coastline of 116,550 sq. km.. The size, complexity, and ecological isolation of The Bahamas have contributed to significant biodiversity and the development of several unique ecosystems. The largest and easily identifiable ecosystems include, Caribbean Pine rock land forests, dry green forests, island ponds, mangrove forests, blue holes, coastal rock, tidal flats and salt marshes, sea grass beds, coral reefs and the open ocean.



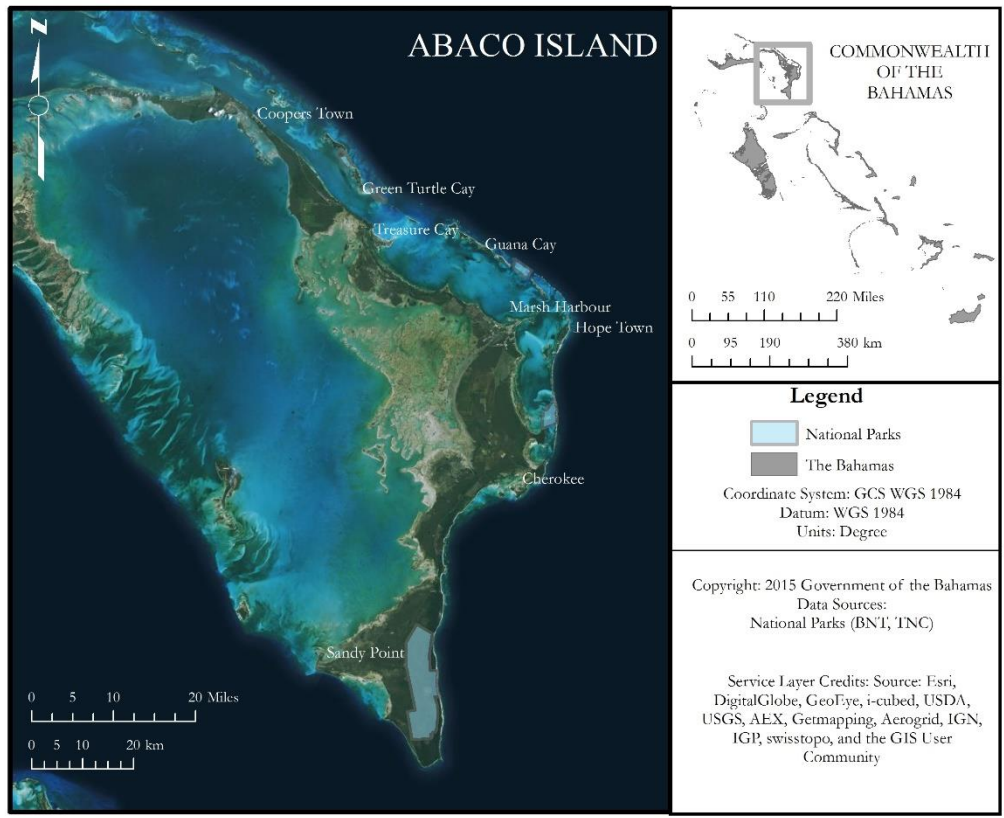
Map 1: The Commonwealth of The Bahamas is located some 80 km (60 miles) east of the state of Florida of the United States of America at its northwestern point and some 80 km (60 miles) north of Cuba at its southeastern extent.

2. The entire Bahamas was, at one time, entirely covered with forests of tall tropical hardwood and slow-growing trees in the drier south-central and southern Bahamas, and with forests of pine in the north and north-central Bahamas. The mangrove forests occupy many shallow lakes and large area of coastal flats between the dry land and the sea. Managed areas of forests are evident with management practices while far from ideal having impacted the entire Bahamas over the last fifty years.
3. Northern Bahamas pine forests, Central Bahamas broadleaf hardwood forests and Southern Bahamas drought-resistant woodlands represent the three (3) major terrestrial environments of The Bahamas (BEST). The Pine Islands named for the dominance of pine of the surface area found on four of the northern islands: Grand Bahama, Great Abaco, New Providence, and Andros.
4. The Pine forest is considered the most productive of the three vegetation types, and is also a protected species. Coppice forests are found in the central and southern Bahamas, with mangrove ecosystems that predominates the leeward shores of most islands. The project will focus on four (4) pine islands. In the pine islands, forests were cut for timber to build boats and houses, for fuel wood and particularly to clear land for cane cultivation. No commercial logging activity is currently being practiced on the pine islands and, consequently, these islands are also in a younger phase of re-growth. (SNCCC 2014). Today, because of the migration of people from the Family Islands to the main economic centres of New Providence and Grand Bahama, some areas of tropical hardwoods have regenerated.
5. Coppice Forests are found predominantly in the Central Bahamas. This comprises the dense, upright and narrow-stemmed, regrowth of mixed hardwood tree species (*Bursera*, *Metopium* and *Swietenia*) . It is by far the most diverse terrestrial habitat found in the Bahamas. Different types of coppice can be found throughout The Bahamas due to the variability resulting from differing environmental conditions affecting the vegetation structure and floristic composition. Blackland coppice are located on higher elevations or ridges. The flora of the coppice forests is mainly broadleaved angiosperms, although some areas have scattered pine. The canopy is closed and typically 5-12 meters high. Whiteland coppice occurs at a lower elevation and the canopy is not closed in the woodland, but is characterized as having scattered patches of emergent trees with interspersed shrubs (Bahamas Ecological Gap Analysis 2014). It provides habitats for many orchids and bromeliads—both terrestrial and epiphytic—and for birds, snakes and crabs. Coastal coppice may occasionally flood, and on windward coasts receives salt spray which may lead to sculpting and wind-shaping.
6. The mangrove forests of The Bahamas are dominated by one or more species of mangrove (*Avicennia*, *Laguncularia* and *Rhizophora*,) with other plant species in drier areas. They encourage sedimentation, hold the sediments in place, and help build land. They also provide nursery habitats for many marine animals, including commercial fishery species, and habitat for water fowl and other fauna. Mangrove forests minimize flooding and erosion. They occur mainly in protected locations on leeward coasts, with particular concentration on Great Inagua, the Bight of Acklins (between Crooked Island and Acklins Island), the western shores of Andros and Great Abaco and the northern shore of Grand Bahama. The Bahamas has about 4,286 sq. km (1,674 sq. mi.) of mangrove forest and other wetlands (Bahamas Ecological Gap Analysis 2014).
7. Blue Holes: While not falling strictly in the category of forest types, the land based entrances to these fascinating ecosystems in forested areas make them a high priority for protection under this project. All the main islands of The Bahamas have blue holes, with Andros featuring some 50 in

the sea and 178 on land with entrances among the shallow creeks, inland lakes, and the shallow banks of the Bahamas. The carbonate system caves can be laterally and vertically very extensive.

The Pine Islands

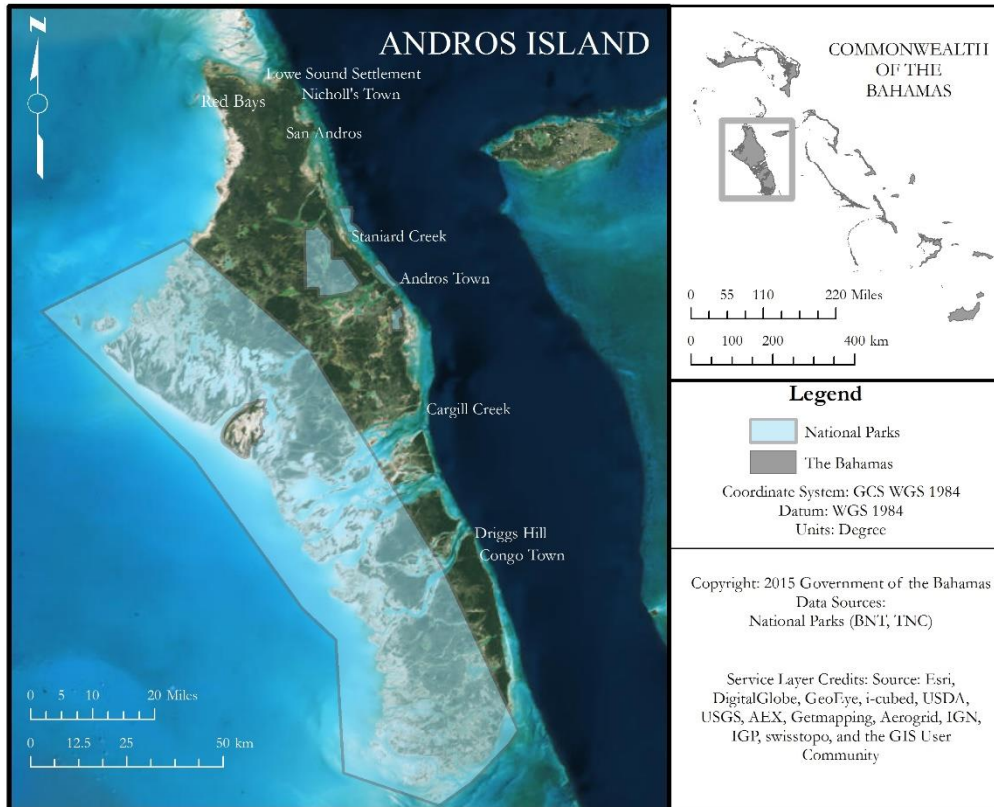
8. Abaco: The islands of Little Abaco and Great Abaco are now joined by a road causeway which is now commonly known as Abaco Island. Together they lie on the north and east edge of the little Grand Bahama Bank, totally 1,678 sq. km (648 sq mi.). It is the second largest island in The Bahamas, and is best known as a yachtsman’s paradise. Abaco is located in the northern Bahamas, which typically boasts of pine forests and is frequented by hunters of wild boar and ducks. Its waters abound with fish, including the marlin and sailfish. It also has bonefishing flats. Abaco is the third most populous island in The Bahamas and bears a resemblance to New England from which it attracts so many of its visitors and winter residents. Marsh Harbour is the commercial centre located on Great Abaco.



Map 2: Abaco Island, The Bahamas

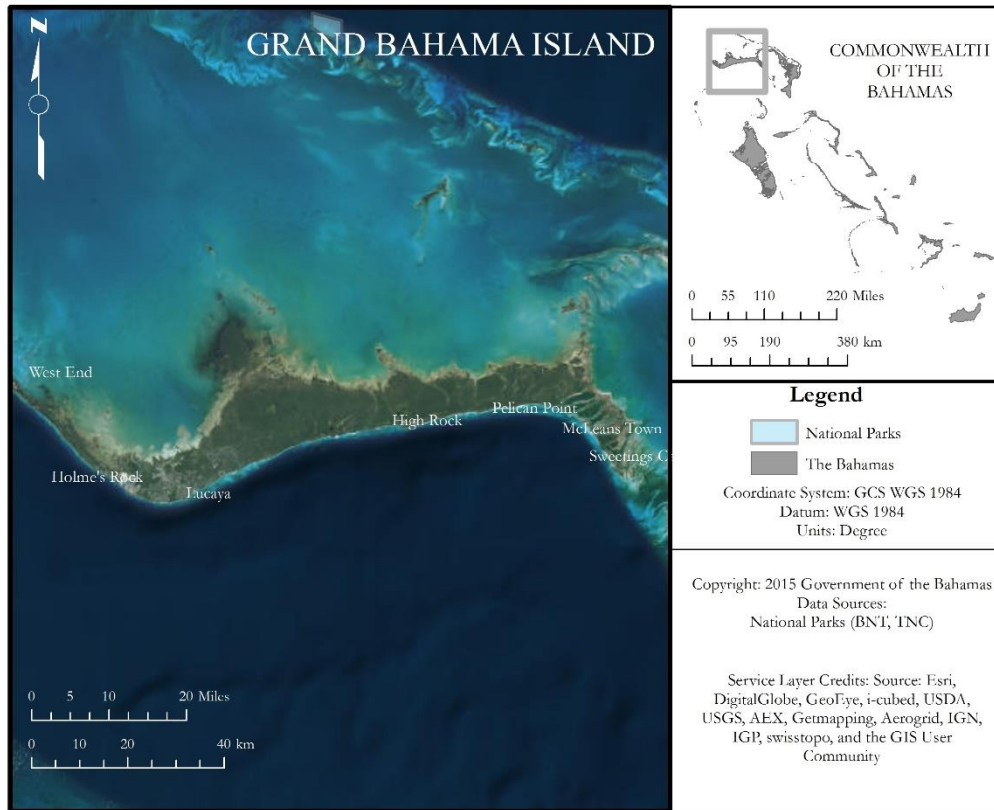
9. Andros: The island is located off the southern tip of Florida, Andros is the largest island in The Bahamas’ archipelago, at 161 km (100 miles) long and 72.4 km (45 miles) wide for a total area of 5,957 sq. km. (2,300 sq. miles). It constitutes 43% of the total land area of the country. North Andros is separated from South Andros by three tidal creeks - North, Middle and South Bights. Andros has a population of approximately 10,000 inhabitants and over 80% of all economic

activities related to natural resources, Andros remains largely undeveloped. Commercial fishing, including crabbing and sponging is the most important source of income for local residents, comprising almost half (49%) of the island's total economy. Tourism and guided recreational fishing account for approximately 30% of the economy. Agriculture currently represents only 1% and is primarily for subsistence. (Hargreaves-Allen. 2010. The Economic Valuation of the Natural Resources of Andros. Conservation).



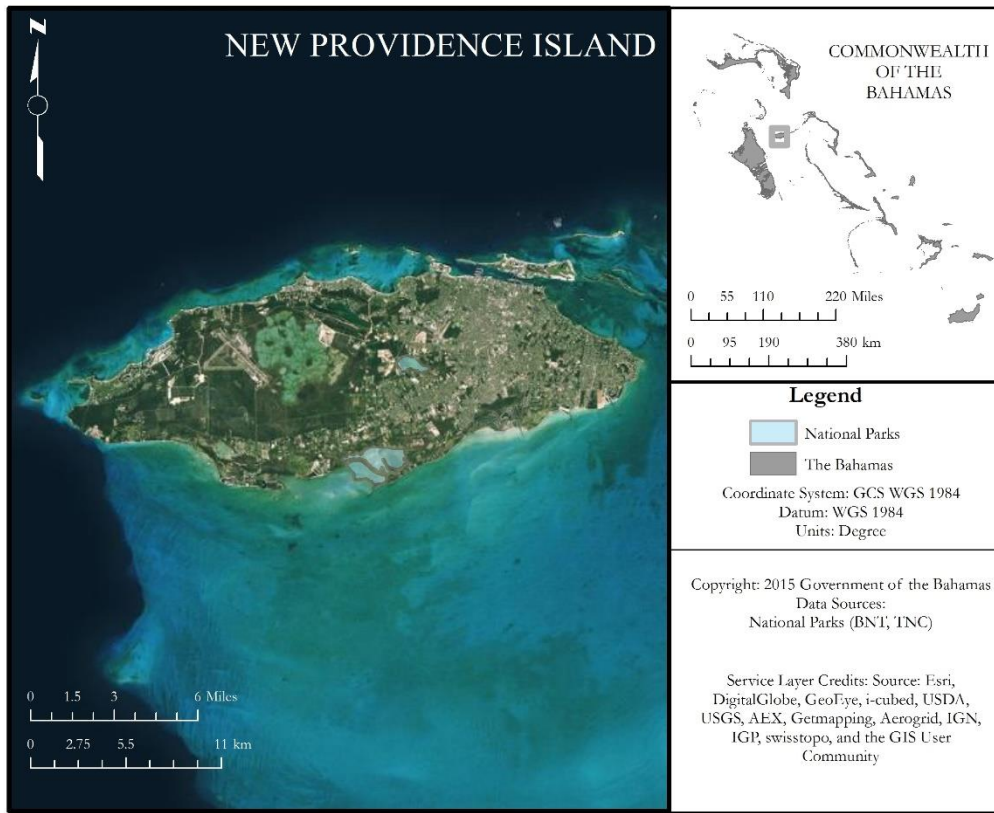
Map 3: Map of Andros Island, The Bahamas

9. Grand Bahama : As the most northerly of islands, Grand Bahama is located 190 km (118 miles) North of New Providence and 78 km (48.5 miles) east of Palm Beach, Florida, USA. Grand Bahama is now the second most populous island in The Bahamas and its major city, Freeport, is regarded as the nation's second city. Grand Bahama Island has a land area of 1,373 km² (530 sq. miles); 154.5 km (96 miles) long from east to west and 27.3 km (17 miles) across the widest point (Grand Bahama Island Tourism Board 2013). According to the 2010 The most recent National Census stated that Grand Bahama has an estimated population of 51,368 people (Department of Statistics of The Bahamas 2013). The island of Grand Bahama is characterized as low lying, similar to that of other larger islands in The Bahamas which typically consist of extensive flatlands (Albury 1975).



Map 4: Grand Bahama Island, The Bahamas

10. New Providence : This island is the most populous island in The Bahamas, containing more than 70% of the total population despite its small size of 210 sq. km (81.25 sq. miles). The island is home of the capital city of Nassau. It is the political capital and the commercial hub of The Bahamas. The three branches of Bahamian Government — the executive, the legislative and the judiciary — are all headquartered on New Providence, which also functions as the main commercial hub of The Bahamas. It is home to over 400 banks and trust companies; and its hotels and port account for more than two thirds of the four million-plus tourists who visit The Bahamas annually. As this is the capital, the remaining islands are generally referred to as “Out Islands” or “Family Islands”.



Map 5: New Providence Island, The Bahamas

Table 1: Geographical statistics of The Bahamas; how much is forested, approximate total land area

Island	Area (ha)	Area of Forest Estate (ha)	Major Towns
Abaco	167,795.00	57239.14	Marsh Harbour
Andros	595,697.26	186,662.87	Nicholl's Town
Grand Bahama	137,269.00	37,732.1	Freeport
New Providence	21,043.65	2,116.10	Nassau
Total	921,805	283,750	

2.2. Global significance

11. The Commonwealth of The Bahamas is a signatory to several multilateral environmental agreements such as the Convention on Biological Diversity (CBD) which supports the conservation of biological resources, sustainable use and the fair and equitable sharing of genetic resources and the United Nations Framework Convention on Climate Change (UNFCCC) which aims is supposed to mainstream such conventions into national policy development and planning.
12. The Bahamas, as a SIDS country, is a globally recognized biodiversity hotspot. The geographic complexity and isolated nature of The Bahamas have led to the development of extremely high levels of endemism in this hotspot with at least 1111 species of vascular plants, of which 10.6% are endemic and 5.2% are threatened. The Bahamas has some 406 known species of amphibians, birds, mammals and reptiles according to figures from the World Conservation Monitoring Centre.
13. Within The Bahamas, the Pine forest comprises 23% of the terrestrial ecosystems and Andros contains 55% of the country's pine forest (TNC, 2004). The country has approximately 1% of its total national territory under some form of protection (Conservation International, 2008) and 1.6% is protected under IUCN categories I-V. This project would expand the amount of protected areas (PA) by an estimated 283,750 ha which would increase the number of protected areas to 86 PAs for conservation, sustainable use and management. The Forested wetlands represent a particularly vulnerable forest type. Forested wetlands are rich in biodiversity and provide significant ecosystem services.

2.3. Threats, root causes and barrier analysis

14. The country's forests have been and are subject to a wide range of threats, described in the following paragraphs. These have diverse implications, for global environmental values, for national development and for the livelihoods of local people. Deforestation and forest degradation (in the form of radical alterations in vegetation structure), put in jeopardy the conservation status of the different ecosystems by reducing their overall extent and by affecting their ecological functioning. Threats to Pine Islands terrestrial ecosystems include:
 - a. Anthropogenic threats, land use planning related - these include development, tourism, urbanization increasing landscape fragmentation , unsustainable large scale developments, coastal

development and pollution. Over the years, there have been a number of incidences of illegal land clearing within protected areas without Central Government approval. Some of these incidents have involved clearing of roadways so developers can access their property or illegal squatting within the well fields. These activities can destroy critical habitat as well as disturb wildlife corridors that exist within the protected area and are also difficult to prosecute despite having the Forestry Act 2010 the fines and penalties. However, the restoration costs are not included.

- b. Indiscriminate Filling and Dumping – Despite free solid waste disposal on the islands, residential and commercial dumping occurs within all three Forests types (Pine, Coppice and Mangroves). These increase chances of brush fires and degrade the health of the ecosystem.
- c. Limited enforcement capacity - The country currently does not possess the capacity to have staff committed to all the proposed forestry estate sites to ensure enforcement of bye-laws of each area. This poses a threat to these protected areas functioning to conserve biodiversity and key biological resources and systems.
- d. Climate – storms, sea level rise, excessive rainfall as well as bleaching caused by increased sea water temperatures and global climate change. Currently there is no reporting mechanisms for meaning climate change in The Bahamas.



Photo1: Pine Forests of Grand Bahama that suffered from inundation during recent hurricanes (D. Hanek)

- 15. In Grand Bahama, the pine forests were damaged due to the surges during hurricane Floyd in 1999, and hurricanes Frances and Jeanne in 2004. The storm surge impacts were the most

devastating on record where hectares were inundated. Due to the intensity of surges in 2004, a deadening of the pine trees were experienced, resulting in the death of pine trees. During the PPG site visits, regeneration of the pine trees was evident as well as a recovering understory of the silver-top palms.

Barrier Analysis:

16. Institutional barriers: Institutional capacity is lacking at the level of planning and forestry authorities, the private sector, NGO partners and island communities. Coordination amongst these different entities is informal at best resulting in a large a systemic gap to share information (relevant research or geospatial information) which greatly inhibits ability to coherently plan. It was discovered that despite initiatives to increase cooperation and seamless arrangement among core agencies, this still eludes majority of stakeholders. A core reason is that due to limited human capacity, availability to proactively partake in projects is subject to other pressing agency commitments thus resulting in low responsiveness and low ownership of new initiatives.
17. Technical barriers: Technical capacity is limited as a result of lack of financial and human resources, few opportunities for technical training and lack of access to scientific data, management tools and methodologies for sustainable forest management, sustainable land management and biodiversity conservation.
18. Economic / Livelihood barriers: Lack of options for alternative livelihoods in areas surrounding forest reserves and conservation forests is further exacerbated by the downturn in the economy which has severely affected nature based tourism in The Bahamas. Low access to markets for sustainable forest and non-timber forest products limits development of cottage industries.
19. Public Awareness: Despite many previous projects and initiatives, the concepts of biodiversity, sustainability and conservation have received minimal enthusiasm from the general public. Effective methods of awareness still evade projects. This project includes some public campaigns activities, however it's possible that due to the gap of public interest being so wide, that it might not be sufficient to directly impact the public's appreciation for the many benefits of forests and it's many ecosystem services. It is believed that will be able to educate people about the economic value of these areas as well as their biological value.
20. Lack of Biodiversity Inventories for The Bahamas: Currently there is a lack of systematic documentation of the variety and stock of Flora and Fauna in the country. These Flora and Fauna provide an important habitat for the birds and damaged coral reefs.

2.4. Institutional, sectoral and policy context

21. National legislation relevant to sustainable development and environment includes, in particular, the following:
 - Agriculture and Fisheries Act (Ch. 223), 1963
 - Bahamas Agriculture and Industrial Corporation Act, (Ch. 358), 1981
 - Bahamas Maritime Authority Act, 1995
 - Bahamas Public Parks and Public Beaches Authority Act 2014
 - Bahamas National Trust Act (Ch. 335)
 - Bahamas National Trust Act Amendment 2010
 - Bahamas Spatial Data Infrastructure Act 2014
 - Environmental Health Services Act
 - Fisheries Resources (Jurisdiction and Conservation) Act (Ch.244)

Fisheries Resources (Jurisdiction and Conservation) Act Amendment No.2, 1993
Forestry Act 2010
Forestry Act Amendment 2014
Forestry Regulations 2014
Local Government Act 1996,
Port Authorities Act
Private Roads and Sub-Divisions Act (Ch. 237)
Reclamation and Drainage Act
Plants Protection Act, 1916
Planning and Subdivisions Act 2010
Water and Sewerage Corporation Act (Ch. 184)
Wild Bird Protection Act (Ch. 230)
Wild Animals Protection Act (Ch. 229)

National Policies and Plans

22. The project is consistent with 1999 The Bahamas National Biodiversity Strategy and Action Plan (NBSAP), in that it would adopt a multi-disciplinary approach to the conservation of biodiversity and ecosystem services, and furthermore contribute to the linkages between ecosystem and human wellbeing. The National Biodiversity Report notes the progress made in integrating biodiversity values into relevant sector policies through the adoption of The Bahamas Forestry Act of 2010, further noting the importance of forest ecosystems, threats to the wellbeing of forest ecosystems and the need for implementation of a Forestry Act.
23. The goal of the National Wetlands Policy is to conserve, restore and manage wetlands wisely in conjunction with sustainable development practices. The policy outlines strategies for managing the wetlands, education, awareness and training, ensuring sound scientific basis for management, building partnerships and international actions.
24. The National Climate Change Policy outlines the intent of The Bahamas Government to take all necessary and feasible actions at the national, regional and international levels to meet the goals of the UNFCCC. The focus of the Government's national actions will be on adapting to global climate change due to the country's minimal contribution to global carbon emissions and its vulnerability to the impacts of climate change.
25. The National Action Program to Combat Land Degradation in The Bahamas calls for mitigation and reversal of the effects of land degradation by adopting measures to effectively preserve and manage the limited land resources of The Bahamas, through the participation and partnership of the various stakeholders. Expected outcomes of the NAP (not exhaustive) include innovation in restoring degraded lands, more efficient land use management, increased awareness of the causes and effects of land degradation, and increased participation by a well-informed public.
26. Most recently, in February 2012, the Cabinet of the Government of The Bahamas gave instructions to the Ministry of Foreign Affairs to deposit the instrument of ratification/ accession for the Protocol concerning Specially Protected Areas and Wildlife (SPAW) to the Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region (Cartagena Convention) to the UN depositary.
27. In an effort to meet the goals under the Programme of Work on Protected Areas (PoWPA) of the Convention on Biological Diversity (CBD) and to further the expansion of The Bahamas National Protected Area System (BNPAS), the 2014 Ecological Gap Analysis was completed. The Gap

Analysis involved comparing the distribution of biodiversity against the distribution of protected areas and identifying where species and ecosystems were either unprotected or under-protected.

28. The First National Report on the Implementation of the United Nations Convention to Combat Desertification (2006) recommends that action be taken to establish land use plans, revamp or develop legislation , and improve data and information sharing and public awareness.

2.5. Stakeholder mapping and analysis

29. Stakeholders involved in the environment are numerous with varying degrees of influence and participation. The management, conservation, protection and enforcement of the various legislations and policies falls on the portfolios of government ministries, statutory bodies, non-governmental organizations (NGO's) and community based organizations (CBOs). At the government level the management of protected areas, forests and watershed areas are divided among a number of different agencies. This project involves several government agencies; however the major agencies involved are the Ministry of Environment & Housing, Ministry of Public Works & Urban Development and Ministry of Agriculture. Other ministries anticipated participation include: Office of the Prime Minister (Department of Lands and Surveys and Department of Information Technology). There are a series of secondary and tertiary stakeholders. The table below shows the stakeholder analysis for the Pine Islands project:

Table 2: Stakeholder Analysis Grid

STAKEHOLDER	OWNERSHIP			
	Interest	Influence	Expertise	Affected
Public Sector				
Bahamas Agriculture and Industrial Corporation (BAIC)	3	3	3	3
Bahamas Environment, Science & Technology (BEST) Commission	3	3	3	3
Forestry Unit (FU)	3	3	3	3
Department of Physical Planning (DPP)	3	3	3	3
Bahamas National GIS Centre (BNGISC)	2	2	3	2
Department of Lands & Surveys	2	3	3	3
Department of Marine Resources	1	1	1	1
Department of Information Technology	1	2	2	1
Ministry of the Environment & Housing (MEH)	3	3	3	3
Ministry of Finance (MoF)	1	2	1	3
Ministry of Tourism (MoT)	2	1	1	1
National Implementation Support Programme (NISP)	3	2	2	3
Office of the Prime Minister (OPM)	3	3	2	3
Royal Bahamas Police Force (RBPF)	2	3	2	2

Royal Bahamas Defense Force (RBDF)	1	1	1	1
Antiquities, Museums & Monuments Corporation (AMMC)	2	3	3	3
Civic Groups				
Andros Conservancy and Trust (ANCAT)	2	1	1	2
Bahamas National Trust (BNT)	2	3	3	3
Bahamas Reef Environment Educational Foundation (BREEF)	2	2	2	1
Bahamas Sportsfishing and Conservation	2	1	1	3
Friends of the Environment (FOE)	2	2	2	2
Nature's Hope for South Andros (NHSA)	1	1	1	2
The Nature Conservancy (TNC)	2	3	3	1
Private Sector				
Specialty Dive Operators (Blue Holes)	3	2	3	3
Dive Operators	2	2	1	1
Tour Operators	3	2	1	1
Hotel Operators	1	3	1	2

Participatory Scale: 1 – Supportive/Tertiary ; 2 – Secondary; 3 – Primary

30. Throughout project implementation, emphasis is to be placed on ensuring and promoting active stakeholder participation. Management systems developed through this project will aim to strengthen stakeholder ability to manage natural resources. This will contribute to the sustainability of the project outcomes. All stakeholders listed above will be engaged in the FSP at some level.

31. The Primary stakeholders to be involved in regularly through execution of the project based on the above ranking are:

- Bahamas Environment, Science and Technology (BEST) Commission –The environmental arm of the Ministry of the Environment, this agency focuses on ‘green’ environmental issues like biodiversity, climate change and land degradation. It represents the Government of The Bahamas at negotiations of multilateral environmental agreements. They also provide expert advice to the Government on environmental policy, legislation and environmental impacts of development projects in The Bahamas.
- Forestry Unit (FU) – Re-established thru the enactment of Forestry Act 2010 in the Ministry of Environment & Housing, mandated to management, conservation, control and development of forests, and the promotion and regulation of forest industries.
- Department of Physical Planning (DPP) - The Department is considered one of the more influential government agencies involved in land development controls. Its key responsibilities are: development planning (Development control) and the formulation of development plans (land use plans – long range planning) for The Bahamas.
- The Town Planning Committee (TPC): The statutory body is responsible for all proposals for development. The Department also has responsibility for statutory zoning in The

Bahamas. Town planning guidelines, provide standards for developments in respective zones. Building and development is restricted in areas designated as National Parks, (e.g. Exuma Cays Land and Sea Park); and in other areas identified as having special ecological significance (e.g. Lake Killarney, Bonefish Pond). Special zoning restrictions apply to the historic areas of New Providence.

- Bahamas Agricultural and Industrial Corporation (BAIC) - mandated to stimulate, facilitate and encourage the development of agriculture as to in the Bahamas, ready to assist small business persons with business plans, research, sourcing funding, business advice/counselling, implementation and follow-up.
32. The agencies which form the National Implementation Support Programme (NISP) include the core members of Bahamas National Trust (BNT), Department of Marine Resources (DMR) and The Nature Conservancy (TNC).
33. Secondary stakeholders include:
- BNGIS Centre
 - Bahamas National Trust (BNT)
 - Department of Lands and Surveys
 - Department of Local Government
 - Antiquities, Monuments & Museums Corporation
 - Friends of The Environment
 - Water & Sewerage Corporation (WSC)
 - Bahamas Reef Environment Educational Foundation
 - Ministry of Finance
 - Ministry of Tourism
 - National Biodiversity Committee
 - National Climate Change Committee
 - Office of the Prime Minister
 - Specialty Dive Operators (Blue Holes)
 - Tour operators
 - Public and Private Schools

2.6. Baseline and gap analysis

34. **Land Use Planning:** As a result of the changing global perspective towards sustainable land – use, and conservation of biodiversity, three (3) pieces of progressive legislation were passed in 2010 to modernize Land Use Planning–The Planning and Subdivisions Act, The Forestry Act, and amendments to The Bahamas National Trust Act. Together these acts strengthen the government’s ability to sustainable manage and protect the country’s natural resources. The Land Use, Policy and Administration Project (LUPAP) was completed in 2008, with funding from the IDB through the Department of Lands and Surveys. The overall goal of the project was to improve the efficiency of land administration and land information in The Bahamas, prepare modern land legislation and policy guidelines for the Government, and thereby contribute to the improved use of land resources in the country. Subsequently, these efforts assisted in the formulation of the Planning and Subdivision Act was took effect in January 1, 2011. The goal of the Planning and Subdivisions Act 2010 goal is to prevent the indiscriminate division and development of land while protecting the country's natural and cultural heritage. The law was written with the view to increase transparency in the approval process by allowing those who are likely to be impacted by a development to review and comment on the proposal, and to have their objections heard in public.

35. Despite the enactment of these significant pieces of legislation, their implementation is still pending. The first order Land Use maps for New Providence were completed in 2010 with the hopes to be used as a model to create other Land Use Plans to facilitate a new culture of planning throughout the archipelago. Despite many initiatives, the official development of Land Use Plans and maps are still awaiting implementation. Although the New Providence map was developed using a participatory stakeholder process, after being completed, the concepts have yet to be incorporated into daily planning and administrative duties of the regulatory agencies.
36. There is an increased interest in approaches to land-use planning and resource management which recognize the complex and dynamic nature of ecological systems interaction with the surrounding built environment. It is not for a lack of trying that there as the various administrations/ governments have attempted to create/design a National Land Use Policy Plans for The Bahamas, yet fall short of being implemented, respected, or incorporated into daily practices of the practicing agencies. To date there exists land-use plans, at some stage: initial, completed developed for the following islands: Andros, Abaco (South), Grand Bahama, Harbour island, Exuma, New Providence, Exuma and the Exuma Cays, Mayaguana, Inagua, San Salvador. As a Small Island Developing State, the assumption would be that due to the relative small size, implementing structured systems that provide transparency of land-ownership and use should be seamless, however there are many initiatives that remain collecting dust, frozen at the implementation phase. Baseline and use policy and planning initiatives are shown on Table 3. These would serve to jumpstart the projects GEF deliverables.

Table 3: Land-use Policy Initiatives for the Pine Islands

Island	Initiative	Status
New Providence	2010 First Order Land Use and Zoning Maps, 2010	Inactive
	Interim Draft Land-Use Policy 2006	Inactive
	Harvard Land-Use Plan 1970	Inactive
Abaco:	Planning Abaco: developed by Andrews University 20 Land use plan developed for part of Abaco 2008	Inactive
Andros:	IDB - Columbia University Master Land-Use and Development Plan for Andros (supplement to the IWCAM Andros land use plan) 2014	Pending
	IWCAM Land and Sea Management Plan 2010	Inactive
	Land Use Plan Hotel Corporation Lighthouse Property 2008	Inactive
Grand Bahama	Grand Bahama Port Authority Plan for Freeport, Grand Bahama	Active

37. The exception to this rule is that of the city of Freeport, Grand Bahama which is governed by Grand Bahama Port Authority. Under Charter of the 1955 Hawksbill Creek Agreement (HCA), The Grand Bahama Port Authority (GBPA) established the infrastructure for world-standard services and facilities in a 595 sq. km. (or 230-square-miles) economic zone just 109 km (68 miles) from Florida, centred at Freeport, a modern, well-planned city twice the size of Washington, D.C. The GBPA are guaranteed long-term tax concessions and benefits for financial, commercial and industrial enterprises within this unique economic trade zone offer advantages that are superior to anywhere else in the region. Thus essentially a government unto itself, Freeport has emerged as a modern, well-planned city with serviced communities. The remaining

areas of Grand Bahama however remain without a plan as they are the jurisdiction of the Government of The Bahamas.

38. The Bahamas faces an important challenge and opportunity to rapidly develop a more sustainable model(s) of development and the planning and other systems required to support that model. In the Bahamian case, like that of other Caribbean island nations in particular, sustainability takes on an added urgency and complexity, given a history of ad hoc development and land management decisions, limited planning capacity, heavy economic reliance on imports and tourism, vulnerability to hurricanes, growing real estate investment demand from abroad, an uneven distribution of development opportunities and demand across chains of relatively small islands, and other factors.
39. The Planning and Subdivision Act 2010 stipulates that land use plans shall be prepared for each island of The Bahamas and be available for public viewing. A comprehensive plan that entails community's needs while conserving biodiversity of various ecosystems yet allowing for sustainable development for future possibilities of economic growth is the what is tasked of the Department of Physical Planning to create.
40. In the case of the land use plan for Abaco, in 2008, Andrews University with the participation of Bahamian students, in collaboration with several local Bahamian firms developed Planning Abaco. More recently, Harvard University has partnered with the government and the Bahamas National Trust (BNT) to form Sustainable Exuma, an ongoing education and research directive to generate land use plans for The Exumas. Both plans follow the premise of sustainable development with a strong emphasis on environmental consideration and public space, but both are yet to be implemented.
41. National GIS capacity exists within known user agencies, such as Department of Lands and Surveys, Department of Physical Planning (DPP), Water and Sewerage (WSC), BNGISC, BNT and TNC. The remote sensing skills within the government exists where technical officers benefited from training with previous initiatives, however many agencies admitted that those skills were not transferred into their department activities due to various challenges, most of which were outlined in the treats and barriers.
42. As noted in the background, numerous initiatives have been pursued yet none have realized into a functional seamless and systematic Land-use plan. The nature of the country's landscape renders it infeasible to replicate intense land-use and zoning plans for each community throughout the populated islands. However, using a consistent systematic approach, the development and implementation of Land-Use plans could be realized. This project can enable this reality within the Pine Islands. The integration of Biodiversity or Sustainable Forestry Management has yet to be incorporated into national land-use planning.
43. **Forest Management:** There is a long history of forest exploitation in The Bahamas beginning in the 1700s when almost all large sized valuable hardwood species was exploited as logs for export. The last extensive exploitation ended in the early 1970s when the pine forests were harvested for pulpwood. Presently the forest resources offers considerable potential for future sustained yield scientific management and the development of small scaled forest based industries to reduce wood imports. Also of great significance are the opportunities for biodiversity conservation, ecotourism, soil and water conservation, microclimate regulation and climate change, agroforestry development and environmental enhancement.

44. The Government of the Bahamas enacted forestry legislation in 2010 which calls for the long term sustainable management of all types of forests in The Bahamas. A Director of Forestry was appointed and a Forestry Unit instituted in the Ministry of the Environment to carry out the provisions of the Act. Forestry regulations were drafted and received the Government's approval.
45. Guided by prudent policy and the provisions of the Forestry Act 2010 and Regulations, the forest resources of The Bahamas will be sustainably managed as a viable renewable natural resource for the benefit of The Bahamas.
46. The Department of Lands & Surveys, the official mapping agency of The Commonwealth of The Bahamas, has mapped the natural forest resources comprising pine forests, coppice hardwoods and mangrove forests, with approximately 80% of forest resources on Crown lands and the remaining 20% on private lands based on the 1972 topographic maps.
47. The last noted effort of a forestry resources assessment was done in 1986 through a Technical Cooperation from the Food and Agricultural Organization (FAO) which was conducted on the pine forests. Despite urbanization in the capital of New Providence, the settlements on the Pine Islands, have essentially remained the same.
48. In regards to the assessments on the status of the geospatial data for forestry and biodiversity, the assessment revealed that survey maps from the 1970s are still being widely used and have not been updated at a large scale, with the exception of the creation of maps during the 1986 Pine Island Assessment. Some survey and assessment maps are available in raster format, but have not been digitized. In the present day, the FAO project on Abaco has updated forest density information on an as needed basis, based upon interests of the project. Ecosystem information (e.g. forest classes) have been updated for Andros (IWCAM data), but classes mismatch those used in previous surveys. There are also some GIS data on terrestrial habitats of the island. The field surveys and forest inventory that were conducted on parts of Abaco were done in pilot areas. The implemented training methodologies during the recent FAO project are expected to be applied on New Providence and Andros. The mangrove data is publically available from UNEP-WCMC & USGS and The Nature Conservancy has access to mangrove data from the University of Queensland.
49. Thru changing the classification of the land-use into one of the three categories of forest classifications (forest reserves, protected forests, or conservation forests), this would add to another measure of safe guarding these areas against continued landscape fragmentation or land degradation thru human impacts. The conservation of world forests, particularly the reduction of deforestation in the tropics, is estimated to be one of the greatest potential contributions to offsetting the buildup of atmospheric CO₂. Therefore, this project would enable a seamless cooperation with the land-use plans and the establishment of a national forestry estate, thus enhancing zoning enforcement and increased awareness of the importance of the ecosystem health, preserving the country's biodiversity and natural resources.
50. The Forestry Act 2010 came into effect on 4th January 2011. The Act was amended to allow for selected Crown Lands under forest, to be vested in the Minister responsible for Forestry. The act called for the establishment of a Forestry Unit within the then Ministry of the Environment, the appointment of a Director of Forestry who will have overall responsibility for the administration of the Forestry Unit, the Forestry Act, and for the management and development of all types of forests. The Act also calls for the establishment of a permanent forest estate on Crown Lands in the Bahamas (this includes pine forests, coppice hardwoods and mangroves forest), and be subject

to scientific management. Provisions were made in this regard for the declaration of three categories of forests as forest reserves, protected forests and conservation forests; each subject to a management plan for sustainable management and environmental conservation. A national forest plan will be produced every five years, subject to approval by the Minister Responsible for Forestry. The Act allows for the licensing of timber harvesting activities and for various administrative aspects including Regulations, powers of Forest Officers and offences.

51. The Forestry Act enabled the official establishment of the Forestry Unit (FU) and provided legal framework to manage the forestry resources of the country. However, only until summer 2014, did the Forestry Regulations 2014 become officially gazetted providing the necessary tools and authority for the legal operations of the FU. Despite the political and institutional will, the practicality of implementing, managing, and enforcing a national forestry estate remain improbable due to limited human and technical capacity.
52. The Forestry Unit collaborated with the Food and Agriculture Organization of the United Nations (FAO) to provide technical assistance to build local capacity in forestry management in The Bahamas. This project assigned a Forest Management Specialist to train the local field staff in all aspects of forest management, for example plant taxonomy, forest mapping and prescribed burning, planning and monitoring of the Pine forest areas in Abaco. During the course of the project, mainstreaming of the forestry sector was active through demonstrative pilots of thinnings, workshops and field training for interested public and private sector individuals in Abaco, North Andros and New Providence. The project started ran from September 2012 to December 2014.
53. The Bahamas Ecological GAP Analysis (2014) produced for The BEST Commission provided an update on changes since 2008 with respect to the first GAP analysis with respect to protection of conservation features. The analysis indicated that terrestrial and freshwater features receive better protection than marine features. All terrestrial features have exceeded the Convention on Biological Diversity (CBD) minimum goal of 10% protection. Interestingly, those targets that are of greatest importance to the national economy, such as groundwater, beaches, blue holes, and mangroves, received little to no protection, however underneath the Forestry Act 2010 and Planning and Subdivision Act 2010, the legal framework now exists to protect these valuable ecosystem services.
54. As it currently stands, the protected areas system spans over 2,896 square miles (7,501 square kilometers). This represents 5% of the nearshore environment and 1% of The Bahamas’ Exclusive Economic Zone (see Table 4).

Table 4: Protected Area Calculations for The Bahamas

	Square kilometers	Hectares	Percentage
The Bahamas (generalized EEZ)	600,463	60,046,300	100%
Nearshore Environment (12 nm)	149,412	14,941,200	22%
Bahamas Land Cover	12,119	1,211,900	2%
Protected Areas (within 12nm)	7,501	750	5%
Protected Areas (within generalized EEZ)	7,501	750	1%
<i>*These calculations were ran using XTools Pro, version 9.1.956</i>			

Source: The Ecological Gap Analysis (2014)

55. The project is closely aligned with the Forest Department’s objectives to “To develop the forest resources of the Bahamas to their maximum potential by applying sound, scientific, and sustained yield forest management principles and concepts.” And is in alignment with the Bahamas

Ecological GAP analysis updated in 2014 as part of the CBD commitment because identified areas with significant biodiversity value overlap with proposed conservation forest areas for the national forest estate.

Sustainable Livelihoods:

56. The concept of sustainable livelihoods is not new to The Bahamas. It is the continued reality of many natives of the Family Islands, where the majority of economic opportunities stem from what can be harvested from the land and sea. Notable activities are the handicraft industry, collection of medicinal plants (colloquially known as “Bush” medicines: teas, rubs, tonics), providing eco-tours, hunting, fishing, guiding and subsistence farming.
57. The recent Geographical Indication Study completed by Dr. Wendy Hollingsworth from the Caribbean Research Study sites the Silver Palm as the most valuable resource in The Bahamas on the Geographical Indication List (2014). This study provided essential validation to the sector. Availability of studies or research conducted on the use of non-timber forest products (NTFP) in The Bahamas is extremely limited. Only the previously referenced study by Hargreaves-Allen (2010), provided baseline values of NTFP in the country. The need for further assessment, specifically quantifiable research, is essential for establishing the importance of the sector.
58. Government initiatives, as ecotourism department of the Ministry of Tourism, see tourism’s ability to improve the socio-economic development thru promotion of ecological and resource-based tourism experiences, while protecting the environment. The most recent advancement was conducted under the previous GEF Full Size Project (FSP) on the creation of a sustainable tourism model (STM) for the BNT’s Exuma Cays Land and Sea Park. The STM is a tool designed to monitor and manage tourism within the national park to maintain healthy habitats and create opportunities for sustainable livelihoods and growth throughout the Exuma Cays.
59. Advancements have mostly been established thru the Bahamas Agricultural and Industrial Corporation (BAIC) . As quasi-governmental agency, it has undertaken a significant amount of work in developing the craft sector especially straw-related craft, thru targeted training initiatives and promotion of small business practices. The straw products are viewed as a staple of the Bahamian tourism souvenir industry.
60. The craft industry, previously an informal and inefficient sector, has experienced some focus on structure and regularization thru the establishment of community handi-craft associations. Many of these associations are closely linked with local women’s organizations. There is an estimated 30 Family Island Handicraft Associations. The objective of these grass-roots associations includes improving small business thru improved local management and marketing of value added products, for the straw industry as well as other NTFPs , including wild honey, medicinal plants, and ecotourism.
61. Despite these advancements, the linkages between communities and the natural resources have mostly missed the mark. Simply because many assumed the ubiquitous availability and accessibility to “the bush” for the resources to create these products. The effects of climate change (i.e. storm surges), unsustainable harvesting practices (preventing regeneration) and increased fragmentation thru development (restricted access to site) have increased awareness at both community and policy makers level that the resource needs to be conserved to ensure sustainability thru future generations.

62. Acknowledgement of the need to protect and effectively manage the natural resource has enabled the seamless partnership with BAIC during the Project Preparation Grant phase. The Pine Islands project will lend the perspective from Forestry sector, viewing the resource as vital and valuable to the overall functioning in supporting ecosystem biodiversity and promoting sustainable livelihoods while ensuring sustainable practices for the conservation of the resource for future generations.
63. Previous initiatives and focus has been placed solely on the business mechanics of creating a small business, providing assistance with developing business plans to secure micro-loans from financial institutions to training classes of how to add value to the product and create viable products for local and international markets. These previous initiatives have made the assumption that the resource is ubiquitous and accessible to all. The proposed project provides a unique perspective when addressing sustainable livelihoods as it is more resource based approach; conserving the accessibility of the resource for future generation.
64. In the PPG phase, the baseline analyses was undertaken using the participatory approach to into the relevant areas of land-use planning, forestry management and sustainable livelihoods. The assessments analyses were reviewed during the PPG Phase, particularly during monthly NISP meeting, individual conferences and the Stakeholder Workshops (August -October 2014). The outcome of these activities highlighted the major gaps that the Project will need to address in the areas of: lack of forestry and biodiversity inventories and monitoring systems, limited national capacity in responsible agencies and local communities; the physical environment and its management; the status and availability of updated geospatial data; economic opportunities in remote communities.

Gaps:

- Accessibility to functioning equipment: many agencies worked with outdated hardware and software; replacement of equipment is usually delayed due to persistent budget restraints;
- Limited staff to perform on current agency duties nor external projects;
- In-consistent training and use of new skills as training sessions are short term and the new skills are rarely incorporated on the job (i.e. trained in remote sensing however skill set not used on job due to unavailable software/hardware or datasets to maintain skills)
- In agreement with the GAP Analysis Updated 2014, there are still many unknowns as it relates to biodiversity in The Bahamas. There are gaps in information about species, life cycles, connectivity, population dynamics and important habitats (2014 GAP Analysis);
- The current gaps in Forestry sector are the lack of a forestry estate, limited data assessing the value of the entire resource. Specifically, there is limited inventory data on the proposed forestry, i.e. no recorded inventory for coppice nor mangrove ecosystems; surveyed estate is 141,100 ha but the proposed estate is 283,750 ha.
- Staff of Forestry Unit increasing; present budget is limited, and activities rely on external grant/project funding; presently FAO TCP is bridging the gap in Abaco and parts of Andros, however these are selective sites;
- No inventories relating to sustainable livelihoods from NTFPs; limited/non-existent available research; There is no legislation for the protection of this resource nor for the people in the industry.

2.7. Linkages with other GEF and non-GEF interventions

65. The linkages with GEF interventions are as follows:

REGIONAL - The Integrating Water, Land and Ecosystems Management in Caribbean Small Island Developing States (GEF-IWEco Project) is a five-year multi-focal area regional project with four components; (1) Development and Implementation of Integrated Targeted Innovative, climate-change resilient approaches in sustainable land management (SLM), integrated water resources management (IWRM) and maintenance of ecosystem services; (2) Strengthening of the SLM, IWRM and ecosystems Monitoring, and Indicators framework; (3) Strengthening of the Policy, legislative and institutional reforms and capacity building for SLM, IWRM and ecosystem services management taking into consideration climate change resilience building and (4) Enhancing knowledge exchange, best practices, replication and stakeholder involvement. The project will be implemented through a network of international, regional and national partners in accordance with their comparative advantage. The Bahamas intervention of IWEco will address problems of land degradation and ecosystem degradation in Grand Bahama, reduction of sedimentation into an adjacent marine protected area (for ecosystem restoration and improved ecosystem management).

NATIONAL – Building a Sustainable National Marine Protected Area Network. The Project seeks to increase revenue of protected area networks at the national level through the July 2014 establishment of the Bahamas Protected Areas Fund (BPAF) which will support management of protected areas including those created within forest sector. The project is also increasing representation of effectively managed MPAs into the national PA system, improving management effectiveness of existing MPAs through targeted conservation planning and training, and increasing the overall coverage of MPAs within the national network.

NATIONAL – Strengthening Access and Benefit Sharing (ABS) in The Bahamas. The project's objective is to create and apply the enabling conditions for fair and equitable access and effective benefit sharing. Synergies are envisioned with respect to a pilot which will explore benefit sharing of research being carried out in Blue Holes, some of which fall within the Forest Estate.

66. Linkages with Non-GEF interventions are as follows:

FAO and Government of The Bahamas (GOB) – Forest Management and Training Pilot in Abaco (TCP/BHA/3401) - The main objective of this recently concluded project was to build the capacity of field staff to effectively manage and monitor forest field operations through pilot project activities on Abaco, Andros and New Providence.

Bahamas Virtual Market for the Handicraft Industry - The Inter-American Development Bank (IDB) in conjunction with Bahamas Agricultural and Industrial Corporation, (BAIC), and the Bahamas National Craft Association (BNCA) are currently implementing a grant funding for. This project would be a natural fit for marketing and promotion.

IUCN - the Biodiversity and Protected Areas Management Programme (BIOPAMA) to conduct a review of the Bahamas protected areas management categories started earlier this year, with a stakeholders inception meeting. technical personnel from different environmental organizations related to protected areas such are The Bahamas National Trust, The Bahamas Environment, Science and Technology Commission, The Nature Conservancy, The Forestry Division and Clifton Heritage participated in the workshop "Protected Areas Management Categories Analysis

for The Bahamas”. This initiative would standardize the conservation categories of the Forestry Estate by having the entire Forestry estate placed on the IUCN Red List.

SECTION 3: INTERVENTION STRATEGY (ALTERNATIVE)

3.1. Project rationale, policy conformity and expected global environmental benefits

67. The Bahamas has one of the largest pine rockland forest resources in the world. The majority of these resources, more than 80%, are found on Crown Lands. Unlike other countries in the region, The Bahamas lacks a forestry industry to exploit this resource which is commonly dismissed by the people as a nuisance and unnecessary “bush”.¹ Forestry is not limited to just pine trees, it also includes coppice forests, mangrove forests, timber, water, fish, wildlife, soil, plants, and recreation. As demands increase for clean water and air, sustainable ecosystems, and controlling atmospheric carbon dioxide, proper use and management of this resource will be of great value in the context of enrichment of our social, biophysical and economic scope in the country.
68. The existing national human and technical capacity is greatly limited when tasked with the duties of the Forestry Act and Forestry Regulations 2014 over the archipelago, much less the four Pine Islands. The continued focus of the political directorate to innovate the current planning mechanisms with integrated focus on conserving our natural resources through highlighting the forest ecosystems of pine, coppice and mangroves is the momentum required to develop the process throughout the country. This project is an attempt to have a collaborative integrated approach on all levels: central government, local government, community organizations, and international conservation linkages.

Expected Global Environmental Benefits:

69. The project will deliver global environmental benefits along with domestic livelihood support and human development. These benefits are explicitly linked to the impact indicators of the GEF-5 focal area strategies relevant to the project Biodiversity, Land Degradation and Sustainable Forest Management (BD, LD, SFM). The establishment of the Forestry Estate will safeguard future land degradation on the Pine Islands thru:
- Improved provision of forest ecosystem goods and services: the 2 Conservation Forests under SFM and improved
 - Reduced GHG emissions from deforestation and forest degradation and increased carbon sequestration: Improved functionality of mangrove ecosystem with increased carbon sink of up to an estimated 96,650 tCO₂ eq
 - Reduced vulnerability of forest ecosystems to climate change and other human-induced impacts: due to establishment and management of National Forestry Estate and improved harvesting practices reducing human impacts while increasing the productivity in forest dependent communities.
70. **Biodiversity:** The expected global environmental benefits under the GEF Biodiversity, Land Degradation (including Sustainable Forest Management) and Sustainable Forest Management (SFM) focal areas include contributions to reducing the rate of extinction of global biodiversity, reducing the rate of degradation of natural ecosystems, expanding carbon sink thru improved ecosystem functionality (conservation forest management and mangrove rehabilitation) . This project will assist in the establishment of Conservation Forests under the Forestry Estate and the effective management of 2 Conservation Forests on Abaco and Andros as an example of ensuring

¹ Russell, C., 1998. The Future of Forestry in The Bahamas. Bahamas Journal of Science vol. 6/98, p 2- 11

that such mainstreaming is achieved at the community and national level. Consequently, effectively managing the resources of the Pine islands is of critical importance to meeting international commitments and protecting the islands' biodiversity. The sustainable management of the areas is necessary to protect ecosystem services, traditional livelihoods and economic activity due to available land, coastal waters and forest resources further allowing persons to engage in community based and ecotourism activities. Lastly the reduction of land degradation rates thru the promotion of sustainable livelihoods by integrating traditional communities living off the land and sustainable manner without compromising natural assets.

71. The project will deliver and implement 2 sub national plans on Pine Islands which will systemically integrate biodiversity values, ecosystem services, and sustainable land use management options at both the planning levels and the public consultative levels for the surrounding communities as prioritized by this project. The project will furthermore support support to the development and implementation consultative forest management plans for Abaco: Blue Hole Conservation Forest and Central Andros: Maiden Hair Conservation Forest , encompassing 15% (22,410 hectares or 55,376 ha) of Forest areas targeted for gazettelement under the Forest Act of 2010. Forest Management Plans will integrate best practice for conservation and sustainable management, preserve biotic corridors for biodiversity; and integrate monitoring (inclusive of indicator species) and enforcement systems at the community management level and icncrease METT scores.
72. **Sustainable Forest Management.** This project aims to increase the effectiveness of new and existing forest reserves, as well as to increase the potential carbon stock of a mangrove system. The adoption of sustainable forest and land management techniques and restoration efforts will result in improved ecosystem health and functionality. This will enhance mitigation efforts again climate change, conservation of carbon stocks and a reduction in emissions from forest deforestation and degradation. During the PPG, the FAO EX-ACT Tool for Sustainable Forest Management was used to measure potential carbon sequestration rates for the proposed forestry estate and the mangrove restoration and rehabilitation. It was noted that the value used was not specific to the dry sub-tropical climate of The Bahamas, nor were there any previous research of due to lack of carbon accounting, forest health monitoring and sustainable management, these all require accurate assessments of forest aboveground biomass (AGB) and stem volumes. Therefore, due to limited data availability during the PPG, the values obtained using the FAO EX-ACT was considered to be the most appropriate when analyzing GHG emissions in the majority of forestry projects, however the primary objective of this project is to development these necessary framework to ensure that the true values are collected. Based on the preliminary estimates, the carbon benefits of the project are estimated at a total carbon sequestration rate for the proposed conservation forest sites of 5,661,077 tCO₂ –eq over a projected 30 year time frame.
73. The resulting increased carbon stock of 50 ha from the restoration and rehabilitation of the mangrove ecosystem is projected to have an increase up to 14,563 t CO₂ eq., as estimated using the FAO EX-ACT model. UNEP's 2009 report "Blue Carbon – The role of healthy oceans in binding carbon" noted - Fifty-five per cent of the atmospheric carbon captured by living organisms – as– is taken up at sea. Between 50-71% of this is captured by the ocean's vegetated "Blue Carbon" habitats - mangroves, salt marshes, seagrasses, and seaweed - which cover less than 0.5% of the seabed, but therefore play an important role in the world's climate and in mitigating change, thus contributing to global benefit by conserving our forests through SFM principles.

74. Due to the fact that research on the true biomass values of the Bahamian ecosystems will be established for the first time on a national scale as deliverable of the project, it should be noted that the above values are all subject to ground truthing and further analysis. These will be noted in the deliverables.
75. **Land degradation** : Global environmental benefits will be realized thru contributions to carbon sequestration through sustainable forest management, improved land use planning and increased sustainable harvesting practices with forest dependent communities while promoting sustainable livelihoods thru community forestry management. Specifically as mentioned above, the project will deliver and implement 2 sub national plans on Pine Islands which will systemically integrate biodiversity values, ecosystem services, and sustainable land use management options at both the planning levels and the public consultative levels for the surrounding communities as prioritized by this project.

3.2. Project goal and objective

The project objective is to address some of the critical issues related to sustainable land and sustainable forestry management and use in the Pine Islands thru the improvement and integration of forest/mangroves into land-use policy.

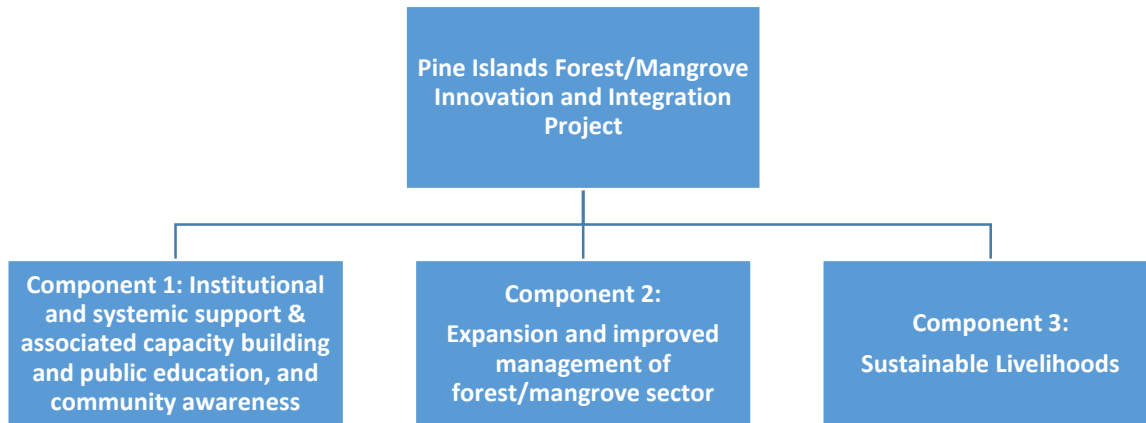
Project components and expected results

76. The context of the GEF priority focal areas of Biodiversity, Land degradation and Sustainable Forestry Management, and to deliver outcomes in the context of GEF priorities in the three overarching areas, namely: Development of Forestry Assessment and monitoring; Land use planning integration into local and national development practices; Establishment of the Forestry Estate; Conservation Forest Management of 2 areas with community co-management incorporated; Safeguarding of key ecosystems and biodiversity areas. Implementation will involve both large and small-scale interventions thru development of policy and pilot projects, with a view to replication and up-scaling at the community and national level. These priority outcomes will be delivered under three closely inter-related and inter-dependent projects components as follows:

Component 1: Institutional and systemic support & associated capacity building and public education, and community awareness;

Component 2: Expansion and improved management of forest/mangrove sector ;

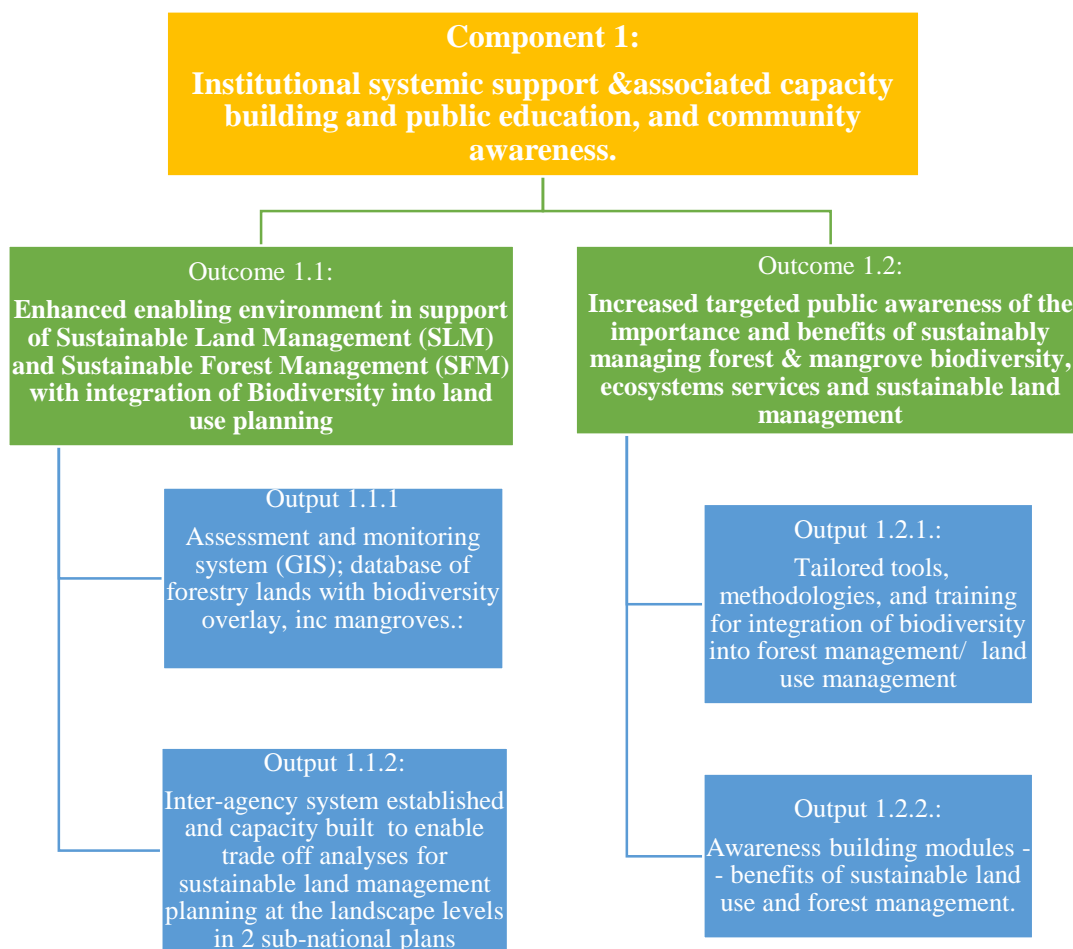
Component 3: Sustainable Livelihoods: Launch of 2 pilot projects: 1) Cultivation and Conservation of Palm Trees and 2) Cascarilla Cultivation and Processing Cascarilla Oil



77. The existing national human and technical capacity is greatly limited when tasked with the duties of implementing the Forestry Act and Forestry Regulations 2014 over the archipelago, much less the four Pine Islands. The continued focus of the political directorate to innovate the current planning mechanisms with integrated focus on conserving our natural resources through highlighting the forest ecosystems of pine, coppice and mangroves is the momentum required to develop the process throughout the country. As stated in the baseline report, there has yet to be an inventory of all three forest ecosystems on all the islands. There have been initiatives implemented over the past 10 years that have resulted in sporadic deliverables. Challenges faced have been the lack of seamless continuity between active engagement of the key stakeholders, including i) The BEST Commission (ii) Forestry Unit, other relevant departments in Ministry of Environment & Housing, iv) Department of Physical Planning , Ministry of Public Works & Urban Development v) Office of The Prime Minister – Department of Lands & Surveys, relevant NGOs and community associations; A cross-cutting training plan aimed at enhancing the capacity of targeted personnel in lead decision-making and implementation agencies to uptake ecosystem services values considerations in planning and in decision making is much needed. A comprehensive and multi-focal mainstreaming initiative using communication, education and public awareness strategy is also essential.

Component 1: Institutional and systemic support & associated capacity building and public education, and community awareness:

Schematic diagram for Component 1:



OUTCOME 1.1 Enhanced enabling environment in support of Sustainable Land Management (SLM) and Sustainable Forest Management (SFM) with integration of Biodiversity into land-use planning

78. Within the PPG it was established that updated inventories in general are limited, therefore, in Output 1.1.1, the first step of this project is to verify the current state of biodiversity and forestry resources in consultation with stakeholders and the surrounding local communities. Secondly, once able to analyze current situation, then the updated information would influence the development of integrated land-use plans for Output 1.1.2, aiming for the enhanced enabling environment for integrated landscape management

79. During the Project Preparation Grant (PPG) activities, the following were developed:
- a. An assessment and recommendations for the establishment of forestry and carbon stock inventory and monitoring system including the current existing national capacity, requirement, proposed framework.
 - b. Development of the system including a literature review
 - c. A draft work plan for obtaining the desired results
 - Assessment of existing national and international data sets and systems for their potential use into a publicly accessible monitoring system;
 - Analysis of needs, opportunities and constraints for the establishment of forestry and carbon stock monitoring system;

Output 1.1.1: Assessment and monitoring system (GIS); database of forestry lands with biodiversity overlay, including mangroves.: The following activities will achieve the requirements for Outcome 1.1.

The above output will be achieved through the following activities:

Activity 1.1.1.1-1.1.1.2: The Development of Work plan and Implementation for the Identification and demarcation of boundaries through field assessments, GPS coordinates and utilizing GIS to update 1986 forestry maps to create maps of the forest estate (demarcation will require legal action and gazettelement of the proposed boundaries).

- Identification and demarcation of boundaries through field assessments, GPS coordinates and utilizing GIS to update 1986 forestry maps to create maps of the forest estate (demarcation will require legal action and gazettelement of the proposed boundaries). The created data will be the basis for the formalization of the Forestry Estate. The estate is estimated at 283,750.2 ha.
- Digitizing maps/creation maps/formalize sample areas for the pine islands along with the schedule for establishment of permanent sample plots (PSP) : FU along with DLS and BNGISC, will complete the digitization of the Forestry Maps and create complete datasets for the 1986 Inventory.
- The Forestry Estate is sectioned into the following categories: Conservation Forest (52.65%), Protected Forests (13.33%), and Forest Reserves (34.02%).
- As this activity will focus on collection of forestry data, the aboveground biomass (AGB) rates and biodiversity within the proposed national forestry estate.
- This project will specifically develop the Forestry Assessment and Monitoring system. These deliverables are immediately linked with Component 2: Establishment of the Forestry Estate. This component will also be the first time establishing permanent sample plots for the long-term monitoring of all forest resources in addition to meeting international standards on providing accurate values on the climatic variables that directly influence Bahamian forests.

Activity 1.1.1.3: Remote sensing analysis of forestry lands to determine carbon sequestration rates, land-use change and forestry growth rates

The activity will estimate forest aboveground carbon storage for all three ecosystems. The estimate rates of aboveground C accumulation will be calculated and a complement Inventory data for validating these maps will be compiled for these datasets. This data can help document changes in forest management that lead to increased forest carbon storage, as required for programs like REDD+. This activity is linked with previous as the inventory data from this sample can be combined with the maps that we produce to map forest aboveground carbon storage.

Activity 1.1.1.4: Develop Forestry Maintenance Plan for Forestry dataset:

In conjunction with BNGSIC, the FU and the contracted consultants will develop an adequate maintenance plan for the geospatial Forestry data; This will document business processes that create, change or destroy Forestry spatial information. This document will serve as procedures for data maintenance/upkeep by FU as the Data Custodian for the upkeep of produced GIS layers. This is the development/integration of biodiversity of concepts in the land use planning act. It is a training of the island administrators and the town planning committee on how to make improved sustainable decisions for their community/settlement.

Activity 1.1.1.5: Develop & Implement Forestry Monitoring system within the established Forestry Estate.

In this activity the monitoring system developed in activity 1.1.1, will be implemented during the last year of the project to conduct the correct assessments. The trained forestry staff and personnel from

relevant supporting agencies will partake in this activity. This information would update the carbon monitoring system developed to monitor the benefits of the project.

Activity 1.1.1.6 Establish Open Source Framework accessible to all agencies of Forest Resources: Using data from Activities 1.1.2, 1.1.3, and 1.1.5, a collaborative effort between FU, BNGISC and Department of Information Technology (DIT), the framework for developing and launching an open-source framework for the Forestry Resources to be accessible to all Government Agencies using the Government website.

Output 1.1.2

Inter-agency system established and capacity built to enable trade off analyses for sustainable land management planning at the landscape levels in 2 sub-national plans

Department of Physical Planning (DPP) is the lead agency for this output with the end result in meeting their legal obligation of creation of gazette land-use plans for the islands of Andros and New Providence. In order to achieve this output, this project is expected to increase their institutional capacity thru hiring of a planning consultant, and acquiring improved software and hardware to accomplish the activities.

Activity 1.1.2.1: Review of the National Planning and Development Policies:

The Planning consultant over a period of 6-8 weeks will review national planning and development policies, previous policy decisions and pending policy initiatives, i.e. using existing GIS systems, previous land use plans, e.g. The Land and Sea Land Use Plan for Andros (IWCAM), the New Providence First-Order Land Use Maps, etc. This will include a review of New Providence and the 4 major settlements of Andros: North Andros, Central Andros, South Andros, and Mangrove Cay. An estimated time of 3 days per settlement for consultation process. This review will provide a localized look of previous planning decisions and provide insight to develop patterns as well as identified needs.

Activity 1.1.2.2: Collate and update selected species and ecosystems baseline for incorporation into the tools

Review of existing data-sets from previous initiatives to establish a complete baseline of for biodiversity levels, specifically incorporating the Ecological Gap Analysis (2014), the BNT Protected Parks area.

Activity 1.1.2.3: Development of 2- subnational plans for Andros and New Providence:

Planning consultant in collaboration with the DPP, Town Planning Committee (TPC), DLG, and FU, using a collaborating approach according to the Planning and Subdivisions Act 2010 section 17 (1), plans and associated maps in accordance with the Planning and Subdivisions Act 2010 will be created for Andros and New Providence. These will take into account resource use (terrestrial and marine) in the region and delimits proposed zoning of critical ecosystems, including the zoning of the Forestry Estate.(conservation forests, forest reserves and protected forests)

Activity 1.1.2.4: Public consultation/review process of the proposed land-use plans for Andros and New Providence:

The plans will be submitted for review to the Town Planning Committee and Minister of Public Works and Urban Development for review/approval before conducting the public consultation process as stipulated in the Planning and Subdivision Act 2010 section 17 part (2) – (6), which is inclusive of the following activities:

- Public consultations will provide adequate information and material on the plans, including distribution of printed copies, public town meetings to be held in the communities on both islands,

- Satisfactory notice via national newspaper circulation, official government website posting

Activity 1.1.2.5: Approval of the Land-use plans.

The process includes working with senior policy makers, like the Permanent Secretaries to approve the integration of the new policy into the existing framework. This will require senior level meetings with Permanent Secretaries of the relevant ministries and other relevant senior policy makers.

Output 1.2.1

Tailored tools, methodologies, and training for integration of biodiversity into forest management/ land use management

Activity 1.2.1.1: Identification of tools, methodologies and training programs to be used for the integration of BD into SLM/SFM at Local Government and Town Planning Committee Levels

- Meetings (Needs assessment by project co-ordinator to meet goals of project and working with International Conservation Corps);
- Workshop format with FU, DPP, DIT, DLS, BEST - find what's existing b/c product has to be beneficial; Using a Charette process, stakeholders will decide on top 3 tools. These should complement Activity 1.1.2.4.
- These will have to go through training program to ensure relevance/use for the DLG and TPC before finalizing tools for development.

Activity 1.2.1.2: Review and Selection of appropriate tools, methodologies and training programs at meeting with Stakeholders. Envisioned a 1-2 day workshop (including lunch + refreshments) for the tools developed in Activity 1.2.1.1.

Activity 1.2.1.3 - During these activities, the tools chosen in the previous activity will be developed (Activity 1.2.1.3), which will then receive feedback on their effectiveness (Activity 1.2.1.4)

Activity 1.2.1.5: This activity will aim integrate the developed tools into the policy framework of stakeholders. The format will be in a workshop that coincides with the 2017 Local Government Training in New Providence.

Output 1.2.2.

Awareness building modules -- benefits of sustainable land use and forest management, which will be developed ensuring that gender roles considered.

Activity 1.2.2.1: Development of Awareness and Communication strategies for all project components, with specific targets into the communities with pilot project activities.

Activity 1.2.2.2: Develop action plan, including training programme, to build capacity and awareness of strategy and policy options and mainstreaming tools and disseminate relevant information widely

Activity 1.2.2.3: Strengthen public awareness, learning and sharing experiences at local, regional and national levels using appropriate multi-media methods

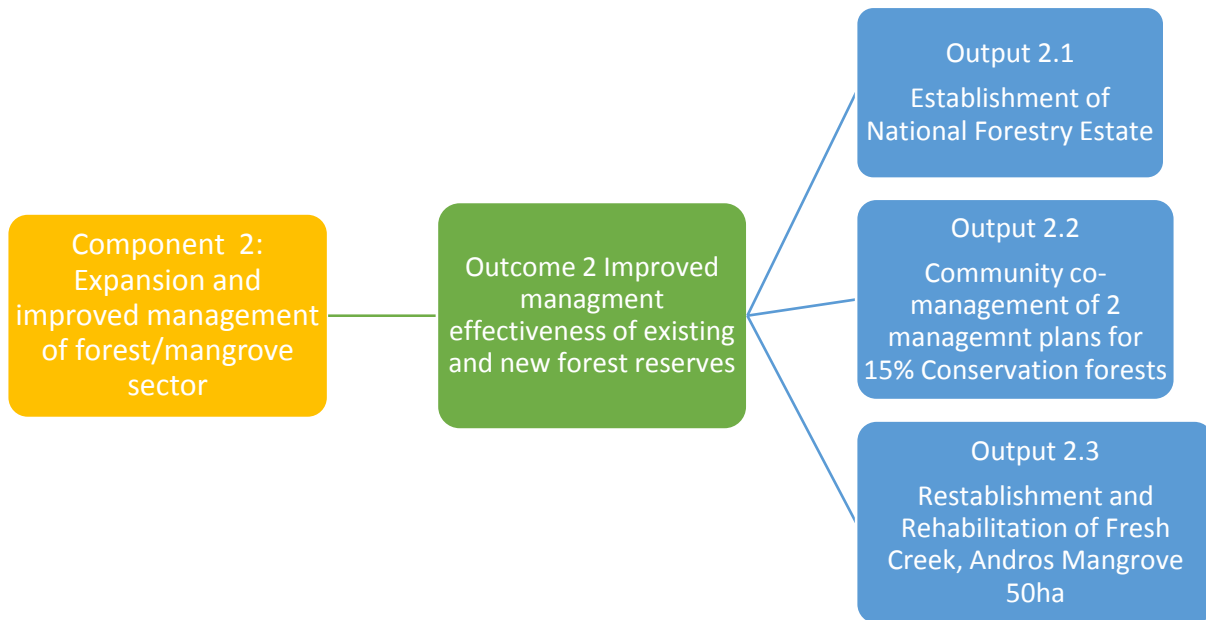
The purpose of increasing the awareness of the project and its associated activities with the goal to mainstream the importance of conservation of biodiversity, sustainable forest management and

reducing land degradation. Using the mediums of print media, tv/talk shows/ radio announcements; video production; website; development of apps; social media (facebook/twitter/instagram)

Component 2: Expansion and improved management of forest/mangrove sector

80. **Sustainable Forest Management:** This component seeks to integrate biodiversity and conservation thru sustainable land management and sustainable forest management into land use planning. An ecosystems approach into the national policy and legislative framework for development planning with a primary focus on land use , using the Pine Islands as a platform. The Office of the Prime Minister, Ministry of Environment & Housing and Ministry of Public Works & Urban Development are the primary players in this component of the project, with the Water & Sewerage Corporation and the Bahamas National Trust to a lesser extent.

81. The primary tasks in this regard involves development of the means to promote integration of ecological considerations into planning policies, regulations and guidelines for development categories, delivering through 2 outcome areas (as seen below).



82. The unique features of the Bahamian forests (pine, coppice hardwood and mangrove) and its associated environment, including the blue holes and sink holes scattered throughout the forest, including native plant and animal life (biodiversity) provides for a pristine setting to explore the ecotourism market. Selected areas of forest have been designated as conservation forest to achieve this purpose, to preserve the full diversity of plant and animal species in undisturbed areas. Areas of special scientific interest and unique biodiversity have been declared Conservation Forests under the Forestry Act 2010 .

Output 2.1: Establishment of National Forestry Estate

Activity 2.1.1.: Obtain GIS dataset layers developed in Activity 1.1.2

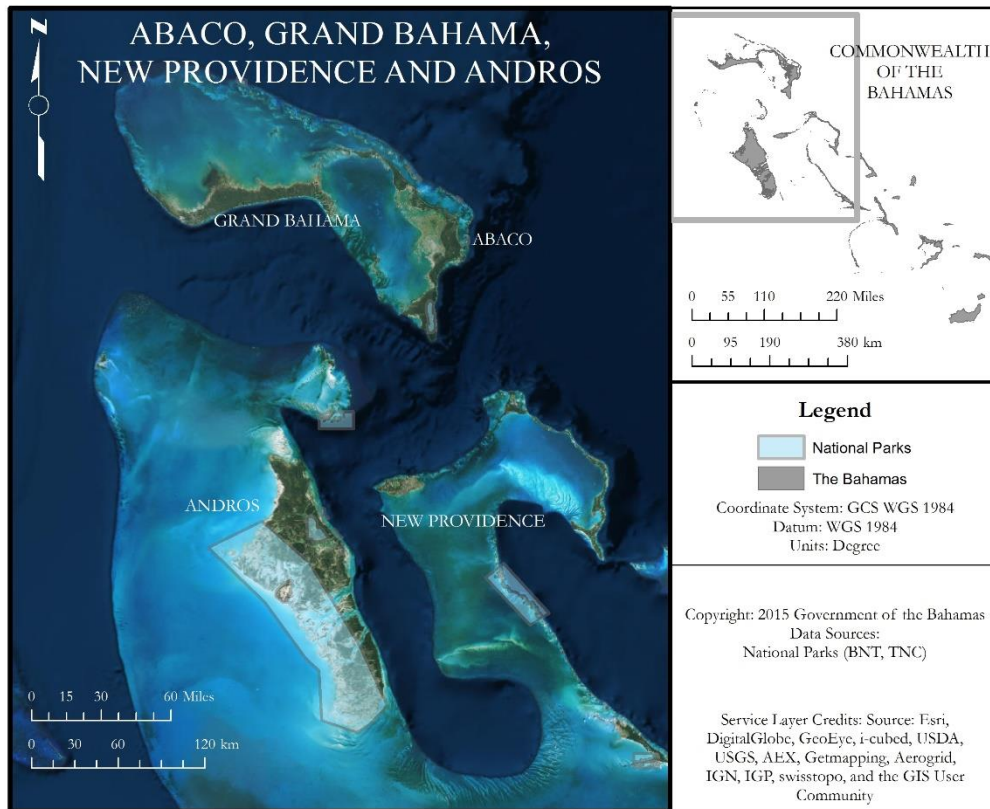
Activity 2.1.2: Collaborative efforts over the finalization of boundaries with Forestry Unit, DPP, Town Planning Committee, Depts. Of Lands & Surveys, and BNGIS Centre

- Using principles of inter-agency cooperation, working sessions with the mentioned departments is required to produce forestry boundaries for seamless integration into existing planning framework.
- The legal approval of land designations is granted by the Town Planning Committee therefore their input is crucial to the approval of the designations and subsequent establishment of Forestry Estate.

Table 5: Summary of Proposed Areas for Forestry Categories of the Forestry Estate by Island

Type	Totals	% of Estate	Abaco	Andros	Grand Bahama	New Providence
Forest Reserves:						
Hectares	96,542.61	34.02	8,340.98	52,930.05	34,505.93	765.67
Protected Forest:						
Hectares	37,810.58	13.33	11,001.8	26,808.805	0	0
Conservation Forest:						
Hectares	149,396.99	52.65	37896.382	106,924	3226	1350
Totals**	238,750.00					

** The above totals are subject to survey and the mapping exercise scheduled for component 1 of the Pine Islands Project



Map 6: Pines Islands of The Bahamas

Activity 2.1.3: *Collaboration with DPP/TPC for insight and cooperation in the land classification designations for the forestry estate*

- Forest Reserves: 96,542.61ha or 238,562 acres
- Protected Forests: 37,810.58 ha or 93,432 acres
- Conservation Forests: 149,396.99ha or 369,168 acres
- Establishing Forestry Estate - Estimated area: 283,750 hectares or 701,162 acres*
- The country's land cover is 13,957 km² therefore the National Forestry Estate would be an estimated 20% land cover designated into one of the three forestry classifications.

Activity 2.1.4: *Submit boundaries to Parliament and proceed through the approval processes (Public Consultations, Cabinet approvals)*

- Town Meetings with community stakeholders will occur on all four islands to meet the requirement of correct public consultation process as established by the Forestry Act 2010. Once these have been approved through all levels of the Cabinet, the areas will be approved to be gazette as the National Forestry Estate and vested into the Ministry of Environment & Housing.

Output 2.2: Community co-management of 2 management plans for 15% Conservation forests

This output call for managing 15% of Conservation Forests as well as working with communities stakeholders to have co-management arrangements for the proposed areas. During the PPG, the islands that were chosen for these sites were Abaco and Andros. The site selections for the conservation forests were determined thru stakeholder consultations on New Providence, Andros and

Abaco. In conclusion, both islands have active communities which they have been advocating to be designated protected areas for some time. Therefore, the areas will be 1) Abaco Blue Hole Conservation Forest, 8,094 hectares and 2) Central Andros: Maiden Hair Conservation Forest, 14,316 hectares. It is expected that up to 5,661,077 tCO₂ -eq amount of carbon sequestered over a 30 year period for the 22,410 hectares, that is the 15% of the Conservation forests.

To achieve this output, the following activities will be developed and rolled out taking into consideration gender roles and ensuring equitable participation.

Activity 2.2.1: Obtain GIS dataset layers developed in Activity 1.1.1.2

Activity 2.2.2: Develop a National Forest Plan as per Forestry Act 2010 Part II 5: (1) (a) – (e)

- After the official gazettement of the forestry estate, the FU will produce national forest plan as per the Forestry Act 2010.
- Thru the partnership with International Conservation Corps, estimate 3-6 weeks of time for preparation

Activity 2.2.3: Submit the national forest plan for review to the Minister of Environment & Housing, and Public Consultation in communities as per Forestry Act 2010 Part II 5: (2)

- These plans will be printed and submitted along with accompanying maps and additional supporting annex to be submitted to parliament;
- Town Meetings will be held in Central & South Abaco settlements and Central Andros settlements to ensure community involvement and ownership; These events will be linked into the public awareness activities through: public announcements, paper ads, radio shows, social media :

Activity 2.2.4: as per Forestry Act 2010 Part II 5: (3) after the Minister has approved a national forest plan, the plan shall be tabled in Parliament and subsequently Gazetted

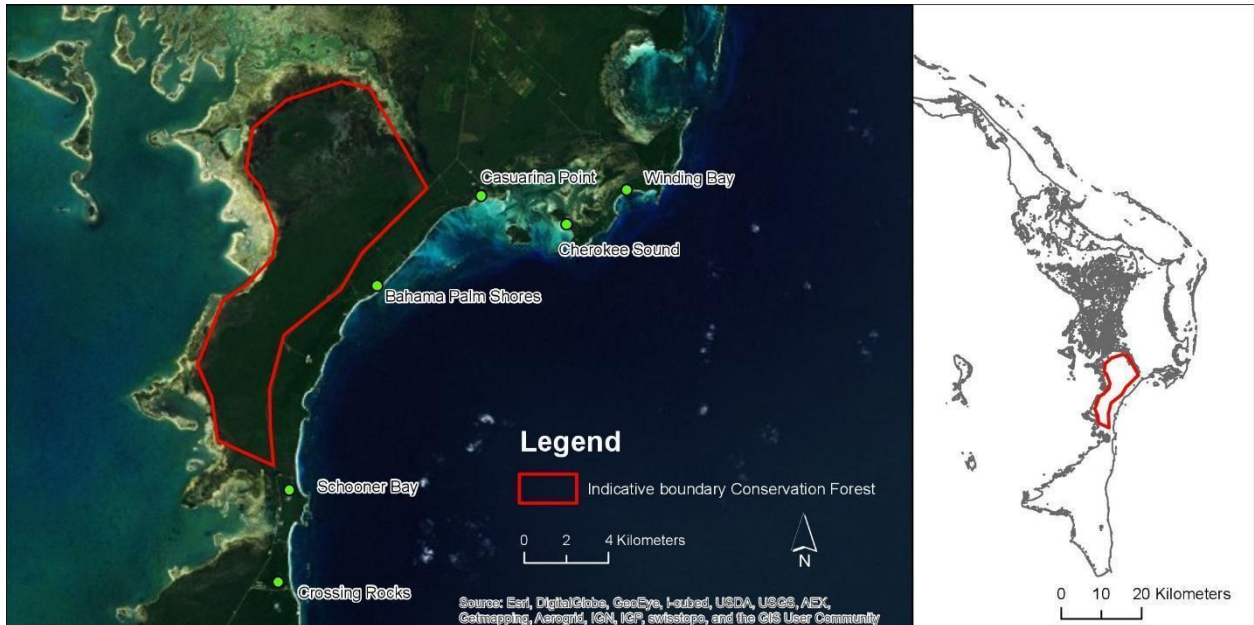
Activity 2.2.5: Implementation of national forest plans by the Forestry Unit as per Forestry Act 2010 Part II 5: (4)

Activity 2.2.6: Develop a Forest Management Plan for 2 Conservation Forest areas as per Forestry Regulations, 2014 Part V- (19) (1) (a) – (e)

The proposed areas are 1) Abaco Blue Hole Conservation Forest, for total of 8,094 ha 2) Central Andros: Maiden Hair Conservation Forest, 14,316 ha. Please reference the below maps 3 and 4.

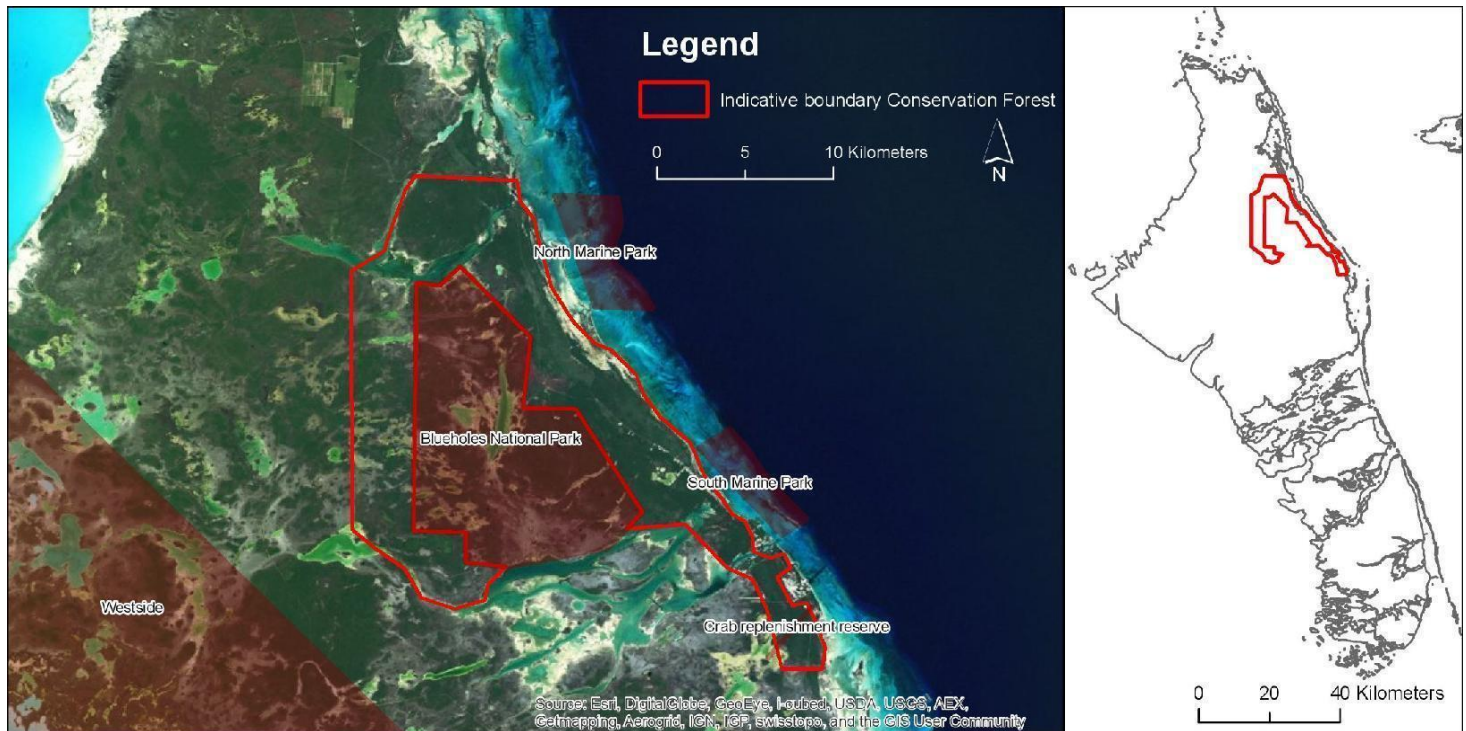
Abaco Blue Hole Conservation Forest. The forest is mostly a pine forest spanning an estimated 8,094 ha (20,000 acres). The surrounding southern Abaco communities of Cherokee Sound, Little Harbour, Winding Bay and Sandy Point who all interact with the forest at some level, between tour guiding, harvesting, hunting or blue hole diving. This area is most noted for four inland blue holes/sinkholes which are connected to at least 13 off shore blue holes that are all combined systems representing more than 16.8 km (10.5) miles of the most intricately decorated and scientifically significant underwater passages on earth. Within this proposed conservation forest, these caves are now recognized as the world's most highly decorated underwater caves, with massive crystal columns over 30 feet in height and diameter, and millions of tiny crystal stalactites, stalagmites and very rare helictites are found throughout the systems. Underground rooms, the size of baseball fields are found throughout the systems. These immense underground rooms are some of the largest in the world and they consistently leave cave diving tourists and explorers alike in awe of their sheer size (SABHCA 2010). The reasoning for the conservation of this area is partly due to the blue hole inland sites that have become world renowned for their amazing scientific value including new species of cave adapted

animals. Secondly, the conservation importance is heightened by the location of pre-historical remains of animals never before known to science, which are currently being studied and cataloged by the Antiquities Monuments and Museums Corporation/National Museum of The Bahamas.



Map 7: Map of Proposed Abaco Blue Hole Conservation Forest, Abaco, The Bahamas

Maiden Hair Coppice Conservation Forest. The coppice is the most diverse terrestrial habitat in the archipelago and serves as a surrogate for many species, it is still under-represented. The largest tracts are found in southern Abaco and Andros, the latter having come under threat from land clearing in recent times, 14,316 ha (35,375 acres). Many of the marine and terrestrial habitats on Andros are intimately linked, not only above ground through flowing tidal waters, but also underground because of groundwater filtration through porous limestone rock and the extensive system of interconnected inland and marine limestone caves and cavities, known as blue holes. Andros has the highest concentration of blue holes in the Western Hemisphere, and the largest reservoir of freshwater in The Bahamas (ANCAT). Critically endangered species also inhabit Andros. Hawksbill, loggerhead and green turtles are primarily found in the Northwest. Flamingoes nest and feed in the Northern and Southern creeks of Andros. The Andros rock iguana, the only iguana in The Bahamas not confined to small cays, can be found in the interior pine and evergreen broadleaf areas (ANCAT).



Map 8: Proposed Maiden Hair Conservation Forest, Andros, The Bahamas

Activity 2.2.7: Collaborative efforts over the finalization of boundaries with Forestry Unit, DPP, Town Planning Committee, Depts. Of Lands & Surveys, and BNGIS Centre; In addition to developing partnerships with community based associations for the management of Forest Areas

Activity 2.2.8: Conduct Public Consultation of the Proposed Management for Conservation Forest areas in NP, Abaco and Andros

Activity 2.2.10: Develop a Sustainable Financial Plan for the 2 Conservation Forest Areas in Abaco and Andros

Activity 2.2.11: Implementation of Conservation Forest Areas in Abaco and Andros

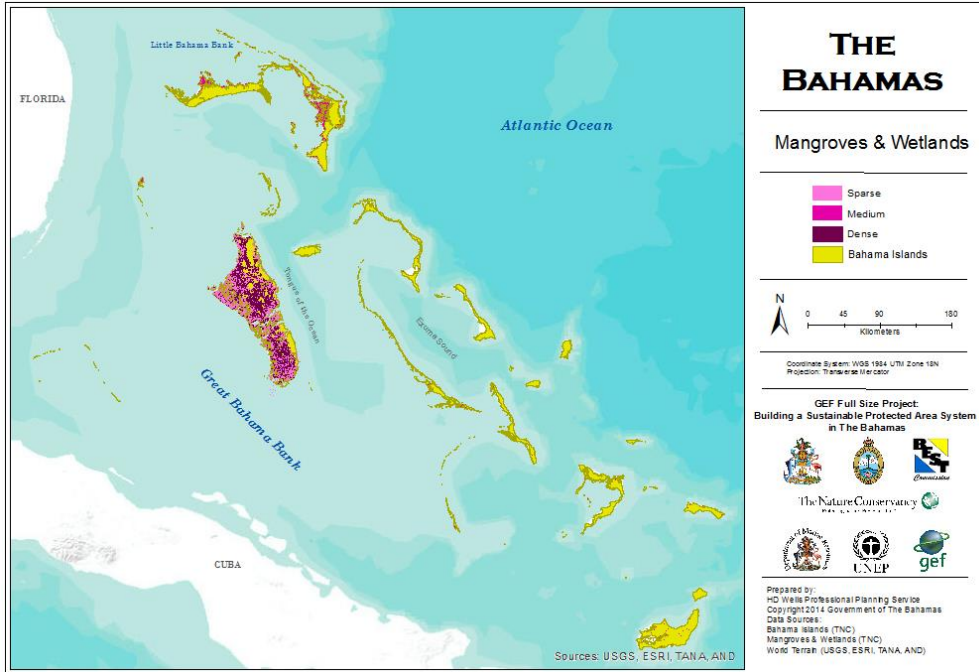
Activity 2.2.12: Monitoring of activities within Conservation Forest areas in Abaco and Andros

Activity 2.2.13: Strengthen public awareness, learning and sharing experiences at local, regional and national levels using appropriate multi-media methods

Output 2.3: Restoration of Davis Creek, Central Andros Mangrove system (50 ha) with a projected annual 14,563 tCO₂-eq savings

The mangrove communities have natural regeneration potential. Mangroves are a taxonomically diverse group of organisms that are classified as pioneer species. They have a variety of biological adaptations including long-lived viviparous propagules that make them adept at colonizing new areas and regenerating damaged habitat. Hence, it is reasonable to expect that when tidal flow is restored to

previously obstructed wetlands, the mangroves and associated communities will be able to naturally re-establish themselves. There are numerous examples of successful mangrove restoration projects in countries such as Australia, Vietnam and Colombia. The mangrove species which exist here are the Button wood, and Red mangroves with few Black or White Mangroves. There is truly a need for the white mangroves to be replanted, and there is a tremendous to eradicate the incoming invasive and debris. The National Creek and Wetlands Initiative (NCWI) commenced in 1999. 40 creek systems countrywide were catalogued and inventoried for restoration - an important starting point for The Bahamas to effectively manage its creeks and wetlands.



Map 9: Map of Mangrove ecosystems within The Bahamas

The island of Andros has the highest density of mangrove ecosystems for the country and it has been validated that it is largest wetland ecosystem for the Western hemisphere. The findings of the proved that creek fragmentation on the eastern side of Andros due to deforestation caused by human development which has severely impacted the ecosystem functioning of the mangroves. One such example is Davis Creek, Central Andros. The connectivity and flow have been greatly reduced due to sedimentation and encroaching invasive species. The creek is now bisected by three roads with minimal amounts of culverts which does not meet the needs of the creek, and thus has be digressing in productivity over the last decades. The mangrove restoration and rehabilitation is aimed at enhancing connectivity of up to 50 ha to increase the potential total carbon benefit of 14,563 tCO₂-eq at the end of the project. The proposed site will be the areas immediately adjacent to Small Hope Bay Lodge area, providing significant potential for demonstration for both local and international visitors --- regarding the negative impacts of the absence of knowledge of mangrove ecosystem services, leading to un-informed land use planning decisions.

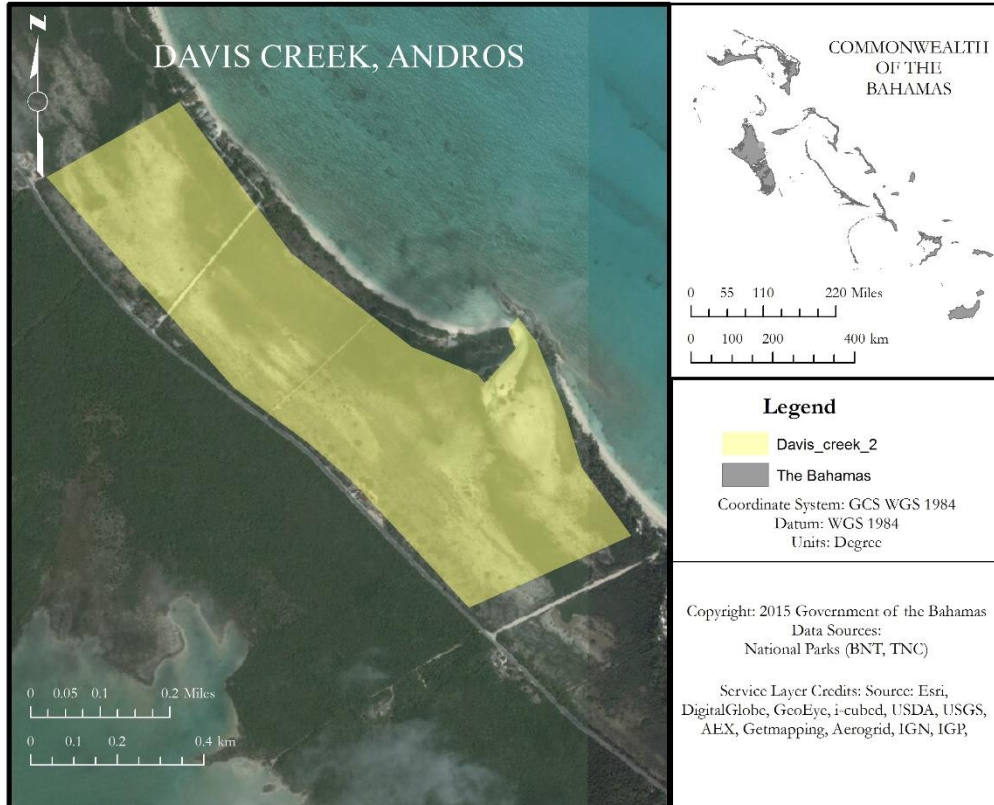
To achieve this output, the following activities are proposed:

Activity 2.3.1: Conduct specific site assessment and determine baseline analysis

Activity 2.3.2: Develop and commence implementation of Participatory based Site Specific Management Plans based on the SFM principles for restoring/rehabilitating degraded mangroves

Activity 2.3.3: Develop and implement a community based monitoring of the rehabilitated mangrove site.

There are interested regional and international universities, non-governmental and community based organizations, and local communities, Establishment and operate research and monitoring committee; Facilitate local participation in research project.

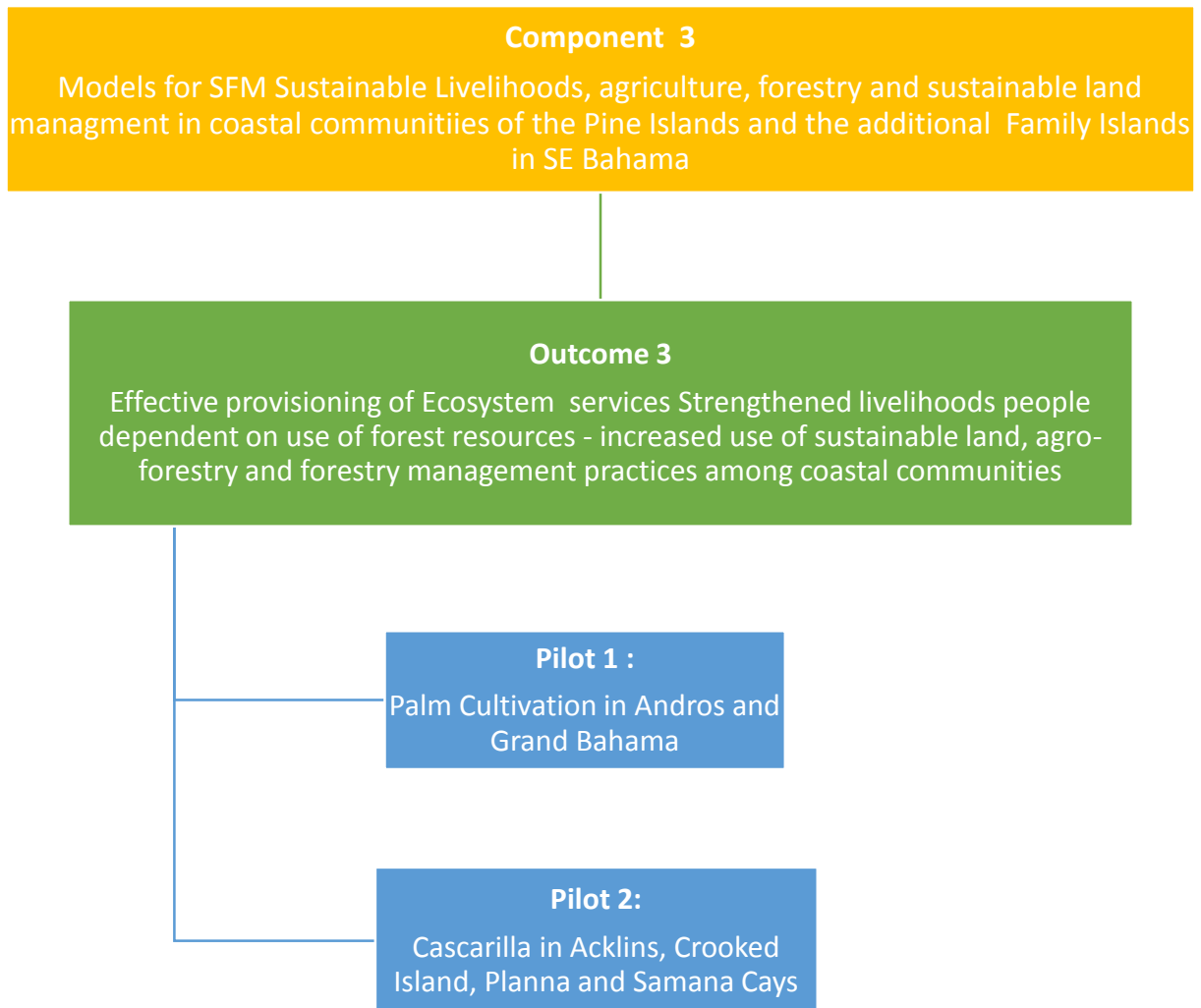


Map 10: Davis Creek, Andros, The Bahamas

Activity 2.3.4 Research and monitoring programme established for indicator species
The communities involvement enables their participation in restoring surrounding wetland areas demonstrate to the local residents the importance of a healthy ecosystem and deliver hands-on experience in conservation restoration.

Activity 2.3.5: Design and implement a comprehensive monitoring programme that involves the community

Component 3: Sustainable Livelihoods : Pilot Projects incorporating



Outcome 3. Effective provisioning of forest ecosystem services

83. The tropical forests of the Caribbean provide a diverse range of important services and products that contribute to the development of the region. An example of a valuable forest service is its ability to function as a watershed thereby securing water resources, reducing severe soil erosion and ameliorating the impacts of shocks to the environment (e.g. torrential rains associated with tropical storms and hurricanes). These regional forests also provide a valuable service through their ability to sustain productive levels of biodiversity from which a variety of products are generated including timber and non- timber forest products (NTFPs). The definition of NTFPs, also known as ‘minor forest products’ or Non Wood Forest Products has proven to be inexact and difficult at times because it is “defined not by what it is, but by what it is not”. After noting the exclusive nature of the terminology, Neumann and Hirsch (2000) go on to define a NTFP as “literally any and every natural resource from the forest except timber”.
84. Many of the rural poor have earned subsistence level income from harvesting such products, selling them either in the raw form or as processed or manufactured goods. The most important NTFPs for the region are (i) medicinal and aromatic plants, (ii) edible products (mainly exotic and

natural fruits, bush meat and bee products) (iii) ornamentals, utensils, handicrafts and (iv) construction material (Rivero 2001).

85. The traditional activities within the family islands are threatened by dying with the older generations who still practice them, as they have failed to attract the younger generations. Through the Pine Islands project, the pilot projects will be targeted in communities that are dependent on the NTFPs with the multi-pronged approach of improving their livelihoods while ensuring the sustainability of the resources and the trade/craft itself (see Table 6).
86. Pilots were selected on the basis of several criteria, including consultative stakeholder process at all levels, review of previous and existing initiatives, baseline review of available data and current political administrative objectives. Based on these, the final two project areas selected are Palm Cultivation on Andros and Grand Bahama and Sustainable Cascarilla Cultivation on Acklins and Crooked Island. The following criteria were applied in selecting these pilot projects:

Mitigation against Deforestation:

- After review of the potential projects, stakeholders indicated that there is great need to prevent deforestation due to unsustainable harvesting practices currently used by communities in the islands, as they have noticed the reduction of available resources of silver top palm and cascarilla.
- ensuring sustainability of the natural resource, with management and proper harvesting practices, this will lead to a reduction of deforestation preventing increased emissions of carbon and secure soil security.
- The project will help adopt the new methodologies in harvesting practices.

Stakeholder selection:

- Meetings were held with government agencies, (i.e. island administrators), local community organizations, NGO's and surrounding communities, indicated the projects of importance preserving livelihoods and cultural importance.
- Primary Stakeholder BAIC indicated that these areas compliment their current mandates for providing economic opportunities for these communities in the family islands.

Political Will:

- Complimentary initiatives supported by BAIC and the IDB who's renewed focus on Andros has created a hub for resources and projects, such as Ecosystem-based Development for Andros Island and Revitalization of the Bahamas Sponging Industry.
- Ministerial support for the Acklins and Crooked Island project which is seen to boost socio-economic base of these islands by enabling them sustainable source of the resource.

Biodiversity conservation:

- These projects will help preserve the unique and high value of biodiversity of these specific sites through sustainable forestry management practices i.e. community forestry management, sustainable harvesting practices.
- Without this intervention, the risk of biodiversity loss is high.

Table 6: Sustainable Livelihoods Project Format

Pilot Project	Islands	Settlements
Palm Cultivation	Andros Grand Bahama	Red Bays The GAP
Cascarilla Bark	Acklins Crooked Islands Samana & Plana Cays	

Output 3.1.: The Inter-American Development Bank in conjunction with Bahamas Agricultural and Industrial Corporation, (BAIC), and the Bahamas National Craft Association (BNCA) are currently implementing grant funding for a Bahamas Virtual Market for the Handicraft Industry. The project’s consultative process determined that building on this project would be a natural fit for marketing and promotion. Under the guidance of BAIC, the BNCA they are willing to take advantage of all assistance available to meet the challenge of developing a sustainable program. The challenge therefore is to develop a sustainable program for the production and marketing of palm trees for the local and international market. In order to do this the following development challenges are recommended. The Red Bays Handicraft Association & End Association (members of the (BNCA) will work with BAIC, Ministry of Agriculture, Ministry of Environment, Inter American Agency for cooperation in Agriculture (IICA) , Bahamas Agricultural & Marine Science Institute (BAMSI), College of the Bahamas (COB) Bahamas National Trust (BNC) and Andros Nature Conservancy (ANCAT) to have this land given to the association in order to have the area reserved for the sustainability of the trees thereby ensuring the sustainable livelihood of the residents of Red Bays, Andros and “THE GAP” East End, Grand Bahama.

Piloting alternative livelihoods: Project 1: Cultivation of Palm

Many of the communities throughout the entire island partake in the industry by either harvesting, processing and/or plaiting. Especially in fishing/guiding settlements where the primary focus is on providing bonefish guided tours, the women typically do plaiting. For example, in North Andros, the entire community of Red Bays is involved in the creation of traditional handicraft products from the Silver top palm tree which includes baskets, fans, wall hangings, floor mats, jugs, jewelry, etc. The art of sewing products have been passed down from generation to generation and most of the women in the village this is their only means of livelihood.

There are several palm trees native to the Bahamas including the three most commonly used for sustainable livelihood which are:

- a. Silver Palm : *Coccothrinax argentata* (preferred palm for indigenous craft industry)
- b. Bow palm: *Pseudophoenix sargentii*
- c. Cabbage palm: *Sabal palmetto*

With a view towards preserving biodiversity, a technical guide will be developed for the identification and utilization of degraded forest lands for sustainable oil palm expansion, and a site selection guide for identifying high potential areas for sustainable palm oil.

The pilot project areas will be on the following island communities:

- A) Red Bays/Lowe Sound, North Andros: The Silver Palm. In Red Bays, North Andros, it is harvested from an area outside the settlement known as the ‘White Road’ which is located in the area of the Government’s Agricultural Produce Packing House.

B) East End, Grand Bahama (The GAP): The adjacent settlements are High Rock, Pelican Point and McLeans Town

The land will be used to:

1. Cultivate palm trees and non-timber forestry products (medicinal plants) for secondary production and ornamental use in the local and international market;
2. Diversify & expand the current product range of handicraft products in the industry by producing products from weaving, plaiting and new methods of production for both the local and international market.

The activities will be developed and rolled out taking into consideration gender roles and ensuring equitable participation:

Activity 3.1.1: Resource assessment of silver top and cabbage palms and baseline assessment for indicators

- Pilot Project Coordinator
- Access & Development of Land
- Current Survey of the Industry
- Sites will be established on Andros and Grand Bahama working with the surrounding communities and established handi-craft associations;
- Site selection based on assessment for establishment of permanent sample plots on 40.5 ha (100 acres) including mapping of high conservation value (HCV) areas:
- The Project will acquire 40.5 ha (100 acres) of land in for the cultivation of the trees:
- Possible research partnerships with Fairchild, Florida International University, and the botanists Corel & Corel;

Activity 3.1.2: Formulate Forestry Management Plan geared towards NTFPs and establishment of palm plantations

- Based on assessment in Activity 3.1.1, site selection, best practices, methods, & silviculture techniques are determined for the development of a Management Plan for the sustainable Cultivation of silver & cabbage palms

Activity 3.1.3: Develop and commence implementation of Integrated Community Management Plan for North Andros and Eastern Grand Bahama along with the handi-craft associations

Develop sustainability guidelines for harvesting & monitoring framework

Activity 3.1.4: Develop Industry Education awareness for Palm Cultivation

- Conservation Awareness developed based on assessment from activity 3.1.1.
- Industry Education and Training (technical & Business)
- Build capacity for community

Activity 3.1.5: Promotion of Sustainable harvesting of silver top & cabbage palms

- Based on activity 3.1.1, develop dvd tutorials on harvesting;
- Conduct Workshops and Field training for all residents
- Development of Modern Technology for harvesting & Packaging

Activity 3.1.6: Develop Marketing Promotion Strategy of Indigenous Craft trade (using harvested Palm tops)

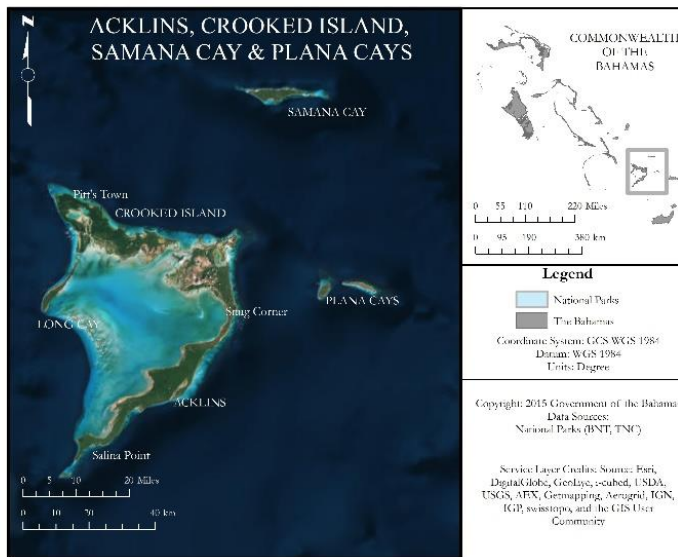
- Tied into Activity 1.2.2.3;
- Business Development and management Training
- Product Development & Branding
- Marketing & Promotion of the Industry.

Activity 3.1.7: Establish a formalized plantation of native palms for ornamental landscape market
Establish sustainable plantation in buffer zones of Forest Reserve (Andros) and Conservation Forest (Grand Bahama) based on best practice available

Output 3.2 Pilot Model Sustainable Cascarilla Cultivation and Processing

Cascarilla is found more abundantly on Acklins, Crooked and Cat Islands. In the government's quest to broaden economic growth and employment opportunities, significant focus is being placed on promoting economic activities within the Family Islands. The commercial cultivation of cascarilla on selected Family Islands is one such activity. The results of study conducted by BAIC in 1998 showed that at current and medium term projected demand the commercial cultivation of cascarilla could be commercially attractive, but would simply displace the existing harvesting of wild bark. If domestic production of cascarilla oil is established the processor will require a secure supply of cascarilla bark. As cascarilla bark is harvested from the wild, security of supply will only be guaranteed if commercial cultivation of the plant is started. Therefore, the Pilot Project will assist in proving the technical and financial support to stimulate the industry by the following activities which will be developed and rolled out taking into consideration gender roles and ensuring equitable participation:

Activity 3.2.1: Resource assessment of cascarilla on Acklins, Crooked Island, Planna and Samana Cays.



Map 11: The South Seastern islands of Acklins, Crookes Island, Samana Cay & Plana Cays, The Bahamas

Activity 3.2.2: Development & Promotion of Sustainable harvesting of cascarilla

Activity 3.2.3: Develop Industry Education system to build capacity on the two inhabited islands,

Activity 3.2.4: Establish a formalized plantation on 4 pilot sites totaling 10 hectares (25 acres) each: Acklins, Crooked Island

Activity 3.2.5: Develop Marketing Plan for Promotion of Cascarilla products (bark and oil) to be implemented by BAIC

Activity 3.2.6: Conduct socioeconomic background baseline to the communities by focusing on gender, age, economic status.

Activity 3.3: Develop Integrated Community Management Plan on Acklins and Crooked Island

Activity 3.2.1.3: Develop and implement Public Awareness of Stakeholder plan for Sustainable Livelihoods

3.4 Intervention logic and key assumptions

87. The Pine Islands Forest/Mangrove Innovation and Integration project aims to support improving the effective management and sustainable use of the forest estate of the Bahamas with a particular focus on Pine Island communities. The project will provide the underpinning needed to manage forest ecosystems by developing the necessary data, tools and training. It will assist in the development of sub national land use plans prioritized for the Pine Islands by integrating biodiversity and ecosystem values, and ensuring sound management of the forest estate.
88. The project will facilitate the deeper integration of environmental sensitivities and priorities into the land use planning, policy and regulatory framework and the development of sustainable management systems into forthcoming development scenarios especially that proposed for Pine Islands towards strengthening of a national development planning approach. It is envisaged that the infusion of ecosystem values and considerations for sustainable use of biodiversity in land use planning will serve to create the requisite conditions at both the local and national level for the protection of biodiversity while pursuing development.
89. The project will develop full fledged management plans for two proposed Conservation Forests. Participatory processes, best practices established and lessons learned will be documented for wider applicability. Similarly, lessons learned from the marketing of palm and cascarilla will be documented for future replication at the inter-island level, as well as a more extended regional replication.
90. Targeted Pine Island communities have limited options to meet livelihood challenges and assist them in the implementation of sustainable land use goals. The stakeholder participation process and subsequent project validation, facilitated consensus building on the proposed activities for implementation. Further, the marketing of NTFPs and creation of markets (with IDB support through BAIC), will demonstrate options for sustainable livelihoods, while ensuring that the sustainable use of biodiversity is protected.
91. Long-term benefits to be obtained from the Project are multi-faceted with regard to biodiversity, SLM, and SFM. The project seeks to generate tailored solutions with regard to sustainable management and use of natural resources including improved data and information systems and informed development decisions.. The project supports the enhancement of data and information

management systems to facilitate under-resourced agencies in making informed decision with regard to environmentally sensitive development planning.

3.5 Risk analysis and risk management measures

Risk	Rating	Risk Mitigation Measure
Key Project partners, communities, farmers and hunters are not prepared to fully participate in the process, exchange information or materials;	H	Increased communication with all stakeholder levels throughout the project phases thus promoting trust, and sharing of information should follow; using open source software would assist in accessibility to data. Component 3 focused on alternative livelihoods designed to engender participation and support.
Adoption of land-use planning strategies may lead to resistance from Local Government island Administrators which will lead to continued fragmented landscapes because of competing land-uses	M	Mitigate temp. zoning requirements if a conflicting development occurs with a conservation; Using the participatory and interactive approach with island communities therefore reducing prejudice that all decisions are top-down approach; By integrating their needs and recommendations, this will increase ownership and acceptance of the process. New legislation for 2010 Subdivision Act encompasses substantive procedural consultative agreement processes.
Long-term monitoring system developed and implemented	M	Training to Town Planning Committees and Family Island Administrators to be provided under project and responsibilities clarified.
Land ownership and access within coastal communities	M	Increased communication with all stakeholder levels throughout the project phases thus promoting trust, and sharing of information should follow; using open source software would assist in accessibility to data. Component 3 focused on alternative livelihoods designed to engender participation and support.
Sustainable Livelihoods	M	Implementing a scientific review; conducting research to establish baseline values integration of gender and youth into livelihoods component; outreach and branding strategy; reducing the middle men; processing locally; adding value.
Forest fires	M	Mitigate with prescribed burns; increasing community training about how to mitigate burns and protect pilot sites through development of prescribed burn plans.

**Risk rating – H (High Risk), S (Substantial Risk), M (Modest Risk), and L (Low Risk)*

3.6 Consistency with national priorities or plans

92. The Forestry Act Amendments and Forestry Regulations 2014: The develop of the forest resources of the Bahamas to their maximum potential by applying sound, scientific, and sustained yield

forest management principles and concepts. The Forestry Act will ensure the valuable natural forest resources of the Bahamas are managed in a sustained manner, in perpetuity.

93. The Government of The Bahamas (GOB) through the Bahamas 2020 Declaration has publically committed itself to meet the 2010 and 2012 goals of the CBD Programme of Work on Protected Areas (PoWPA) and additionally, to effectively conserve 20% of the marine nearshore habitat by 2020. The GOB has also committed to effectively conserve a minimum of 50% of existing marine and 50% of existing terrestrial national parks and protected areas being effectively managed by 2020 through provision and facilitation of necessary core staff, infrastructure, policies, regulations, bylaws and management plans to make them fully functioning protected areas where sustainable activities occur inclusive of research, education, habitat rehabilitation and conservation.
94. The project is also consistent with priority activities as outlined in the National Biodiversity Strategy and Action Plan, National Invasive Species Strategy and National Environmental Management and Action Plan. Project activities will also be aligned with those of the Regional Invasive Species project, Early Action Grant for Supporting Country Action on the CBD Programme of Work on Protected Areas, and the Second National Communication on Climate Change project.
95. **Ecosystem-based Development for Andros Island: BH-T1040 Inter-American Development Bank** : The IDB Andros Project is going to improve upon and come up with a new development plan for Andros that incorporates conserving of biodiversity. The general objective of this operation is to ensure that the natural capital (biodiversity and ecosystem services [ES]) of Andros, the largest island in the archipelago of The Bahamas, is mainstreamed in the design and implementation of development strategies with a view to ensuring the future well-being of all Bahamians including Andros island residents. The specific objectives are to: (a) quantify Andros' key ecosystem assets and service flows under current circumstances; (b) analyze alternative development scenarios consistent with Government plans and their impacts on ES availability and distribution, taking into consideration climate-resilient coastal zone management; and (c) propose a viable and actionable master plan which maintains the economic value of ES through sustainable use and identifies investment options.
96. **The Office of The Prime Minister : The National Development Plan (NDP)**: The 25-year road map will outline a plan for sustainable development in the domestic economy, with the aim of refining government practices, setting investment priorities, establishing operational targets and improving socio-economic factors. It is an ambitious plan, with an ambitious timeframe. The government and the Inter-American Development Bank (IDB), which is funding the project through a \$450,000 grant, hope to have it completed within nine months and ready to roll out from 2015 to 2040.
97. **The Bahamas Agriculture Marine Science Institute (BAMSI) : The Ministry of Agriculture**: The establishment of the Bahamas Agricultural & Marine Sciences Institute (BAMSI) on Andros, which signals the embracing by The Bahamas of Agricultural and Mariculture as significant drivers of the expansion of the nation's economy. The institute goal is to mainstream careers in agriculture and fisheries. This initiative is seen be a stimulus to agriculture sector and North Andros.
98. **IUCN, International Union for Conservation of Nature Andros Iguana Conservation Plan 2005-2011**: The Iguana Specialist Group (ISG) is a volunteer member network of experts from

various backgrounds and geographic areas around the world that are dedicated to the conservation of iguana species and their habitat. This group is one of more than 100 Specialist Groups organized through the IUCN Species Survival Commission (SSC)

3.7 Incremental cost reasoning

99. Without GEF interventions, land use planning processes in The Bahamas would continue to undervalue biodiversity and ecosystem services in the planning and management processes. The GEF intervention will build on existing legislation, eg. The Forestry Act of 2010 and the Planning and Subdivision Act of 2010 to develop 2 sub national plans which integrate valuation of biodiversity, ecosystem services and take into account sound management of the forestry estate . Without the GEF intervention the high biodiversity, priority forest, of the Pine Islands would continue to be degraded and threatened by ad hoc development which fails to take into account local, national and global environment considerations. A GEF intervention, focusing on prevention and informed decision making strengthens sensitive planning, conservation and management measures in lieu of ad hoc development and inaction.
100. GEF support will permit a sound start to the implementation of the Forestry Act through the development of community implemented management plans for two priority Conservation Forest Areas. While mangrove restoration activities have occurred sporadically over the years, there is limited data and knowledge available on potential sites that would be suitable for mangrove restoration and thus a means for adaptation to climate change. The National Creeks and Wetlands Initiative report indicates several sites where these natural systems have been impacted by coastal erosion and movement of sand during tropical storms. The restoration of the Davis Creek mangrove has critical demonstration value for replication of restoration efforts across the Bahamas and in the Caribbean region.
101. GEF support will further support the piloting of sustainable use of non-timber forest products in Pine Island communities with limited livelihood options. this would be the first attempt to formalize existing NTPF activities within Bahamian forests. Underneath the legal framework of the Forestry Regulations 2014, which can begin the dialogue with communities to develop the required community forestry management and training to promote sustainability of the resources while encouraging small businesses..

3.8 Sustainability

102. The involvement of a wide range of stakeholders, including private sector groups such as tour operators, hotel operators, cave divers, and community led organizations in the pilot activities as well as the dissemination of information about National Forestry Estate and threats to them will have a multiplier effect which will contribute to wider sustainability and future expansion to remaining islands.
103. Institutional sustainability is incorporated through: Development and use open source framework for accessibility to the national forestry estate and land-use plans and maps for the relevant departments and greater community; Training of forestry officer and conservation forest community managers in use of management effectiveness tracking tools which will assist in monitoring as a part of the greater Bahamas National Protected Area System and enable effective protected area management that is adaptive.

104. Social (and economic) sustainability is incorporated through capacity building within local communities and local technical experts for skills related to sustainable land use planning through the training and sustainable forestry management, addressing the inventory and development of the monitoring system, mangrove restoration and sustainable livelihoods.

3.9 Replication

105. The Bahamas project components cover key issues that are faced by several countries across the Caribbean as well as other Small Island Developing States globally. Pilot projects particularly will involve monitoring through use of scientifically and internationally accepted methodologies that will enable replication of these activities. Policies, plans and strategies developed through the project will also serve as examples for other countries to replicate. The capacities developed will include increased skill sets for planners at the local and national levels, facilitating replication at the inter-island and national levels.
106. The project will pilot innovative sustainable use of non-timber forest products while ensuring protection of biodiversity resources. The lessons learned, marketing and innovative successes of will be shared at regularly convened inter-island community venues to en(gender) replication, and will have a positive and sustainable impact on women.

3.10 Public awareness, communications and mainstreaming strategy

107. All three elements – awareness, communication and mainstreaming – will be supported by strategies at the local, national and global level with effective links to partners at all levels. An important element of public awareness and communications will be capacity building in the area of community documentation. Public awareness planning and implementation will be an integral component of the Project's overall communications strategy. As highlighted in Output 1.2 (see Section 3.3), the mainstreaming focus for the Project will target policies relevant to sustainable forestry management in both the agricultural and environmental sectors and will be finalized during the first Project inception workshop in The Bahamas. The Ministry of Environment & Housing, with the support of Bahamas Agriculture & Industrial Corporation, will take the lead role in this strategy.

3.11 Environmental and social safeguards

108. The Project has been designed to have positive environmental, economic and social impacts through the establishment of the national forestry estate, the creation of sustainable conservation forest areas, reducing land degradation through promotion of sustainable harvesting methods within forest dependent communities thru various pilot demonstration projects **designed to ensure equitable gender participation and benefits**. The enhancement of sustainable livelihoods will also provide a necessary boost of interest into the trades of handicraft that will be reflected throughout the island. Component 3, costed at \$2.8 million of which GEF resources \$844,125 is designed entirely around providing socio-economic benefits to underpin the alternative livelihoods which can be supported through non timber forest products. Component 1 furthermore substantiates the socio-economic benefits afforded through valuation and integration of ecosystem services in land use planning. In accordance with UNEP requirements, the checklist for Environmental and Social Issues has been completed. With respect to gender considerations, specific activities will be developed and rolled out taking into full consideration gender roles and ensuring equitable participation (note Outputs 1.2, 2.2, 3.1 and 3.2).

SECTION 4: INSTITUTIONAL FRAMEWORK AND IMPLEMENTATION ARRANGEMENTS

109. At the national level, BEST, will be responsible for the implementation of the project in accordance with the components outlined in Section 3 of this document. UNEP, as the GEF Implementing Agency (IA), will be responsible for overall project supervision to ensure consistency with GEF and UNEP policies and procedures, and will provide guidance on linkages with related UNEP and GEF funded activities. UNEP's GEF Biodiversity/Land Degradation/Biosafety Unit of the Division of Environmental Policy Implementation (DEPI) will monitor implementation of the activities undertaken during the execution of the project. UNEP's GEF Biodiversity/Land Degradation/Biosafety Unit of the Division of Environmental Policy Implementation (DEPI) will be responsible for clearance and transmission of financial and progress reports to the GEF. Appendix 9 includes a decision-making flowchart and organizational chart for FSP implementation.
110. BEST, as the NEA, will cooperate with UNEP so as to allow the organization to fulfil its responsibility as IA accountable to the GEF. To this end, free access to all relevant information will be provided by BEST. The NEA will also establish a National Coordinating Committee (NCC) and appoint a National Project Coordinator (NPC). In conjunction with the NPC, BEST will establish reporting guidelines for all partners and specialists and ensure that they submit quality reports. The NEA and NPC will collaborate to prepare biannual progress reports, quarterly financial reports and annual summary progress reports for UNEP.
111. The NCC will be responsible for guiding the execution of project activities, inclusive of reviewing and advising on the main outputs of the BPI FSP, ensuring that the environmental policy of the Government is fully reflected in the BPI FSP, ensuring effective communication and decision-making, and assisting with mobilization of expertise as needed for proper execution of the BPI FSP outputs. The NCC will consist of at least five members, and be comprised of representatives of key sector and institutions and will ensure the project fits within local, national, and international needs. The NCC will be chaired by the Permanent Secretary of the MEH (Chair) with representation to be drawn from existing NISP²: BEST, DMR, TNC and BNT and to be determined from lead and co-executing stakeholders: BAIC, BNGIS, DLS, Forestry Unit, Department of Physical Planning, and Town Planning Committee. The NCC responsibilities will include oversight of project implementation, monitoring of project progress, strategic and policy guidance and to review and approve annual work plans and budgets. The inclusion of a NISP member on the NCC will serve to ensure coordination with other related initiatives. A complete list of responsibilities of the NCC can be found in Appendix 10.
112. The NPC will be responsible for coordinating, managing and monitoring the implementation of the Pine Islands Project conducted by the local and international experts, consultants, subcontractors and cooperating partners. The NPC will also coordinate and oversee the preparation of the outputs of the BPI FSP, manage the FSP finance, oversee overall resource allocation, and where relevant, submit proposals for budget revisions to the NCC and UNEP. Detailed responsibilities of the NPC are listed in Appendix 10.

² The agencies which form the National Implementation Support Programme (NISP) include the core members of Bahamas National Trust (BNT), Department of Marine Resources (DMR) and The Nature Conservancy (TNC). The NISP meets monthly to monitor and guide environmental projects under implementation.

113. As previously mentioned in Section 2.5, the Primary stakeholders to be involved in regularly through execution of the project are:
- Bahamas Environment, Science and Technology (BEST) Commission
 - Forestry Unit (FU)
 - Department of Physical Planning (DPP)
 - The Town Planning Committee (TPC)
 - Bahamas Agricultural and Industrial Corporation (BAIC)
 - Bahamas National GIS Centre

SECTION 5: STAKEHOLDER PARTICIPATION

114. The project depends on the active stakeholder participation selected key stakeholders who will drive the project. Additionally, various participatory stakeholders ranging from the community and other government agencies. During the Stakeholder Validation Workshop, the stakeholders indicated their level of participation for the execution of the project. The following table summarizes the stakeholder participation for the duration of the project.

Table 7: Stakeholder participation and management arrangements

Component	Lead Stakeholder = Responsible for overall delivery and oversight	Co-Executing Stakeholder = Key for delivery of activities	Participatory Stakeholder = Key consultative and participatory role in delivery of activities
1	FU; DPP	BNGISC; DLS; BEST	BNT; TNC; WSC
2	BEST; FU	DPP; BNGISC; DLS	BNT; TNC; WSC; BREEF
3	BAIC	DLG; FU; WSC	BNT; TNC

115. The Forestry Unit and the Department of Physical Planning will be the co-lead agencies for Component 1, as they will each be the lead for their respective outputs. The Forestry Unit will lead the activities to achieve outputs 1.1, 1.2.1 and DPP will lead the activities to achieve output 1.1.2; and they will co-lead for output 1.2.2.

116. In component 2: the entire component will be led by the Forestry Unit with support from government agencies either in a collaborative format or participatory format, specifically Dept. of Lands & Surveys, Dept. of Physical Planning and Bahamas National GIS Centre. The two conservation forest areas, Abaco Blue Hole Conservation Forest and Andros Maiden Hair Conservation Forest, have active community organizations that are influential in the implementation of the community forestry management.

117. Lastly, in Component 3, this component will be lead entirely by Bahamas Agricultural and Industrial Corporation (BAIC) with support from government agencies either in a collaborative format or participatory format, specifically the Forestry Unit, Water & Sewerage Corporation, and the Department of Local Government (DLG). The local community organizations will play an essential role in this component, notably the Bahamas Handi-craft associations who are active in each of the settlements identified for the pilot sites.

118. Communities around the forest estate and proposed sub-national plans under the project will play a key role. The Forestry Regulations of 2014, Sections 19(2) and 19(3) Forest Management Plans assure consultative processes as well as public notification processes including a posting and written commentary phase.
- http://laws.bahamas.gov.bs/cms/images/LEGISLATION/SUBORDINATE/2014/2014-0038/ForestryRegulations2014_1.pdf The Planning and Subdivision Act of 2010, Sections 17(1), 17(2), 17(4), 17(5) and 17(6) – Preparation of Land Use Plan also assures an extensive consultation, as well as public opportunities to review, inclusive of public meetings and several notification processes and opportunities for representation.
- http://laws.bahamas.gov.bs/cms/images/LEGISLATION/PRINCIPAL/2010/2010-0004/PlanningandSubdivisionAct2010_1.pdf

SECTION 6: MONITORING AND EVALUATION PLAN

119. UNEP will be responsible for managing the mid-term review/evaluation and the terminal evaluation. The Project Manager and partners will participate actively in the process. The project will be reviewed or evaluated at mid-term. The purpose of the Mid-Term Review (MTR) or Mid-Term Evaluation (MTE) is to provide an independent assessment of project performance at mid-term, to analyze whether the project is on track, what problems and challenges the project is encountering, and which corrective actions are required so that the project can achieve its intended outcomes by project completion in the most efficient and sustainable way. In addition, it will verify information gathered through the GEF tracking tools.
120. The National Coordinating Committee will participate in the MTR or MTE and develop a management response to the evaluation recommendations along with an implementation plan. It is the responsibility of the UNEP Task Manager to monitor whether the agreed recommendations are being implemented. An MTR is managed by the UNEP Task Manager. An MTE is managed by the Evaluation Office (EO) of UNEP. The EO will determine whether an MTE is required or an MTR is sufficient.
121. An independent terminal evaluation (TE) will take place at the end of project implementation. The EO will be responsible for the TE and liaise with the UNEP Task Manager throughout the process. The TE will provide an independent assessment of project performance (in terms of relevance, effectiveness and efficiency), and determine the likelihood of impact and sustainability. It will have two primary purposes:
- (i) to provide evidence of results to meet accountability requirements, and
 - (ii) to promote learning, feedback, and knowledge sharing through results and lessons learned among UNEP and executing partners.
122. While a TE should review use of project funds against budget, it would be the role of a financial audit to assess probity (i.e. correctness, integrity etc.) of expenditure and transactions. The TE report will be sent to project stakeholders for comments. Formal comments on the report will be shared by the EO in an open and transparent manner. The project performance will be assessed against standard evaluation criteria using a six point rating scheme. The final determination of project ratings will be made by the EO when the report is finalised. The evaluation report will be publically disclosed and will be followed by a recommendation compliance process.

123. The direct costs of reviews and evaluations will be charged against the project evaluation budget.

124. The GEF tracking tools are attached as Appendix 15. These will be updated at mid-term and at the end of the project and will be made available to the GEF Secretariat along with the project PIR report. As mentioned above the mid-term and terminal evaluation will verify the information of the tracking tool.

SECTION 7: PROJECT FINANCING AND BUDGET

7.1. Overall project budget and 7.2 Project Co-financing

125. The overall project budget is presented in detail in Appendix 1 (Budget by project components and UNEP budget lines) and Appendix 2 (Co-financing by source and UNEP budget lines). A total of US\$ 7,695,258 is committed as co-financing from various sources. The sources of these commitments come from other GEF projects, bilateral sources, multilateral sources, the Government of The Bahamas and the private sector.

126. Summary GEF budget for the four years of project implementation.

Components	Amount Requested from GEF	Year 1	Year 2	Year 3	Year 4
Component 1	962,345	250,000	250,000	250,000	212,345
Component 2	860,455	300,000	403,748	100,000	56,707
Component 3	844,125	245,039	250,000	286,753	62,333
PMC	186,500	46,625	46,625	46,625	46,625
Totals	2,853,425	841,664	950,373	683,378	378,010

127. Summary of GEF Co-financing by source and type.

Components	Total Co-financing	Co-financing	Source	Co-financing	Source
		In – Kind		Cash	
Component 1	2,874,580	2,744,580	FU,BNGIS, DPP, DL&S USGS	130,000	FU,D&LS, DPP
Component 2	2,332,817	2,272,817	FU,BNGISC, DL&S, ICC, UNEP	60,000	FU,D&LS

Component 3	1,984,433	1,584,433	BAIC,ICC, BNGISC	400,000	BAIC
PMC	503,428	503,428	BEST, FD	0	BEST, FD
Totals	7,695,258	7,105,258		590,000	

7.2. Project cost-effectiveness

128. Current land use planning and implementation continues to undervalue biodiversity and ecosystem services, resulting in the degradation of land, biodiversity, priority forest areas. The current effort will couple informed land use planning and sustainable livelihoods, including agroforestry and non-timber forest products to relieve pressure on forest resources while providing opportunities for generation of income in the Family Islands of The Bahamas.

129. To ensure cost effective use of GEF funds the synergistic components of this project comprise:

- Formalizing the National Forestry Estate thru identification of boundaries, a complete assessment inventory and monitoring of all three ecosystems (pine, coppice and mangroves);
- Enhancing the practical functions of Sustainable Land Management (SLM) practices through the development of 2 sub-national land-use plans that integrates Sustainable Forest Management for islands of Andros and New Providence
- Piloting SFM in Conservation Forests with formalized community management promoting the biodiversity conservation at all levels of society;
- Developing, implementing and replicating SFM and community forestry approaches to sustainable livelihoods

APPENDICES

Appendix 1: Budget by project components and UNEP budget lines (separate file)

Appendix 2: Co-financing by source and UNEP budget lines (separate file)

Appendix 3: Incremental cost analysis

Component	Cost in US \$		
	Baseline (B)	Alternative (A)	Increment (A-B)
COMPONENT 1. Institutional systemic support & associated capacity building and public education, and community awareness.			
<p>OUTCOME 1.1 Enhanced enabling environment in support of Sustainable Land Management (SLM) and Sustainable Forest Management (SFM) with integration of Biodiversity into land use planning</p>	<p>Implementation of Pine Islands land use plans does not integrate of sustainable land use, forest ecosystem services, and biodiversity values.</p>	<p>Town Planning Committee implementation of Land Use Plans integrates sustainable land use, forest ecosystem services considerations, and biodiversity values.</p>	<p>Total Cost: 3,836,925 Cost to GEF: 962,345 Co-financing: 2,874,580</p>
<p>Output 1.1.1 Assessment and monitoring system (GIS); database of forestry lands with biodiversity overlay, incl. mangroves.</p>	<p>No open access to forestry, biodiversity or ecosystem services resources data.</p> <p>No established monitoring systems for the forestry sector resulting in inconsistent data for forestry resources.</p> <p>Previous mapping initiatives were not biodiversity or forestry focused.</p>	<p>Open source framework accessible to all agencies of forest resources which integrates ecosystem services and biodiversity data.</p> <p>Developed GIS datasets using Remote Sensing analysis</p>	
<p>Output 1.1.2 Inter-agency system established and capacity built to enable trade off</p>	<p>No comprehensive land-use plans that incorporate biodiversity and conservation areas exist for Andros or New Providence</p>	<p>Developed an open-source framework for all agencies to have access to Forestry data and Land-Use plans</p>	

Component	Cost in US \$		
	Baseline (B)	Alternative (A)	Increment (A-B)
analyses for sustainable land management planning at the landscape levels in 2 sub-national plans	Limited technical capacity	Town Planning Committee implementation of Land Use Plans integrates sustainable land use, forest ecosystem services considerations, and biodiversity values. 75% of the Town Planning Committee and Family Island Administrators received training	
Outcome 1.2 Increased targeted public awareness of the importance and benefits of sustainably managing forest & mangrove biodiversity, ecosystems services and sustainable land management	No Land-use plans to aid Local Island administrators in decision making. Ad Hoc knowledge only of land-use planning Community awareness of basis decision making limited LD Tracking Tools:	Public awareness activities Local Island Administrators on Andros and Abaco increased by 50% over baseline.	
Output 1.2.1 Tailored tools, methodologies, and training for integration of biodiversity into forest management/ land use management	Extremely limited accessibility of tools which incorporate sustainable land use, forest ecosystems services and biodiversity values into processes of Town Planning Committees and Local Island Administrators;	Public awareness activities Local Island Administrators on Andros and Abaco increased by 50% over baseline.	
Output 1.2.2. Awareness building modules -- benefits of sustainable land use and forest management.	Limited public awareness of sustainable land use options, forest ecosystem services and biodiversity values in Town Planning Committees and Local Island Administrators	30% Increased Awareness in Targeted Communities based on Surveys	

Component	Cost in US \$		
	Baseline (B)	Alternative (A)	Increment (A-B)
COMPONENT 2. Expansion and improved management of forest/mangrove sector			
OUTCOME 2 Improved management effectiveness of existing and new forest reserves (283,700.2ha (estimate and subject to survey*))	Consolidated BD-1 Tracking Tool Score: 140 SFM Tracking Tool Score: 4	Consolidated BD-1 Tracking Tool Score: 259 SFM Tracking Tool Score: 6	Total Cost: 3,193,272 Cost to GEF: 860,455 Co-financing: 2,332,817
Output 2.1: Establishment of National Forestry Estate inclusive of Conservation Forests.	The Forestry Act 2010 speaks to these designations. Cabinet conclusion directing Forest Department to gazette national forestry estate	Gazettal of National Forestry Estate (GEF supports Conservation & Protected Forests and GOB supports Forest Reserves) Vesting of Forestry lands into Ministry of Environment and Housing	
Output 2.2 - Community co-management of 2 Conservation forests (representing 15% of Conservation Forests) on the island of Abaco: Blue Hole Conservation Forest, 8,094 ha and on the island of Central Andros: Maiden Hair Conservation Forest, 14,316 ha; estimated 5,661,077 tCO ₂ eq carbon sequestered over 30 year period	No Community management plans Baseline CO ₂ eq	Forest Conservation Plans signed, adopted and implementation underway by Communities. EXACT figure CO ₂ eq in 4yrs	

Component	Cost in US \$		
	Baseline (B)	Alternative (A)	Increment (A-B)
Output 2.3: Restoration of Andros Davis Creek Mangrove system (50 ha) with CO2savings up to 14,563 tCO2 eq	Degraded mangrove system, limited ecosystem services provisioning Baseline CO2eq	50 hectares of degraded mangrove restored. Carbon stock increase of up to 14,563 tCO2 eq. EXACT fig CO2eq in 4yrs	
COMPONENT 3. Models for SFM Sustainable livelihoods, agriculture, forestry & sustainable land management in coastal communities of the Pine Islands, and additional Family Islands in Central and SE Bahamas			
Outcome 3. Effective provisioning of forest ecosystems underpinned by strengthened livelihoods people dependent on use of forest resources - increased use of sustainable land, agroforestry and forestry management practices among coastal communities.	Unsustainable and uninformed harvesting of non timber forest products (NTFPs).	Sustainable practices adopted in 2 Pine Island communities	Total Cost: 2,828,558 Cost to GEF: 844,125 Co-financing: 1,984,433
Output 3.1 Pilot Model Sustainable Cultivation of Native Palms Establish sustainable plantation in buffer zones of Forest Reserve (Andros) and	Unsustainable harvesting of palm hearts is damaging productivity	Joint community/forestry unit monitoring of 40.5 ha in Andros and 40.5 ha in Grand Bahama 35% Increase in persons engaged in NTFPs and community level income (gender disaggregated)	

Component	Cost in US \$		
	Baseline (B)	Alternative (A)	Increment (A-B)
Conservation Forest (Grand Bahama) based on best practice available			
Output 3.2 Pilot Model Sustainable Cascarilla Cultivation and Processing	<p>Unsustainable harvesting of cascarilla bark prohibits regeneration and limiting productivity.</p> <p>No baseline data.</p>	<p>Joint community/forestry unit monitoring of 20 ha in Acklins and 20 ha in Crooked Island</p> <p>35% Increase in persons engaged in NTFPs and community level income (gender disaggregated)</p>	
PMC	0	689,928	Total Cost: 689,928 Cost to GEF: 186,500 Co-financing: 503,428
Grand Total:		\$10,548,683	

Appendix 4: Results Framework

Project Strategy	Indicators	Baseline	Mid Term Targets³	End of Project Targets	Sources of Verification	Risk and Assumptions
Project Objective: Integrate Biodiversity Considerations & Ecosystem Services into Forest Management and Land Use Planning (4 Pine Islands: Grand Bahamas, New Providence, Abaco and Andros)						
COMPONENT 1. Institutional systemic support & associated capacity building and public education, and community awareness.						
OUTCOME 1.1 Enhanced enabling environment in support of Sustainable Land Management (SLM) and Sustainable Forest Management (SFM) with integration of Biodiversity into land use planning	2 sub national plans integrate BD and SFM	Implementation of Pine Islands land use plans does not integrate of sustainable land use, forest ecosystem services, and biodiversity values. Consolidated BD-1 Tracking Tool Score: 140 SFM Tracking Tool Score: 4 LD-3 Tracking Tools Score: 5	Draft of the 2 sub-national land use plans that integrate BD and SFM Consolidated BD-1 Tracking Tool Score: SFM Tracking Tool Score: LD-3 Tracking Tools Score:	Town Planning Committee implementation of Land Use Plans integrates sustainable land use, forest ecosystem services considerations, and biodiversity values. Consolidated BD-1 Tracking Tool Score:259 SFM Tracking Tool Score:6 LD-3 Tracking Tools Score: 8	Published approval on official website of the Government of The Bahamas Technical Reports verifying activities by the Town Planning Committee	Risks: Viewed as extra red-tape policy Assumptions: Decision makers want progressive sustainable development of communities

³ To be agreed at Project Inception Workshop

<p>Output 1.1.1 Assessment and monitoring system (GIS); database of forestry lands with biodiversity overlay, inc mangroves.</p>	<p>Establishment of Carbon and Forestry monitoring systems</p>	<p>No open access to forestry, biodiversity or ecosystem services resources data.</p> <p>No established monitoring systems.</p>	<p>Available data collected, consolidated and collated.</p> <p>Draft framework available for review.</p> <p>Conducted Remote Sensing to determine carbon values</p>	<p>Open source framework accessible to all agencies of forest resources which integrates ecosystem services and biodiversity data.</p> <p>Developed GIS datasets using Remote Sensing analysis</p>	<p>Forestry Maps that other agencies ;</p> <p>Reports of Carbon sequestration monitoring for pine, coppice and mangroves</p>	<p>Risk: Availability of cloud free data; GIS data sets not having the required resolution to differentiate forest types</p> <p>Assumptions: Data already developed is available</p>
<p>Output 1.1.2 Inter-agency system established and capacity built to enable trade off analyses for sustainable land management planning at the landscape levels in 2 sub-national plans</p>	<p>An Integrated GIS framework for all agencies in regards to Forestry Resources</p> <p>Sub national land-use plans for Andros and New Providence</p> <p>Enhance capacity</p>	<p>No Forestry in existing GIS framework</p> <p>No comprehensive land-use plans that incorporate biodiversity and conservation areas exist for Andros or New Providence</p> <p>Limited technical capacity</p>	<p>Data collection completed</p> <p>Draft of the 2 sub-national land use plans that integrate BD and SFM</p> <p>Capacity needs assessment carried out</p>	<p>Developed an open-source framework for all agencies to have access to Forestry data and Land-Use plans</p> <p>Town Planning Committee implementation of Land Use Plans integrates sustainable land use, forest ecosystem services considerations, and biodiversity values.</p> <p>75% of the Town Planning Committee and</p>	<p>Published approval on official website of the Government of The Bahamas</p> <p>Technical Reports verifying activities by the Town Planning Committee and Family Island Administrators</p>	<p>Risks: Viewed as extra red-tape policy; lack of interest of Town planning committee; flawed local board of works election process</p> <p>Assumptions: Decision makers want progressive sustainable development of communities</p>

				Family Island Administrators received training		
Outcome 1.2 Increased targeted public awareness of the importance and benefits of sustainably managing forest & mangrove biodiversity, ecosystems services and sustainable land management	Public Awareness	Community awareness of basis decision making limited	Tools and training modules developed Baseline awareness Surveys completed	Public awareness activities Local Island Administrators on Andros and Abaco increased by 50% over baseline.	Surveys with gender disaggregated data	
Output 1.2.1 Tailored tools, methodologies, and training for integration of biodiversity into forest management/ land use management	Tools and Training for capacity enhancement in the areas of sustainable land use, forest ecosystem services, and biodiversity values.	No tools or training modules in the areas of sustainable land use, forest ecosystem services, and biodiversity values.	Capacity needs assessment conducted Developed training modules workshop With Planning Consultant/DPP, FU, BEST BNGIS, and DLS	Public awareness activities Local Island Administrators on Andros and Abaco increased by 50% over baseline.	Surveys with gender disaggregated data	Risks: Change of administration focus due to Local Govt. election in 2017 Assumptions: Compliance to partake in training
Output 1.2.2. Awareness building modules -- benefits of sustainable land use and forest management.	Awareness built of benefits of sustainable land use, forest ecosystem services and biodiversity values.	Low awareness and no communication strategy	Conduct baseline surveys within communities Development of communication strategy and action plan	30% Increased Awareness in Targeted Communities based on Surveys	Surveys with gender disaggregated data	Assumptions: Participating stakeholders in communities
COMPONENT 2. Expansion and improved management of forest/mangrove sector						
OUTCOME 2 Improved management effectiveness of	BD-Tracking Tool	Consolidated BD-1 Tracking	Consolidated BD-1 Tracking Tool	Consolidated BD-1 Tracking	Technical Reports	Risks: (i) damages to forest by natural

<p>existing and new forest reserves</p>	<p>SFM Tracking Tool</p>	<p>Tool Score: 140 SFM Tracking Tool Score: 4</p>	<p>Score SFM Tracking Tool Score</p>	<p>Tool Score:259 SFM Tracking Tool Score:6</p>	<p>Government records/Cabinet Decisions. Tracking tools</p>	<p>disasters, forest fires, storm surges; lack of community support Assumptions: (ii) No major natural disaster (hurricane, wildfires) upsets implementation and forest regeneration; (i) Adequate community buy-in and internal control mechanisms are created; (iii) Improved regulatory framework can be enforced where internal control does not apply (e.g. external squatters)</p>
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<p>Output 2.1: Establishment of National Forestry Estate inclusive of Conservation & Protected Forests.</p>	<p>Establishment of National Forestry Estate inclusive of Conservation & Protected Forests</p>	<p>The Forestry Act 2010 speaks to these designations. Cabinet conclusion directing Forest Department to gazette national forestry estate</p>	<p>Draft boundaries for estimated total of <u>283,750.2 ha</u> (Conservation Forests = 149396.99 ha (52.65% of forestry Estate) & Protected Forests= 37810.58 ha) (13.33%) for Forestry Estate</p>	<p>Gazettal of National Forestry Estate (GEF supports Conservation & Protected Forests and GOB supports Forest Reserves) Vesting of Forestry lands into Ministry of Environment and Housing</p>	<p>Boundaries declared and published on Government website SFM Tracking Tool</p>	<p>Delays in public consultation process and Cabinet Decisions. Cooperation of government agencies on usage of land for Forestry designations</p>
<p>Output 2.2 - Community co-management of 2 Conservation forests (representing 15% of Conservation Forests)</p> <p>Abaco: Blue Hole Conservation Forest, 8,094 ha</p> <p>Central Andros: Maiden Hair Conservation Forest, 14,316 ha</p> <p>Estimated CO2 savings up to 5,661,077 tCO2-eq for 30 years</p>	<p>Management Plans developed and implemented taking into account balanced gender roles and opportunities</p>	<p>No Community management plans Baseline COeq</p>	<p>Gazettal of target Forest areas (Blue Hole Conservation Abaco and Maiden Hair, Andros) & community consultations underway EXACT figure CO2eq in 2 yrs</p>	<p>Forest Conservation Plans signed, adopted and implemented by Communities. EXACT figure CO2eq in 4yrs</p>	<p>Technical reports Tracking Tools New Carbon Sequestration monitoring reports</p>	<p>Risks: Delays in gazettment process. Encroachment of squatters in Conservation areas Assumptions: Appreciation/Respect of Conservation areas from community</p>

Output 2.3: Restoration of Andros Davis Creek Mangrove system (50 ha) with CO2savings up to 14,563 tCO2 eq	The area and condition of mangrove forests	Degraded mangrove system, limited ecosystem services provisioning Baseline CO2eq	Culverts cleaned out. Invasive species removed. Establishment of nursery EXACT fig CO2eq in 2 yrs	50 hectares of degraded mangrove restored. Carbon stock increase of up to 14,563 tCO2 eq. EXACT fig CO2eq in 4yrs	Technical reports on survey in sample plots incorporating carbon sequestration rates. Surveys of water quality and fish counts. Tracking Tools	Disregard for importance of mangroves Assumptions: Business partnerships to clean up creek tidal way
COMPONENT 3. Models for SFM Sustainable livelihoods, agriculture, forestry & sustainable land management in coastal communities of the Pine Islands, and additional Family Islands in Central and SE Bahamas						
Outcome 3. Effective provisioning of forest ecosystems underpinned by strengthened livelihoods people dependent on use of forest resources - increased use of sustainable land, agroforestry and forestry management practices among coastal communities.	Integrated landscape management practices adopted by local communities taking into account balanced gender roles and opportunities.	Unsustainable and uninformed harvesting of non timber forest products (NTFPs).	Data and guidelines for sustainable models of NTFPs developed	Sustainable practices adopted in 2 Pine Island communities	Technical reports	Risks: (i) aging communities unable to take advantage of training and opportunities; Assumptions: (i) Cooperative communities engage actively in process and see the benefit of market penetration and diversity of products offered
Output 3.1 Pilot Model Sustainable Cultivation of	Application of sustainable	Unsustainable harvesting of	Sustainable model of harvesting	Joint community/for	Technical reports	Risk: aging family island harvesters

<p>Native Palms</p>	<p>practices in forest communities of the Pine Islands taking into account balanced gender roles and opportunities.</p>	<p>palm hearts is damaging productivity</p>	<p>developed on the basis on gathered data.</p> <p>Gender disaggregated socio economic survey for surrounding communities</p>	<p>estry unit monitoring of 40.5 ha in Andros and 40.5 ha in Grand Bahama</p> <p>35% Increase in persons engaged in NTFPs and community level income (gender disaggregated)</p>	<p>(database, map of palms, resources assessment inventory)</p> <p>Resource monitoring reports (at baseline, mid and end of project)</p> <p>Surveys with gender disaggregated data</p>	<p>and decline income from expanded opportunities in other communities</p> <p>Assumptions: market exist for products offered; products command a price to offset cost of development and market diversification</p>
<p>Output 3.2 Pilot Model Sustainable Cascarilla Cultivation and Processing</p>	<p>Application of sustainable practices in forest communities of the Pine Islands taking into account balanced gender roles and opportunities.</p> <p>10 ha in Acklins and 10 ha in Crooked Island</p>	<p>Unsustainable harvesting of cascarilla bark prohibits regeneration and limiting productivity.</p> <p>No baseline data.</p>	<p>Sustainable model of harvesting developed on the basis on gathered data.</p> <p>Gender disaggregated socio economic survey for surrounding communities</p>	<p>Joint community/for estry unit monitoring of 20 ha in Acklins and 20 ha in Crooked Island</p> <p>35% Increase in persons engaged in NTFPs and community level income (gender disaggregated)</p>	<p>Technical Reports (database, map of cascarilla, resources assessment inventory)</p> <p>Resource monitoring reports (at baseline, mid and end of project)</p> <p>Survey reports</p>	<p>Risk: aging family island harvesters and decline income from expanded opportunities in other communities</p> <p>Assumptions: market exist for products offered; products command a price to offset cost of development and market diversification</p>

Appendix 5: Workplan and timetable

	Year 1				Year 2				Year 3				Year 4			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Component 1: Institutional systemic support & associated capacity building and public education, and community awareness.																
OUTCOME 1: Enhanced enabling environment in support of Sustainable Land Management (SLM) and Sustainable Forest Management (SFM) with integration of biodiversity into land use planning																
Output 1.1: Develop Assessment and monitoring system (GIS);																
Activity 1.1.1.1: Development of work plan and acquirement of geospatial data for proceeding activities for entire project																
Activity 1.1.1.2: Identification and demarcation of boundaries through field assessments, GPS coordinates and utilizing GIS to update 1986 forestry maps to create maps of the forest estate (demarcation will require legal action and gazetting of the proposed boundaries).																
Activity 1.1.1.3: Conduct remote sensing analysis to determine true Carbon sequestration values and sensing analysis of forestry lands																
Activity 1.1.1.4: Develop Forestry Maintenance Plan for Forestry dataset																
Activity 1.1.1.5: Develop Forestry Monitoring system within the established Forestry Estate																
Activity 1.1.1.6: Develop and implement open source framework accessible to all agencies, using data developed in previous activities																

Output 1.1.2: Development of Land-Use Plans for 2 islands which integrates biodiversity, ecosystem services and forestry the landscape level																
Activity 1.1.2.1: Review of the National Planning and Development Policies including in depth reviews on Andros and Town Planning Committee on New Providence																
Activity 1.1.2.2: Collate and update selected species and ecosystems baseline for incorporation into the tools																
Activity 1.1.2.3: Development of 2 sub-national plans for Andros and New Providence																
Activity 1.1.2.4 – Public consultations/review process of the proposed land-use plans for Andros and New Providence																
Activity 1.1.2.5: Approval of the Land-use plans																
Output 1.2.1: Tailored tools, methodologies and training for integration of biodiversity into forest management and land-use management																
Activity 1.2.1.1: Identification of tools, methodologies and training programs to be used for the integration of BD into SLM/SFM at DPP/TPC, FU, DLS and Local Government levels																
Activity 1.2.1.2: Review and Selection of appropriate tools, methodologies and training programs at meeting with Stakeholders																

Activity 1.2.1.3: Development of integrated Land Use Planning Materials																
Activity 1.2.1.4: Feedback on developed tools from agencies																
Activity 1.2.1.5: Integration into policy framework and follow-up of tools with stakeholders and Local Administrators																
Output 1.2.2.: Awareness building modules - benefits of SLM & SFM																
Activity 1.2.2.1: Development of Awareness and Communication strategies																
Activity 1.2.2.2: Develop action plan, including training programme, to build capacity and awareness of strategy and policy options and mainstreaming tools and disseminate relevant information widely																
Activity 1.2.2.3: Strengthen public awareness, learning and sharing experiences at local, regional and national levels using appropriate multi-media methods																
Component 2:																
Outcome 2.1: Improved management effectiveness of existing and new forest reserves																

Output 2.1.1: Establishment of National Forestry Estate																
Activity 2.1.1.1: Obtain GIS dataset layers developed in Activity 1.1.1.2																
Activity 2.1.1.2: Collaborative efforts over the finalization of boundaries with Forestry Unit, DPP, Town Planning Committee, Depts. Of Lands & Surveys, and BNGIS Centre																
Activity 2.1.1.3: Collaboration with DPP for insight and cooperation in the land classification designations																
Activity 2.1.1.4: Submit boundaries to Parliament and proceed through the approval processes (Public Consultations, Cabinet approvals) for the Gazettal of the National Forestry Estate																
Output 2.1.2: Community co-management of 2 management plans for 15% Conservation forests																
Activity 2.2.1: Obtain GIS dataset layers developed un Activity 1.1.1.2																
Activity 2.2.2: Develop a National Forest Plan as per Forestry Act 2010 Part II 5: (1) (a) – (e)																

Activity 2..2.3: Submit the national forest plan for review to the Minister of Environment & Housing, and Public Consultation as per Forestry Act 2010 Part II 5: (2)																	
Activity 2.2..4: as per Forestry Act 2010 Part II 5: (3) after the Minister has approved a national forest plan, the plan shall be tabled in Parliament and subsequently Gazetted																	
Activity 2.2..5: Develop a Forest Management Plan for 2 Conservation Forest areas as per Forestry Regulations, 2014 Part V- (19) (1) (a) – (e)																	
Activity 2.2..6: Collaborative efforts over the finalization of boundaries with Forestry Unit, DPP, Town Planning Committee, Depts. Of Lands & Surveys, and BNGIS Centre; In addition to developing partnerships with community based associations for the management of Forest Areas																	
Activity 2.2..7: Conduct Public Consultation of the Proposed Management for Conservation Forest areas;																	
Activity 2.2.8: Develop a Sustainable Financial Plan for the 2 Conservation Forest Areas in Abaco and Andros																	

Activity 2.2.9: After consultation, the Minister shall grant formal approval of the 2 Conservation Forest Areas in Abaco and Andros																
Activity 2.2.10: Implementation of Conservation Forest Areas in Abaco and Andros																
Activity 2.2.11: Monitoring of activities within Conservation Forest areas																
Activity 2.2.12: Strengthen public awareness, learning and sharing experiences at local, regional and national levels using appropriate multi-media methods (ref. to activity 1.2.2.3)																
Output 2.3.: Restoration of Mangrove system (50 ha)																
Activity 2.3.1 : Conduct specific site assessment and determine baseline analysis																
Activity 2.3.2: Develop and commence implementation of Participatory based Site Specific Management Plans based on the SFM principles for restoring/rehabilitating degraded mangrove																
Activity 2.3.3: Develop and implement a community based monitoring of the rehabilitated mangrove site																

Activity 2.3.4: Research and Monitoring programme established for indicator species																
Component 3: Sustainable Livelihoods																
Outcome 3.1 Effective provisioning of forest ecosystem services																
Output 3. 1 Piloting alternative livelihoods: Project 1: Cultivation of Palm																
Activity 3.1.1: Resource assessment of silver top and cabbage palms																
Activity 3.1.2: Develop Industry Education awareness for Palm Cultivation																
Activity 3.1.3: Promotion of Sustainable harvesting of silver top & cabbage palms																
Activity 3.1.4: Promotion of Indigenous Craft trade (using harvested Palm tops)																
Activity 3.1.5: Establish a formalized plantation of palms for ornamental landscape market																
Activity 3.1.6: Develop Marketing Promotion Strategy of Indigenous Craft trade (using harvested palm tops)																
Activity 3.1.7: Establish formalized plantation of palms for ornamental landscape market																

Output 3. 2 Piloting alternative livelihoods: Project 2: Cultivation of Cascarilla and Cascarilla Oil production																
Activity 3.2.1: Resource assessment of cascarilla on Acklins, Crooked Island, Samana Cay and Plana Cays																
Activity 3.2.2 Promotion of Sustainable harvesting of cascarilla																
Activity 3.2.3: Develop Industry Education system to build capacity																
Activity 3.2.4: Establish a formalized plantation																
Activity 3.2.5: Develop Marketing Plan for Promotion of Cascarilla products (bark and oil)																
Component 4: Monitoring																
Output 4.1: Monitoring & Evaluation																
Activity 4.1.1: Finalise and disseminate project Monitoring and Evaluation Framework																
Activity 4.1.2: Implement participatory Monitoring and Evaluation plan, tools, and methods with targeted communities, including necessary training																
Activity 4.1.3: Establish reporting plan and																

requirements, templates																
Activity 4.1.4: Submit project and financial reports to GEF																
Activity 4.1.5: Organise and implement project Mid-Term Evaluation																
Activity 4.1.6: Organise and implement project Final Evaluation																
Component 5:																
Outcome 5.1: Project Management																
Output 5.1.1: Establishment of NPC																
Activity 5.1.1.1: Establish arrangements for overall national project administration and implementation infrastructure including national coordination unit																
Output 5.1.2: Selection and appointment of NPC																
Output 5.1.3: Project Management unit operational																
Activity 5.1.3.1: Plan and undertake a full project inception meeting to address capacity building related to relevant project methodologies, approaches and general technical guidance as well																

as project management and administration																	
Activity 5.1.3.2: Establish and operate project budgeting and accounting system																	
Activity 5.1.3.3: Review and refine annual work plan with national project coordinator and national partners based on better understanding of local context in pilot sites and in-depth baseline																	
Activity 5.1.3.4: Establish project National Steering Committees and conduct regular meetings																	
Activity 5.1.3.5: Establish other relevant committees including Site Committees and other committees, working groups identified for other project outputs																	
Activity 5.1.3.6: Finalise and disseminate project Communication Strategy																	
Activity 5.1.3.7: Establish overall project Capacity Building Plan, including essential project management process-related training such as developing effective partnerships																	
Output 5.1.4: Selection of subject matter specialists, experts, and consultants																	

Appendix 6: Key deliverables and benchmarks

Component	Activities	Deliverables	Benchmarks
Project Objective: Integrate Biodiversity Considerations & Ecosystem Services into Forest Management and Land Use Planning (4 Pine Islands: Grand Bahamas, New Providence, Abaco and Andros)			
COMPONENT 1. Institutional systemic support & associated capacity building and public education, and community awareness.			
Component	Activities	Deliverables	Benchmarks
OUTCOME 1.1 Enhanced enabling environment in support of Sustainable Land Management (SLM) and Sustainable Forest Management (SFM) with integration of Biodiversity into land use planning.			
Component	Activities	Deliverables	Benchmarks
Output 1.1.1 Assessment and monitoring system (GIS); database of forestry lands with biodiversity overlay, inc mangroves.	<p>Activity 1.1.1.1-1.1.1.2: <i>The Development of Work plan and Implementation for the Identification and demarcation of boundaries through field assessments, GPS coordinates and utilizing GIS to update 1986 forestry maps to create maps of the forest estate (demarcation will require legal action and gazettement of the proposed boundaries).</i></p> <p>Activity 1.1.1.3: <i>Remote sensing analysis of forestry lands to determine carbon sequestration rates, land-use change and forestry growth rates</i></p> <p>Activity 1.1.1.4: <i>Develop Forestry Maintenance Plan for Forestry dataset:</i></p>	<p>Forestry Maps that other agencies including Forestry Unit use in decision making process</p> <p>GHG inventory of forest ecosystems; Verified biomass rates from monitoring exercises at end of project</p>	<p>Open source framework accessible to all agencies of forest resources which integrates ecosystem services and biodiversity data.</p> <p>Developed GIS datasets using Remote Sensing analysis</p> <p>Available data collected, consolidated and collated. : Draft framework available for review. Conducted Remote Sensing to determine carbon values</p>

	<p>Activity 1.1.1.5: <i>Develop & Implement Forestry Monitoring system within the established Forestry Estate.</i></p> <p>Activity 1.1.1.6 <i>Establish Open Source Framework accessible to all agencies of Forest Resources.</i></p>		
Output 1.1.2 Inter-agency system established and capacity built to enable trade off analyses for sustainable land management planning at the landscape levels in 2 sub-national plans	<p>Activity 1.1.2.1: <i>Review of the National Planning and Development Policies:</i></p> <p>Activity 1.1.2.2: <i>Collate and update selected species and ecosystems baseline for incorporation into the tools</i></p> <p>Activity 1.1.2.3: <i>Development of 2-subnational plans for Andros and New Providence:</i></p> <p>Activity 1.1.2.4: <i>Public consultation/review process of the proposed land-use plans for Andros and New Providence:</i></p> <p>Activity 1.1.2.5: <i>Approval of the Land-use plans.</i></p>	<p>2 sub-national plans for Andros and New Providence islands</p> <p>Systemic outreach and updating of data to Town Planning Committees or Local Island Administrators Regularized.</p> <p>Developing an open-source framework for all agencies to have access to Forestry data and Land-Use plans</p>	<p>2 sub-national plans submitted and passed in Parliament; Gazettal of Maps for Pine Islands;</p> <p>Review historical practices in island communities;</p> <p>The Town Planning Committees or Local Island Administrators 2 sub national plans themed with Biodiversity, National Forestry Estate including other Protected Areas;</p> <p>Schedule of interagency consultations established</p>
Component	Activities	Deliverables	Benchmarks
Outcome 1.2 Increased targeted public awareness of the importance and benefits of sustainably managing forest & mangrove biodiversity, ecosystems services and sustainable land management			
Output 1.2.1 Tailored tools, methodologies, and training	Activity 1.2.1.1: <i>Identification of tools, methodologies and training</i>	Improved awareness of Local Govt. Officers / Town Planning Committee	Conduct training workshops on Andros and New Providence on

<p>for integration of biodiversity into forest management/ land use management</p>	<p><i>programs to be used for the integration of BD into SLM/SFM at Local Government and Town Planning Committee Levels</i></p> <p>Activity 1.2.1.2: <i>Review and Selection of appropriate tools, methodologies and training programs at meeting with Stakeholders. Envisioned a 1-2 day workshop (including lunch + refreshments) for the tools developed in Activity 1.2.1.1.</i></p> <p>Activity 1.2.1.3 - <i>During these activities, the tools chosen in the previous activity will be developed (Activity 1.2.1.3), which will then receive feedback on their effectiveness (Activity 1.2.1.4)</i></p> <p>Activity 1.2.1.5: <i>This activity will aim integrate the developed tools into the policy framework of stakeholders. The format will be in a workshop that coincides with the 2017 Local Government Training in New Providence</i></p>	<p>of SLM/SFM and Biodiversity;</p> <p>Training modules developed for Local Govt. Officers</p>	<p>1) sustainable land use, 2) forest ecosystem services, and 3) integrated biodiversity values in SLM and SFM using sub-national land-use plans for Andros and New Providence.</p>
<p>Output 1.2.2. Awareness building modules -- benefits of sustainable land use and forest management.</p>	<p>Activity 1.2.2.1: <i>Development of Awareness and Communication strategies for all project components, with specific targets into the communities with pilot project activities.</i></p> <p>Activity 1.2.2.2: <i>Develop action plan, including training programme, to</i></p>	<p>3 workshops in 3 Pine Island Communities (Abaco, North Andros, South Andros);</p>	<p>30% Increased Awareness in Targeted Communities based on Surveys Baseline targeted assessment and awareness surveys carried out</p>

	<p><i>build capacity and awareness of strategy and policy options and mainstreaming tools and disseminate relevant information widely</i></p> <p><i>Activity 1.2.2.3: Strengthen public awareness, learning and sharing experiences at local, regional and national levels using appropriate multi-media methods</i></p>		
COMPONENT 2. Expansion and improved management of forest/mangrove sector			
OUTCOME 2 Improved management effectiveness of existing and new forest reserves			
Component	Activities	Deliverables	Benchmarks
Output 2.1: Establishment of National Forestry Estate inclusive of Conservation Forests.	<p><i>. Activity 2.1.1.: Obtain GIS dataset layers developed in Activity 1.1.2</i></p> <p><i>Activity 2.1.2: Collaborative efforts over the finalization of boundaries with Forestry Unit, DPP, Town Planning Committee, Depts. Of Lands & Surveys, and BNGIS Centre</i></p> <p><i>Activity 2.1.3: Collaboration with DPP/TPC for insight and cooperation in the land classification designations for the forestry estate</i></p> <p><i>Activity 2.1.4: Submit boundaries to Parliament and proceed through the approval processes (Public</i></p>	<p>Gazettal of National Forestry Estate;</p> <p>Vesting of Forestry lands into Ministry of Environment and Housing.</p>	<p>Draft boundaries for Forestry Estate, with selection estimated total of <u>283,750.2 ha</u> (Conservation Forests = 149,396.99 ha (52.65% of forestry Estate) & Protected Forests = 37810.58 ha (13.33%)</p>

	<i>Consultations, Cabinet approvals)</i>		
<p>Output 2.2 - Community co-management of 2 Conservation forests (representing 15% of Conservation Forests)</p> <p>Abaco: Blue Hole Conservation Forest, 8,094 ha</p> <p>Central Andros: Maiden Hair Conservation Forest, 14,316 ha</p> <p>Estimated CO2 savings up to 5,661,077 tCO2-eq for 30 years</p>	<p>Activity 2.2.1: <i>Obtain GIS dataset layers developed in Activity 1.1.1.2</i></p> <p>Activity 2.2.2: <i>Develop a National Forest Plan as per Forestry Act 2010 Part II 5: (1) (a) – (e)</i></p> <p>Activity 2.2.3: <i>Submit the national forest plan for review to the Minister of Environment & Housing, and Public Consultation in communities as per Forestry Act 2010 Part II 5: (2)</i></p> <p>Activity 2.2.4: <i>as per Forestry Act 2010 Part II 5: (3) after the Minister has approved a national forest plan, the plan shall be tabled in Parliament and subsequently Gazetted</i></p> <p>Activity 2.2.5: <i>Implementation of national forest plans by the Forestry Unit as per Forestry Act 2010 Part II 5: (4)</i></p> <p>Activity 2.2.6: <i>Develop a Forest Management Plan for 2 Conservation Forest areas as per Forestry Regulations, 2014 Part V- (19) (1) (a) – (e)</i></p>	<p>Gazettal of target Forest areas (Blue Hole Conservation Abaco and Maiden Hair, Andros) & community consultations underway</p> <p>Draft Community Management Plans for the 2 Conservation Forest Areas</p> <p>New Carbon sequestration monitoring reports</p>	<p>Implemented Management plans for both areas;</p> <p>Forest Conservation Plans signed, adopted and implemented by Communities;</p> <p>Working agreements and arrangements between stakeholders and communities established.</p> <p>Tracking Tools</p>

	<p>Activity 2.2.7: Collaborative efforts over the finalization of boundaries with Forestry Unit, DPP, Town Planning Committee, Depts. Of Lands & Surveys, and BNGIS Centre; In addition to developing partnerships with community based associations for the management of Forest Areas</p> <p>Activity 2.2.8: Conduct Public Consultation of the Proposed Management for Conservation Forest areas in NP, Abaco and Andros</p> <p>Activity 2.2.10: Develop a Sustainable Financial Plan for the 2 Conservation Forest Areas in Abaco and Andros</p> <p>Activity 2.2.11: Implementation of Conservation Forest Areas in Abaco and Andros</p> <p>Activity 2.2.12: Monitoring of activities within Conservation Forest areas in Abaco and Andros</p> <p>Activity 2.2.13: Strengthen public awareness, learning and sharing experiences at local, regional and national levels using appropriate multi-media methods</p>		
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<p>Output 2.3: Restoration of Andros Davis Creek Mangrove system (50 ha) with CO2savings up to 14,563 tCO2 eq</p>	<p>Activity 2.3.1: Conduct specific site assessment and determine baseline analysis</p> <p>Activity 2.3.2: Develop and commence implementation of Participatory based Site Specific Management Plans based on the SFM principles for restoring/rehabilitating degraded mangroves</p> <p>Activity 2.3.3: Develop and implement a community based monitoring of the rehabilitated mangrove site.</p> <p>Activity 2.3.4 Research and monitoring programme established for indicator species</p> <p>Activity 2.3.5: Design and implement a comprehensive monitoring programme that involves the community</p>	<p>50 hectares of degraded mangrove restored and rehabilitated</p> <p>Carbon stock increase of up to 14,563 tCO2 eq.</p> <p>Establishment of nursery</p>	<p>Technical reports on survey in sample plots incorporating carbon sequestration rates.</p> <p>Surveys of water quality and fish counts.</p>
Component	Activities	Deliverables	Benchmarks
<p>COMPONENT 3. Models for SFM Sustainable livelihoods, agriculture, forestry & sustainable land management in coastal communities of the Pine Islands, and additional Family Islands in Central and SE Bahamas</p>			
<p>Outcome 3. Effective provisioning of forest ecosystems underpinned by strengthened livelihoods people dependent on use of forest resources - increased use of sustainable land, agroforestry and forestry management practices among coastal communities.</p>			
<p>Output 3.1 Pilot Model</p>	<p>Activity 3.1.1: Resource assessment of silver top and cabbage palms and</p>	<p>See activities</p>	<p>Adoption and practice of</p>

<p>Sustainable Cultivation of Native Palms</p>	<p>baseline assessment for indicators</p> <p><i>Activity 3.1.2:</i> Formulate Forestry Management Plan geared towards NTFPs and establishment of palm plantations</p> <p><i>Activity 3.1.3:</i> Develop and commence implementation of Integrated Community Management Plan for North Andros and Eastern Grand Bahama along with the handi-craft associations</p> <p><i>Activity 3.1.4:</i> Develop Industry Education awareness for Palm Cultivation</p> <p><i>Activity 3.1.5:</i> Promotion of Sustainable harvesting of silver top & cabbage palms</p> <p><i>Activity 3.1.6:</i> Develop Marketing Promotion Strategy of Indigenous Craft trade (using harvested Palm tops.</p> <p><i>Activity 3.1.7:</i> Establish a formalized plantation of native palms for ornamental landscape market Establish sustainable plantation in buffer zones of Forest Reserve (Andros) and Conservation Forest (Grand Bahama) based on best practice available</p>		<p>sustainability guidelines in the harvesting of native palms; Developed sustainable model of harvesting developed on the basis on gathered data; Socio-economic survey for surrounding communities; Non-sustainable harvesting practices and impact on palm tops and pine understory biodiversity identified; Resource monitoring reports (at baseline, mid and end of project)</p>
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Component	Activities	Deliverables	Benchmarks
Output 3.2 Pilot Model Sustainable Cascarilla Cultivation and Processing	<p><i>Activity 3.2.1:</i> Resource assessment of cascarilla on Acklins, Crooked Island, Planna and Samana Cays.</p> <p><i>Activity 3.2.2:</i> Development & Promotion of Sustainable harvesting of cascarilla</p> <p><i>Activity 3.2.3:</i> Develop Industry Education system to build capacity on the two inhabited islands,</p> <p><i>Activity 3.2.4:</i> Establish a formalized plantation on 4 pilot sites totaling 10 hectares (25 acres) each: Acklins, Crooked Island</p> <p><i>Activity 3.2.5:</i> Develop Marketing Plan for Promotion of Cascarilla products (bark and oil) to be implemented by BAIC</p> <p><i>Activity 3.2.6:</i> Conduct socioeconomic background baseline to the communities by focusing on gender, age, economic status.</p> <p><i>Activity 3.3:</i> Develop Integrated Community Management Plan on Acklins and Crooked Island</p> <p><i>Activity 3.2.1.3:</i> Develop and</p>	<p>See activities.</p>	<p>Technical Reports (database, map of cascarilla, resources assessment inventory)</p> <p>Resource monitoring reports (at baseline, mid and end of project)</p> <p>Survey reports of Socio economic survey for surrounding communities</p>

	implement Public Awareness of Stakeholder plan for Sustainable Livelihoods		
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Appendix 7: Costed M&E plan

Type of M&E Activity	Responsible Parties	Budget (GEF & co-finance)	Time Frame
Inception Workshop	<ul style="list-style-type: none"> ● NPC and PIU & stakeholder agencies 	\$2,500	Within 2 months of project start-up
Inception Report	<ul style="list-style-type: none"> ● NPC and PIU 	NPC Salary	1 month after project inception meeting
Measurement of project indicators (outcome, progress and performance indicators, GEF tracking tools) including baseline data collection	<ul style="list-style-type: none"> ● NPC and PIU ● Project Technical team ● Consultants/Sub-contracts 	25,000 (est.)	<p>Outcome indicators: start, mid and end of project</p> <p>Progress/performance indicators: annually</p>
Semi-annual Progress/Operational reports to UNEP	<ul style="list-style-type: none"> ● NPC and PIU 	NPC Salary	Within 1 month of the end of reporting period i.e. on or before 31 January and 31 July
Project Management Committee (PMC) meetings	Permanent Secretary of the MoHE (Chair); Permanent Secretary of other relevant Ministries; National Project Coordinator; A representative of UNEP; A member of the NGO community.	\$6,000:	Once a year minimum
Reports of PMC meetings	<ul style="list-style-type: none"> ● National Project Coordinator with input from PMU and other relevant stakeholders 	NPC Salary	Annually
Project Implementation	<ul style="list-style-type: none"> ● NPC and PIU 	NPC Salary	Annually, part of

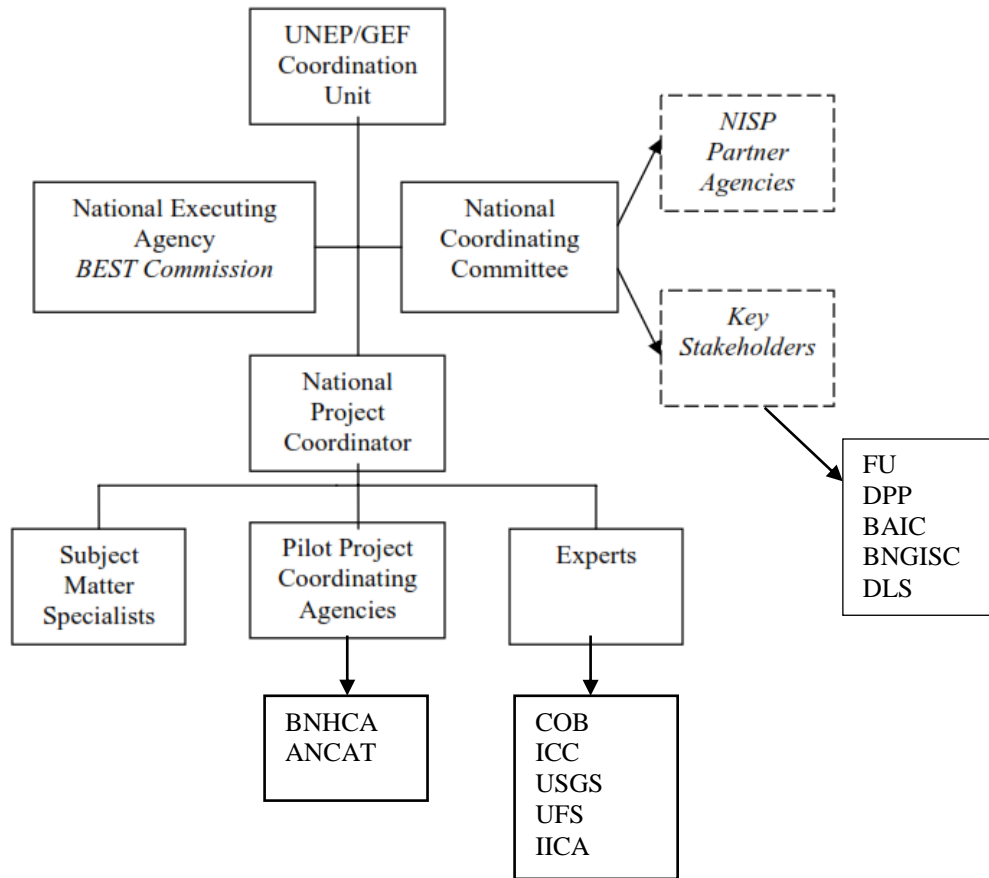
Review (PIR)			reporting routine
Mid Term Review/Evaluation	<ul style="list-style-type: none"> • External consultant • UNEP 	20,000	At mid-point of project implementation
Terminal Evaluation	<ul style="list-style-type: none"> • UNEP • External consultant 	20,000	Within 6 months of end of project implementation
Audit	<ul style="list-style-type: none"> • National Executing Agency 	8,000	Annually
Project Final Report	<ul style="list-style-type: none"> • NPC 	NPC Salary	Within 2 months of the project completion date
Co-financing report	<ul style="list-style-type: none"> • National Executing Agency and NPC 	NPC Salary	Within 1 month of the PIR reporting period, i.e. on or before 31 July
Publication of Lessons Learnt and other project documents	<ul style="list-style-type: none"> • Stakeholder Agencies • NPC 	10,000	Annually, part of Semi-annual reports & Project Final Report
Total M&E Plan cost		Total \$91,500	

Appendix 8: Summary of reporting requirements and responsibilities

	Due Date	Responsibility
Procurement plan	2 weeks before project inception meeting	NPC in conjunction with NEA
Inception report	1 month after project inception meeting	NPC
Expenditure report accompanied by explanatory notes	Quarterly on or before the following dates each year – 30 April, 31 July, 31 October, and 31 January	NPC in conjunction with NEA
Cash advance request and details of anticipated disbursements	Quarterly as indicated above for expenditure report or as required	NPC in conjunction with NEA
Progress report	Half-yearly on or before 31 January and 31 July	NPC
Audited report for annual expenditures ending 31 December of each year	Yearly on or before 30 June	Contracted auditor providing report to NEA
Inventory of non-expendable equipment	Yearly on or before 31 January	NPC in conjunction with NEA
Co-financing report	Yearly on or before 31 July	NPC in conjunction with NEA and NCC
Project implementation review (PIR) report	Yearly on or before 31 August	NPC in conjunction with NEA
Minutes of NCC meetings	Yearly or as relevant	NPC
Mission reports and aide memoire for NEA	Within 2 weeks of return	Task Manager, DGEF, FMO, DGEF
Final report	2 months following project completion date	NPC in conjunction with NEA
Final inventory of non-expendable equipment		NPC in conjunction with NEA
Equipment transfer letter		NPC in conjunction with NEA
Final expenditure statement	3 months following project completion date	NPC in conjunction with NEA
Mid-term evaluation	Midway through project	UNEP Evaluation and Oversight Unit (EOU)

Final audited report for project expenditures	6 months following project completion date	Contracted auditor providing report to NEA
Independent terminal evaluation report	6 months following project completion date	UNEP Evaluation and Oversight Unit (EOU)
UNEP-DEPI Supervision Missions	UNEP DEPI Task Manager	Mission reports
Meetings of the National Coordinating Committee (NCC)	Project Implementation Unit (PIU) in the Department of Forestry as the Lead Project Implementation Entity (LPIE) as overseen by the National Executing Agency (NEA) : BEST Commission Bahamas, Environment, Science and Technology (BEST)	Minutes of the meetings of the NCC

Appendix 9: Decision-making flowchart and organizational chart



Appendix 10: Terms of Reference

National Executing Agency (NEA),

- The National Executing Agency (NEA), in addition to other duties given to it by the National Government, will:
- Establish the National Coordinating Committee (NCC);
- Appoint a full time National Project Coordinator (NPC), taking into account the sustainability of activities related to the Establishment of the Forestry monitoring system, National Forestry Estate, and Sustainable Livelihood Pilot projects
- Provide the necessary scientific, technical, financial and administrative support to the work of the NCC, working in close cooperation with relevant government agencies, the scientific community and the public and private sectors;
- Ensure that regular reports, financial accounts, and requests are submitted to UNEP as set out in Section ___;
- Review all documentation deriving from the BPI FSP and any other relevant documentation to ensure that these are consonant with National Government;
- Submit the final version of the Terminal Report no later than four years from signature of this Memorandum of Understanding.

National Coordinating Committee (NCC)

- The National Coordinating Committee (NCC) will work together as a team on management of the National Project and meet at least on a quarterly basis with the following duties:
- Develop a common understanding of what is needed to implement the BPI FSP;
- Oversee the execution of project activities;
- Approve the detailed workplan and budget produced by the NPC;
- Mobilise necessary expertise, as needed for the proper execution of the BPI FSP outputs;
- Provide overall policy advice on the implementation of the BPI FSP;
- Review and advise on the main outputs of the Pine Islands FSP;
- Ensure that information on the implementation of the BPI FSP as well as the outputs are brought to the attention of local and national authorities for follow up;
- Assist in mobilising available data and ensure a constant information flow between all concerned parties;
- Allow for effective communication and decision-making between the National Project Coordinator and other actors;
- Ensure that the environmental policy of the Government is fully reflected in the BPI FSP documentation;
- Review and approve the BPI FSP outputs and documents.

On an annual basis the NCC will meet with all executing partners including UNEP, to fulfil steering mechanism responsibilities including: oversight of project implementation, monitoring of project progress, strategic and policy guidance and to review and approve annual work plans and budgets.

National Project Coordinator (NPC)

1. Title of Position: National Project Coordinator (Team Manager)

2. *Position Location:* Normally NEA
3. *Reports to:* NEA, NCC and UNEP Task Manager
4. *Date of TOR:* _____
5. *Supervises:* National Subject Matter Specialists and Project Site Teams

6. *Tasks:*

- Act as secretary to the NCC;
- Coordinate, manage and monitor the implementation of the BPI FSP conducted by the local and international experts, consultants, subcontractors and cooperating partners; this includes planning, initiating and managing national project activities according to the project document and the procedures in the official UNEP Operational Guidelines ;
- Organize National Coordinating Committee meetings;
- Prepare detailed workplan and budget under the guidance of the NCC;
- Ensure effective communication with the relevant authorities, institutions and Government departments in close collaboration with the National Coordinating Committee;
- Acting as the technical focal point for national stakeholders and broaden national stakeholder base where relevant, e.g. by organizing national stakeholder consultations and facilitating national stakeholder meetings;
- Foster, establish and maintain links with other related national and international programmes and initiatives;
- Identification of additional national co-finance as the FSP develops;
- Prepare and oversee the development of Terms of Reference for FSP components, Subject Matter Specialists, Project Site Teams, other consultants and experts;
- Organize, contract and manage the consultants and experts, and supervise their performance;
- Coordinate and oversee the preparation of the outputs of the BPI FSP;
- Manage the FSP finance, oversee overall resource allocation and where relevant submit proposals for budget revisions to the NCC and UNEP;
- Manage the overall FSP ensuring that all the activities are carried out on time and with budget to achieve the stated outputs;
- Coordinate the work of all stakeholders under the guidance of the NEA and the NCC and in consultation with the UNEP Task Manager
- Ensure that information is available to the NCC about all Government, private and public sector activities, which impact on BPIs; and
- Prepare and submit to UNEP and the NCC, regular progress and financial reports as set out in Section _.

7. *Deliverables*

- NCC established; regular meetings held and documented;
- PSTs established; meetings held as required and documented;
- Terms of references and work plans for national Subject Matter Specialists prepared, agreed and monitored;
- Technical and financial reports as well as other inputs that may be required are provided in timely fashion;
- Legal framework and governance structure submitted to authorities for formal approval (Year 1);
- Bahamas Protected Area Fund established and capitalized with \$6.5 Million (Year 3); this will be done in conjunction with NEA, NCC and donors to the Fund (i.e. GEF, GOB, KfW and TNC);

- Pilot demonstration projects completed in timely fashion and within budget according to Terms of Reference for each (Years 3 and 4); and
- Pilot demonstration projects results submitted to UNEP (Year 4).

8. *Qualifications and Experience Required:*

- Advanced university degree (Master's or higher) in forestry sciences, biodiversity conservation, agriculture, or plant biology;
- Familiarity with the GEF SFM, LD, and BD goals and objectives;
- Experience in undertaking similar assignments, preferably with experience working in a SIDS;
- Minimum of seven (6) years experience in administration/management of international projects preferably as team leader or global coordinator;
- Team player who possesses excellent organisational and communications skills; and
- Proven experience in project management and administrative management;
- Proven experience in facilitating meetings or discussions;
- Experience with GEF policies and procedures including logframe and similar project planning tools;
- Willingness and ability to travel to the participating islands as required;
- Ability to work with senior government officials, research institutes, non-governmental organizations (NGOs), and local communities, etc.;
- Proven ability to manage budgets;
- Demonstrated experience working in an international and/or multi-cultural environment;
- Fluent in English (native English speaker preferred);
- Excellent written and oral communication skills;
- Computer literacy with familiarity with Microsoft Office Suite;

Subject Matter Specialists

1. *Title of Position:* Subject Matter Specialists (Consultants of various disciplines)
2. *Position Location:* Variable
3. *Reports to:* Normally NPC
4. *Date of TOR:* Variable
5. *Major Functions:*

The role is to assist the NPC in the implementation of FSP activities. The NPC will prepare the terms of reference based on the individual needs of specific project components including activities during the various components and pilot demonstration sites on various islands. Currently foreseeable roles include (but are not limited to):

- Communications Specialist
- Forestry Planner
- Enforcement Trainer
- Environmental Economist
- GIS Expert
- Sustainable Livelihoods Specialist
- Mangrove Specialist
- Prescribed Burning Specialist

Appendix 11: Co-financing commitment letters from project partners (separate file)

Appendix 12: Endorsement letter of GEF National Focal Point



**THE BAHAMAS ENVIRONMENT, SCIENCE
AND TECHNOLOGY COMMISSION
Ministry of the Environment**

REF: MTE/BEST/GEF

SENT VIA FACSIMILE

February 23, 2012

Ms. Maryam Niamir Fuller
Director, GEF Coordination Office
United Nations Environment Programme – UNEP
P.O. Box 30552 Nairobi, Kenya
Email: maryam.niamir-fuller@unep.org

Dear Ms. Fuller

ENDORSEMENT FOR THE PROJECT ENTITLED: “THE BAHAMAS – PINE ISLANDS FOREST/MANGROVES INNOVATION AND INTEGRATION (GRAND BAHAMA, NEW PROVIDENCE, ABACO AND ANDROS)”

In my capacity as GEF Operational Focal Point for The Bahamas, I confirm that the above project proposal (a) is in accordance with my government’s national priorities and our commitment to the relevant global environmental conventions; and (b) was discussed with relevant stakeholders through the National Project Formulation Exercise for GEF 5).

I am pleased to endorse the preparation of the above project proposal with the support GEF UNEP. If approved, the proposal will be prepared and implemented by the Bahamas Environment Science and Technology (BEST) Commission, Department of Forestry, Department of Physical Planning and The Bahamas National Trust. I request a copy of the to project document be provided before it is submitted to the GEF Secretariat for CEO endorsement.

The total financing (from GEFTF, LDCF, SCCF and/or NPIF) being requested for this project is US\$3,234,000, inclusive of project preparation grant (PPG), if any, and Agency fees for project cycle management services associated with the total GEF grant. The financing requested is detailed in the table below.

Source of Funds	GEF Agency	Focal Area	Amount (in US\$)			Total
			Project Preparation	Project	Fee	
GEFTF	UNEP	BD	52,500	1,050,000	110,250	1,212,750
GEFTF	UNEP	LD	52,500	1,050,000	110,250	1,212,750
GEFTF	UNEP	MFA	35,000	700,000	73,500	808,500
(select)	(select)	(select)				0
Total GEF Resources			140,000	2,800,000	294,000	3,234,000

I consent to the utilization of \$2,425,500 of The Bahamas allocations in GEF-5 as defined in the System for Transparent Allocation of Resources (STAR) together with a request for an additional \$808,500 from the Global Sustainable Forest Management Multi Focal Area.

Sincerely

Philip S. Weech
Director, GEF Operational Focal Point

c: Kristin McLaughlin – UNEP, DEPI

P.O. Box N-7132
Nassau, The Bahamas

Telephone: 242-322-4546
Facsimile: 242-326-3509

Email: bestnbs@bahamas.gov.bs
Internet: www.best.bs

Appendix 13: Procurement Policy

For procurement of goods/services valued under \$50,000, the following requisition procedures will be employed:

1. Requirement

Three (3) quotations from suppliers will be required before requisitions are authorized unless written explanatory notations are provided with respect to the non-availability of the requisite number of suppliers.

- a) Once a Section Head has determined that a particular item or service is needed, the Request Form is prepared. The following information must be provided:
- Name of Section/Unit
 - Date the request is prepared
 - Quantity of the item being requested
 - Name of suggested supplier
 - Price of the item
 - Extended price of all items
 - If item is new, state reason for requirement
 - If item is a replacement, indicate disposition of existing item/equipment
 - Balance in item before request is approved
 - Balance in item after request is approved
 - Signature of Requesting Officer/Section Head
 - Approval by Supplies Officer
 - Approval by Heads of Accounts Section
 - Approval by Permanent Secretary/Head of Department

2. Section/Unit Request

The request must be prepared by the Section/Unit Head or officer responsible for requesting goods and services. A copy of the request should be kept for the Section/Unit records in date order.

Request for stock items goes to the Supplies Officer prior to being sent to Accounts and non-stock items go directly to the Accounting Officer. The request once received by Accounts is recorded in the goods request register in date and number order.

The request form must be approved by the Head of Accounts who verifies that funds are available and that goods and services are complying with regulations and then forwards form to Permanent Secretary or Head of Department for approval. If items are rejected for lack of funds or not complying with regulations, it is forwarded to the Permanent Secretary or Head of Department on a rejection form. The rejected request is noted in the goods request register.

The Supplies/Accounting Officer, once satisfied that there is justification for the goods or services being requested, approves the request by signing and dating the request and the routing sheet in the appropriate spaces provided.

The Accounting Officer would have the request audited, checking for the quotations, date of quotation and calculations. A minimum of three quotes must be attached. Where three quotes are not obtainable, the reason must be stated on the request.

The Supplies/Accounting Officer, in cases where there are no quotes or insufficient quotes, if possible will obtain the necessary quotes or additional quotes.

In smaller Ministries/Departments without a Supplies Section, all requisitions will go directly to the Accounting Officer.

For goods/services valued at \$50,000 or greater, the Tenders Board process is initiated.

The Financial Regulations found in Chapter 359 Section 21 of the Financial Administrative and Audit Act (Commencement 14th February, 1975) established the Government Tenders Board and Award of Contracts by such Board and by the Government.

The Financial Regulations states that the Tenders Board shall consist of the following three (3) members who constitute a quorum:

1. The Financial Secretary, who shall be the Chairman;
2. The Permanent Secretary of the Ministry of Works;
3. The Permanent Secretary of the Ministry of Health; and
4. Such other public officers not exceeding three as may be appointed by the Minister in writing from time to time.

The Chairman shall in the case of any equality of votes have a second or casting vote. The Minister may appoint a public officer to be secretary to the Board. The functions of the Board shall be to make recommendations to the Minister of Finance for the award of contracts for supplies, works and services required by the Government in excess of fifty thousand dollars (\$50,000) but not exceeding two hundred and fifty thousand dollars (\$250,000). All awards of contracts for supplies, works and services required by the Government for amounts in excess of two hundred and fifty thousand dollars (\$250,000) shall be made by the Cabinet.

Board Meetings

Meetings of the Tenders Board are held at the Ministry of Finance each

Tuesday at 10:00 a.m. Tender Submission and Evaluation

Advertisements in local newspapers and other media for consultancies should run for 2-4 weeks, usually appearing twice per week in major newspapers.

Notices of tender openings should be sent to the attention of the Ministry of Finance at least two weeks in advance. Tender envelopes submitted by the general public are addressed to the Financial Secretary/Chairman of the Tenders Board with identification of tender project; bids must arrive in triplicate within a sealed envelope. The envelopes are received by the receptionist at the Ministry of Finance and are stamped with a battery operated date stamp and a Ministry of Finance crest stamp and initialed by the receptionist. They are recorded in a log book and the deliverer signs his/her name in the book. The receptionist then places the envelopes in one of two locked boxes next to her work station.

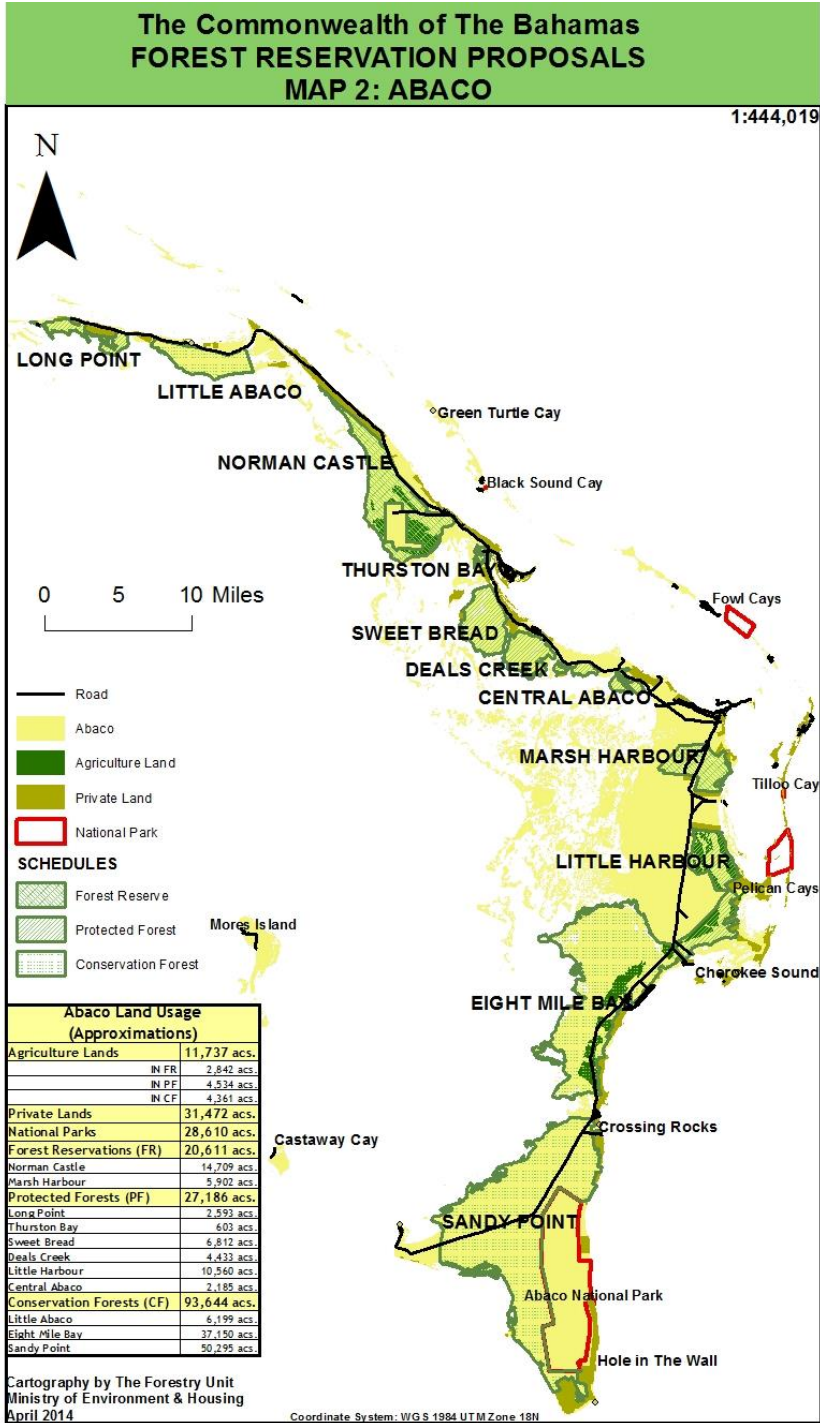
A representative of the project execution agency must be present at tender opening. Representatives are given copies of tenders for evaluation and are to return to Tenders Board meeting with a recommendation within two weeks inclusive of an evaluation report.

The tender evaluation should contain a recommendation with a justification of choice along with a matrix of all bidding entities for easy comparison/review.

In extraordinary circumstances or if well justified, the Tenders Board will agree to sole sourcing or to selecting a bid other than the lowest bid.

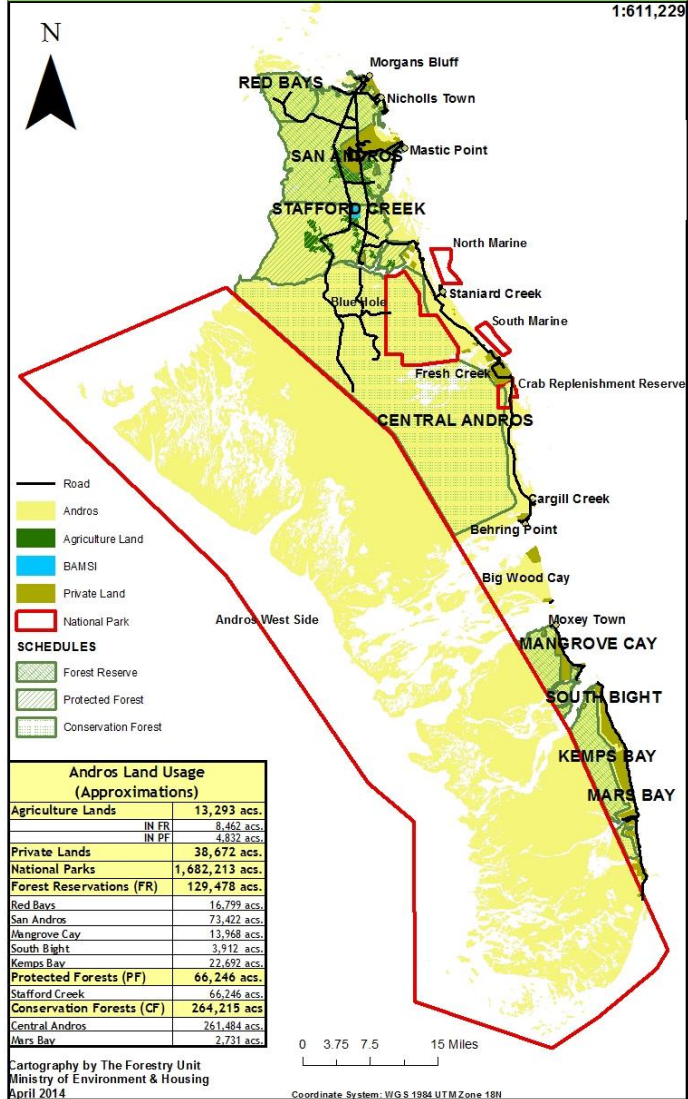
Appendix 14: Tracking Tools (separate files)

Appendix 16: Maps of the Proposed Forestry Estate



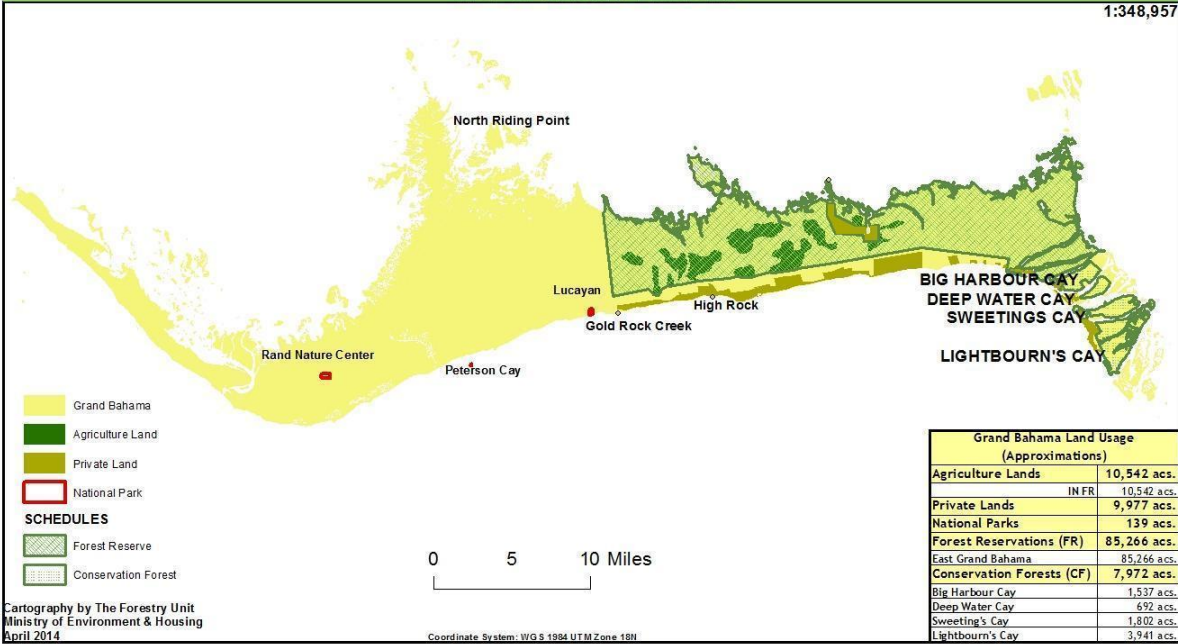
The Commonwealth of The Bahamas
FOREST RESERVATION PROPOSALS
MAP 1: ANDROS

1:611,229



The Commonwealth of The Bahamas
FOREST RESERVATION PROPOSALS
MAP 3: GRAND BAHAMA

1:348,957



Cartography by The Forestry Unit
 Ministry of Environment & Housing
 April 2014

Coordinate System: WGS 1984 UTM Zone 18N

The Commonwealth of The Bahamas
FOREST RESERVATION PROPOSALS
MAP 4: NEW PROVIDENCE

1:98,241

