

**Project Document**

# Section 1: Project Identification

**1.1 Project title:** ***Improving Environmental Management through***

***Sustainable Land Management in St. Kitts and Nevis***

**1.2 Project number:** 9785

PMS:

**1.3 Project type:**

**1.4 Trust Fund:**

**1.5 Strategic objectives:**

GEF strategic long-term objective:  CCM2, LD1, LD2

Strategic programme for GEF VI: Biodiversity Climate Change Land Degradation

**1.6 UN Environment priority:**

**1.7 Geographical scope:**       

**1.8 Mode of execution:**  External

**1.9 Project executing organization:** IUCN-ORMACC

**1.10 Duration of project:** 60 months

Commencing:  **July 2019**

Technical completion: **June 2024**

**Validity of legal instrument**:       months

* + 1. **Cost of project US$ %**

|  |  |  |
| --- | --- | --- |
| **Cost to the GEF Trust Fund** | **3,015,982** | **12.08** |
| **Co-financing** |  |  |
| Cash |  |  |
| Ministry of Sustainable Development Ministry of Finance – European Union Ministry of Public Infrastructure, Post, Urban Development and Transport *Sub-total* | 6,180,000 5,629,833  9,500,000  21,309,833 | 24.76 22.55  38.06  85.36 |
| In-kind |  |  |
| Ministry of Sustainable Development  Ministry of Public Infrastructure, Post, Urban   Development and Transport  International Union for Conservation of Nature   *Sub-total*   **Co-financing sub-total**  **Total** | 161,922   38,388  437,200  637,510   **21,947,343**   **24,963,325** | 0.65   0.15  1.75  2.55   **87.92**   **100** |

* + 1. **Project Summary**

The Federation of St. Kitts and Nevis (SKN) consists of two islands located in the Eastern Caribbean with a total land area of 269 sq. km. (St. Kitts is 176 sq. km, and Nevis is 93 sq. km.). The total population of the two islands is 47,195 people. The climate of St. Kitts and Nevis is tropical marine, influenced by steady northeast trade winds and tropical oceanic cyclonic movements. The economy in St. Kitts and Nevis has undergone radical transformation during the last decade, which has changed the islands’ land use patterns and pressures on its ecosystems. Sugarcane long dominated the landscape, particularly on the island of St. Kitts, but faced with declining production, the Government closed the state-run sugar industry in 2005. In an effort to diversify the economy, land use zoning has been modified to allow for non- agricultural uses of former sugarcane lands, such as construction of homes, tourism facilities, schools, commercial & industrial sites, etc. More broadly, SKN is transitioning rapidly towards a more service-oriented economy; in 2014, tourism revenue contributed over 25.5% of GDP, and tourism revenues are forecast to rise to 31.2% of GDP by 2025 (however, ecotourism remains a very small part of the tourism sector in the country). This rapid growth comes with sustainable development challenges, in particular the construction of hotels and other infrastructure in potentially fragile areas or areas of important biological diversity, as well as an increase in uses of energy and water, increased pollution, and the potential degradation of coastal areas from unsustainable tourism practices.

The Project Goals are to support St. Kitts and Nevis to transition away from sugar and monocrop agriculture and to reorient all sectors of the economy towards sustainable resource use policies and practices, which together can provide economic opportunities for the country’s population while also sustaining ecosystem services and globally significant biodiversity. The Project Objective is: To transform degraded forest landscapes areas into biodiversity and climate-friendly areas of sustainable agricultural/agroforestry production.

The Project consists of three components and seeks to achieve the following. The project will assist SKN to be better able to comply with its commitments under international conventions and agreements by providing support to update/revise the National Physical Development Plan and National Building Codes, revise the legal and regulatory framework to support NPDP implementation, the production of baseline digital land use maps of areas of high priority environmental concern, training and capacity building to staff of relevant institutions, Civil Society Organizations and local communities for coordinated and effective action on Sustainable Land Management (SLM), Biodiversity (BD) conservation and climate smart agriculture, biodiversity baseline assessments and management strategies, as well as support to post-graduate technical training for at least 6 students, that are existing government staff. The idea is that these staff will keep working for the government in the areas of expertise after the training is completed. The successful implementation of these activities is anticipated to reduce pressure on natural resources from competing land uses on the islands of St. Kitts and Nevis, improve capacity for systemic sustainable development in the country, and enhance protection and management of Key Biodiversity Areas.

The project will also support SKN in the mainstreaming of BD conservation, SLM, Climate Smart Agriculture (CSA) and Climate Change Mitigation (CCM) into key development and resource management sectors, and in the development and implementation of strategies for Knowledge Management and dissemination for SLM, BD and CC. These interventions will result in conservation of biodiversity habitat and ecosystem services, and increased carbon sequestration in soil and woody vegetation, through restoration and management of critical forest sites. Sustainable Land Management practices supported by productive assets will reduce land degradation, increase soil carbon sequestration, and enable sustainable agricultural production on degraded/abandoned lands, coupled with improved infrastructure conditions to support SLM measures.

The GEF with the approval of the Government of St. Kitts & Nevis has selected the United Nations Environment Programme (UN Environment) as the Implementing Agency of the project and the IUCN is being proposed as the Executing Agency. A Project Steering Committee will be appointed with representation from all key agencies relevant for project implementation, the GEF Implementing Agency, the Project’s Executing Agency, and other selected project partners. The project will follow UN Environment’s standard monitoring, reporting and evaluation processes and procedures. A Mid-Term Project Review will take place at the mid-point in the project. An Independent Terminal Evaluation will take place 6 months prior to the end of project, determining lessons learned. Findings of these events will be analyzed jointly by UN Environment, the GEF, the project Executing Agency, the Government of St. Kitts & Nevis, and other key stakeholders. The GEF Activity Based Budget is US$ 3,015,982. Approximately 7.8% (US$ 235,500) of this budget is dedicated to the process of monitoring and evaluation. Counterpart cash and in kind contributions negotiated for this project are estimated at US$ 21,947,343.01.

table of contents

[Section 1: Project Identification 1](#_Toc7084440)

[ACRONYMS AND ABBREVIATIONS 6](#_Toc7084441)

[SECTION 2: BACKGROUND AND SITUATION ANALYSIS (BASELINE COURSE OF ACTION)………………………………………………………………………………………………7](#_Toc7084442)

[2.1 Background and context 7](#_Toc7084443)

[2.2 Global significance 8](#_Toc7084444)

[2.3 Threats, root causes and barrier analysis 10](#_Toc7084445)

[2.4 Institutional, sectoral and policy context 14](#_Toc7084446)

[2.5 Stakeholder mapping and analysis 16](#_Toc7084447)

[2.6 Baseline analysis and gaps 17](#_Toc7084448)

[2.7 Linkages with other GEF and non-GEF interventions 19](#_Toc7084449)

[Section 3: Intervention strategy (Alternative) 20](#_Toc7084450)

[3.1. Project rationale, policy conformity and expected global environmental benefits 20](#_Toc7084451)

[3.2. Project goal and objective 23](#_Toc7084452)

[3.3. Project components and expected results 24](#_Toc7084453)

[3.4. Intervention logic and key assumptions 34](#_Toc7084454)

[3.5. Risk analysis and risk management measures 36](#_Toc7084455)

[3.6. Consistency with national priorities or plans 37](#_Toc7084456)

[3.7. Incremental cost reasoning 38](#_Toc7084457)

[3.8. Sustainability 39](#_Toc7084458)

[3.9. Replication 40](#_Toc7084459)

[3.10. Public awareness, communications and mainstreaming strategy 40](#_Toc7084460)

[3.11. Environmental and social safeguards 41](#_Toc7084461)

[Section 4: Institutional Framework and Implementation Arrangements 42](#_Toc7084462)

[DIVISION OF RESPONSIBILITIES 42](#_Toc7084463)

[INTERNAL STRUCTURE 43](#_Toc7084464)

[OVERSIGHT MECHANISMS 44](#_Toc7084465)

[Section 5: Stakeholder participation 45](#_Toc7084466)

[Section 6: Monitoring and evaluation Plan 47](#_Toc7084467)

[Section 7: Project Financing and Budget 49](#_Toc7084468)

[7.1. Overall project budget 49](#_Toc7084469)

[7.2. Project co-financing 50](#_Toc7084470)

[7.3. Project cost-effectiveness 50](#_Toc7084471)

[Appendices…………………………………………………………………………………………...51](#_Toc7084472)

[Appendix 1: Budget by project components and UNEP budget lines 51](#_Toc7084473)

[Appendix 2: Co-financing by source and UNEP budget lines 51](#_Toc7084474)

[Appendix 3: Incremental cost analysis 52](#_Toc7084475)

[Appendix 4: Results Framework 58](#_Toc7084476)

[Appendix 5: Workplan and timetable 63](#_Toc7084477)

[Appendix 6: Key deliverables and benchmarks 68](#_Toc7084478)

[Appendix 7: Costed M&E plan 74](#_Toc7084479)

[Appendix 8: Summary of reporting requirements and responsibilities 75](#_Toc7084480)

[Appendix 9: Consultant Costs 76](#_Toc7084481)

[Appendix 10: Terms of Reference (Key Staff Positions) 79](#_Toc7084482)

[Appendix 11: Co-financing commitment letters from project partners 83](#_Toc7084483)

[Appendix 12: Endorsement letters of GEF National Focal Point 84](#_Toc7084484)

[Appendix 13: Draft Procurement Plan 85](#_Toc7084485)

[Appendix 14: EXACT Tool for Carbon Emissions 91](#_Toc7084486)

[Appendix 15: UNEP Environmental and Social Safeguards 91](#_Toc7084487)

[Appendix 16: Theory of Change 99](#_Toc7084488)

[Appendix 17 - Scholarship Initiative for Post-Graduate Technical Training 100](#_Toc7084489)

[Appendix 18 – Public Awareness & Education Strategy 104](#_Toc7084490)

[Appendix 19 – Knowledge Management Strategy 109](#_Toc7084491)

[Appendix 20 – UNEP Capacity Scorecard 114](#_Toc7084492)

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# ACRONYMS AND ABBREVIATIONS

|  |  |
| --- | --- |
| ANR | Assisted Natural Regeneration |
| ARMP | Agriculture Resource Management Project |
| BD | Biodiversity |
| CC | Climate Change |
| CCM | Climate Change Mitigation |
| CNFRP | Central Forest Reserve and National Park |
| CSA | Climate Smart Agriculture |
| CSO | Civil Society Organization |
| GDP | Gross Domestic Product |
| EO | Evaluation Office |
| FAO | Food and Agriculture Organisation of the United Nations |
| GEB | Global Environmental Benefits |
| GEFTF | Global Environmental Facility Trust Fund |
| GHG | Green House Gases |
| GIS | Geographic Information System |
| GSKN | Government of St. Kitts & Nevis |
| Ha | Hectare |
| IICA | Inter-American Institute for Cooperation on Agriculture |
| IUCN-ORMACC | International Union for the Conservation of Nature - Regional Office for Mexico, Central America and the Caribbean |
| KBA | Key Biodiversity Area |
| LD | Land Degradation |
| MEA | Multilateral Environmental Agreement |
| MMA | Marine Management Area |
| NBSAP | National Biodiversity Strategy & Action Plan |
| NIA | Nevis Island Administration |
| NPDP | National Physical Development Plan |
| OECS | Organization of Easter Caribbean States |
| PPG | Project Preparation Grant |
| PMU | Project Management Unit |
| PSC | Project Steering Committee |
| PSIP | Public Sector Investment Program |
| SKN | St. Kitts & Nevis |
| SLM | Sustainable Land Management |
| TAC | Technical Advisory Committee |
| TE | Terminal Evaluation |
| UNEP | United Nations Environment Program/UN Environment |

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

* 1. Background and context

*Country Context*

1. The Federation of St. Kitts and Nevis consists of two islands located in the Eastern Caribbean with a total land area of 269 sq. km. (St. Kitts is 176 sq. km, and Nevis is 93 sq. km.). The total population of the two islands is 47,195 people. The climate of St. Kitts and Nevis is tropical marine, influenced by steady northeast trade winds and tropical oceanic cyclonic movements. Mean annual rainfall ranges from about 40 inches in the coastal areas to about 150 inches in the central mountain ranges, although the South East Point of St. Kitts is drier, with mean annual precipitation varying from 39 inches on the peaks to 34 inches at Cockleshell Bay. Rainfall is unevenly distributed during the year, with a reliable wet period from August to September and driest months January – April. The hurricane season extends from June to November, and there is a high annual frequency of tropical disturbances that generate squalls and high wind velocities.
2. Notwithstanding the rainfall patterns described above, SKN has been subject to a prolonged drought since 2015, leading to high pressure on the main aquifers, such as the Basseterre Valley Aquifer that provides 40% of the country’s needs, which has resulted in the rationing of municipal water supplies over the course of 2015-2016. Official government figures revealed rainfall of 24 inches in 2015, 35 inches in 2016, and 60.5 inches in 2017. The rationing was temporarily suspended in 2017, but was reintroduced in specific areas in February 2018 following reduced levels of rainfall. As of June 30, 2018, the level stood at 9.4 inches of rainfall so far for 2018. Areas affected by water rationing include sections of Basseterre, Bird Rock, Frigate Bay, St. Peters, New Road, Shadwell, Pine Gardens and Cayon to Keys[[1]](#footnote-1). As stated in the report ‘Planning for the Integration of Climate Resilience in the Water Sector in the Caribbean’[[2]](#footnote-2) (2018), based on analysis recently carried out, climate change will result in additional pressure to the water sector in St. Kitts and Nevis, as it relates to the long term availability of water resources, where it has been estimated that a 10% reduction in rainfall, coupled with increasing temperatures could result in a 30% reduction in recharge to aquifers.
3. The economy in St. Kitts and Nevis has undergone radical transformation during the last decade, which has changed the islands’ land use patterns and pressures on its ecosystems. Sugarcane long dominated the landscape, particularly on the island of St. Kitts, but faced with declining production, the Government closed the state-run sugar industry in 2005. As a result, approximately 3,750 hectares of sugar cane fields (of a total of 5,050 hectares of agricultural land) were suddenly no longer under active management. The shift out of sugar cultivation, which employed a large part of the population along the value chain from planting and harvesting to processing, packaging and exporting, produced significant unemployment and a challenge to farmers to adopt new crops/practices. At present, the agriculture sector is composed primarily of part-time smallholder farmers working on small plots (1 ha. or less) where they cultivate various vegetable, fruit and root crops for local markets, as well as a small livestock sector producing pigs, poultry, cows, sheep and goats; these smallholders face significant challenges from pests and diseases, water shortages and low productivity resulting from unsustainable production practices. In addition, the passage of Hurricanes Irma and Maria in 2017 destroyed vegetation, farm structures, livestock, roads and other infrastructure at a value of over EC$ 4 million. Despite the adverse weather, in 2017 the country saw a promising rebound with increased production in seven crops, the most significant four being pineapples with a 247% growth, sweet pepper with 167%, cucumber 128%, and squash with 83% growth[[3]](#footnote-3).
4. Although the soils in SKN are rich and can contribute to meeting domestic needs, production of food is insufficient and the country continues to import large quantities of food at a greater economic and environmental cost (e.g. land degradation through abandonment of arable productive land, carbon emissions).
5. Agricultural cooperatives have not been part of the farming landscape in SKN, but these are now beginning to emerge and offer the opportunity to improve agricultural production and to engage on issues related to conservation agriculture and sustainable land management. The Fahies Agricultural Women’s Cooperative and the New River Farmers Association are primary examples of emerging agriculture-based associations in the country. Furthermore, in an effort to diversify the economy, land use planning has been modified to allow for non- agricultural uses of former sugarcane lands, such as construction of homes, tourism facilities, schools, commercial & industrial sites, etc. More broadly, SKN is transitioning rapidly towards a more service-oriented economy; in 2017, Travel & Tourism revenue contributed 6.6% to total GDP, and is forecast to rise by 3.3% in 2018, by 5.8% per annum from 2018-2028, to 8.9% of total GDP in 2028[[4]](#footnote-4) (however, ecotourism remains a very small part of the tourism sector in the country). This rapid growth comes with sustainable development challenges, in particular the construction of hotels and other infrastructure in potentially fragile areas or areas of important biological diversity, as well as an increase in uses of energy and water, increased pollution, and the potential degradation of coastal areas from unsustainable tourism practices.
   1. Global significance
6. SKN is home to rich terrestrial biological diversity. Vegetation types vary across the two islands, from small sections of Elfin Woodland at high elevations in St Kitts to rainforest in the upper watershed of the Wingfield River to dry scrubland in the South-east Peninsula. On Nevis, the vegetation varies from Elfin Woodland on Nevis Peak to dry scrubland and riparian forest along dry river channels. St Kitts has only a few small patches of mangrove remaining, estimated at 79 ha. Fifteen mangrove sites have been identified in St Kitts and Nevis, eight in St. Kitts and seven in Nevis. Except for some sites, such as Friar’s Bay Pond and Greatheeds Pond in St. Kitts and Nisbett Settlement in Nevis, the majority of sites contain few mangroves species. The most common species are: *Avicennia germinans, Laguncularia racemosa, Rhizophora mangle*and *Avicennia schaueriana*, which is listed on the IUCN Red List of Threatened Species. The series of white mangrove stands (*Laguncularia racemosa*) are located around fresh or brackish water lagoons. At Greatheeds Pond stands of *A. germinans* reach a maximum of 10 m in height; in other sites mangroves rarely reach above 5 m high. In Nevis, *Laguncularia racemosa* and *Conocarpus erectus* are the most common species[[5]](#footnote-5). Beard (1949) estimated that of 2,000 species of flowering plants found in the Eastern Caribbean, 243 species were trees and 121 species were found in SKN, but there has not been a more recent census. SKN is home to several endangered, resident and migrant bird species, including the threatened Brown Pelican (Pelecanus occidentalis) and the Roseate Tern (*Sterna dougalliidougallii*).
7. In the case of the Least Tern (*Sternula antillarum*), it has presence in the Caribbean, but requires monitoring particularly in St. Kitts due to anthropogenic disturbances of fragile marine and terrestrial ecosystems. In 2006 and 2007, surveys were conducted of all historical colony sites on the South East Peninsula salt pond system and along beaches during the breeding season (May–July).  As for the Leatherback Turtle (Dermochelys coriacea) monitoring efforts are concentrated on the 2 primary leatherback nesting beaches (in Nevis is Lover's beach and in St. Kitts is St. Christopher beach). However, other major nesting beaches on both islands are in the process of being identified. While poaching of turtle eggs and of adult nesting females is illegal under laws already in place, it remains an issue due to insufficient enforcement. As well, the data gathered is being used to promote conservation in order to improve laws and change long-standing attitudes regarding the importance of sea turtles not only to the island's ecosystem but economy.
8. Wetlands (salt ponds) are numerous on the island of St. Kitts and constitute important ecosystems; these salt ponds and their surrounding vegetation (e.g. mangroves) serve as important habitats for wildlife, and even during dry spells the mud flats are important to shore birds and wading birds. These salt ponds have an average depth of one meter or less and some virtually dry up during dry spells. The ponds are replenished when they receive runoff from neighbouring hillsides; in addition, the low profile and fragile nature of the seaward berms allows seawater to breach the ponds during storms, periodically replenishing them with seawater. Otherwise, there are no natural surface water connections to the open sea, which makes St. Kitts’ ponds unique within the Caribbean.
9. “Ponds of the Southeast Peninsula” is one of three terrestrial Key Biodiversity Areas (KBAs) identified in St. Kitts and Nevis. Two additional terrestrial KBAs exist on St. Kitts, namely the Central Forest Reserve and Cayon to Key sites. The Southeast Peninsula is composed of low hills, eight salt ponds, coastal cliffs, and beaches. It is approximately 15 kilometers long and a road runs its length. The peninsula widens towards the southeastern tip to approximately 4 kilometers wide, although the narrowest northern section is less than one kilometer wide. Tourism is concentrated in the northern section of the peninsula, which is dominated by resorts, a golf course, and restaurants. Similar developments are expected to expand southward. Ponds of importance to birds on the peninsula include Greatheeds Pond and beach, Half Moon, Friar's Bay, Great Salt, Major's Bay, Mosquito Bay, Little Salt, and Frigate Bay Ponds. The boundaries of the Southeast Peninsula is limited by an area thirty meters from the high water line of each pond. Least Terns nest at three sites on the Southeast Peninsula. A survey in 2004 revealed that Mosquito Bay Pond has 20 Least Tern pairs, Great Salt Pond has 27 pairs, and Greatheeds Beach (which is just north of the peninsula) has 18 pairs. Although St. Kitts' population of 65 pairs meets the Important Bird Area (IBA) requirements, there is no one site where concentrations are sufficient to classify as an IBA. Because Least Tern colonies have previously been recorded at other nearby sites, indicating possible movement between breeding sites, the entire Southeast Peninsula is proposed as an IBA.
10. The Cayon to Key KBA consists of an area of 6,000 ha, and is located in the Saint Mary Cayon Parish on the northeast coast of St Kitts. The parish is approximately 6 square miles and consists of forest-draped and scrub covered mountains, black-sand beaches and cliffs. The town of Cayon dominates the central portion of the parish, with the smaller villages of Lodge and Ottley's to the North. All the lands surrounding these villages are covered in farms and abandoned sugar cane estates, up to 1,000 ft above sea level, after which forests become more dominant. Most coastal lands are in private hands, while sugar cane lands are either leased from the government or privately owned. Other national lands have been placed in a Special Purpose Vehicle which limits the central government making unilateral decisions on land use. A Draft Land Use Policy recently developed will help to clarify the access and management of land. The beaches of Saint Mary Cayon hold important biodiversity and ecological importance due to their use for the laying of eggs by Leatherback Turtles.
11. The St. Kitts Central Forest Reserve is a declared National Park covering 5,060 ha; and comprising all areas on the island of St. Kitts over 300 meters elevation. The dominant feature of the reserve is Mt. Liamuiga (1,156 m), the highest point on St. Kitts. It is part of the mountain range which runs north to south and forms the northern part of the island. Human settlement is limited to the lower elevations, where sugarcane fields were farmed and villages dot the coastal area. Canyons, or ghauts, radiate from the peak. There are three more terrestrial protected areas established or in the process of establishment, namely Brimstone Hill Fortress (15 ha), Royal Basseterre Valley (200 ha) and Nevis Peak National Park (2,250 ha).
    1. Threats, root causes and barrier analysis

*Environmental Problems*

1. Due to its geographical location, topography and recent economic developments, in particular the closing of the sugar production sector and parallel growth of the tourism and construction sectors, St. Kitts and Nevis is facing increasing environmental pressures, which are limiting the country’s ability to achieve its sustainability objectives.
2. Ecosystem Degradation: In the lowland coastal areas of St. Kitts and Nevis, intensive land use has removed all vestiges of the natural vegetation. Although the mountain peaks are still covered by forest, they do not have virgin forest characteristics. The lower slope areas of both islands are dominated by secondary growth on abandoned sugarcane farms. Most of the country’s major watersheds are concentrated in the central area of the islands, and the area’s forest resources provide a reliable rainwater storage service. However, growing deforestation mainly due to land clearing for agricultural production in the middle and lower slopes is causing increased runoff and decreasing water availability and quality downstream, and slowing the process of aquifer recharge. Despite this decline in water availability, cropping continues to be rainfed, whereas urban and tourism water needs are being met from increasingly pressured groundwater sources. The country is also marked by clefts or ravines (ghauts), through which water runs down to the sea. The most important one on St. Kitts is College Street Ghaut, which is subject to severe erosion, causing threats to agricultural land and human life, but many other ghauts on the island exhibit severe erosion problems of similar intensity. Degradation along these ghauts undermines arable farmland, and excessive silt from erosion in the ghauts is deposited into the sea, contributing to negative effects on the sea grass beds, mangroves, coral reefs and other spawning grounds in the marine environment. Coastal areas are also subject to negative impacts from improper shoreline development mainly for the constantly growing tourism industry, sand mining, land-based pollution, and the destruction of reefs and mangroves. Residential and tourism development, including squatting and unregulated settlements, are the most important factors driving land degradation today in SKN; other important factors include deforestation, overgrazing and hoof damage, discharge of grey water and fires; and on Nevis, the operation of privately owned quarries, which are a major contributor to siltation in terrestrial and coastal waters. Land is subject to competing demands from various sectors such as agriculture, tourism and housing. Also, in Nevis substantial shoreline erosion from constant battering of the waves has been observed, and has triggered an initial response by the authorities in the form of reforestation with native species known to be resilient on the coast, especially seagrapes and coconut.
3. As stated in the report ‘Planning for the Integration of Climate Resilience in the Water Sector in the Caribbean’ (2018), pollution is also contributing to ecosystem degradation on St. Kitts, as urban areas lack adequate treatment facilities for domestic sewage and waste water, and enforcement of maintenance of domestic soakaways. Rapid urban growth in the upper watershed of the Basseterre Valley Aquifer is a risk to water quality (22% population increase in St Peters Parish over the period 2001 to 2011, and although the Basseterre wellfield is protected as a national park the upper catchment is not afforded this protection. Package sewage treatment plants are also utilised in the residential and tourist areas of Frigate Bay, but there has been a noted increase in illegal solid waste disposal on St. Kitts; with the current situation land based sources of pollution enters streams and seeps underground, creating a threat for public safety. Pollution from litter and dumping is also a major issue on both St. Kitts and Nevis which is further contaminating water resources and exacerbating ecosystem degradation, while expanded distribution of human settlements and shelters has resulted in more pollution and solid waste generation.
4. Biodiversity loss and invasive species: The significant area of abandoned sugarcane farms in the lower mountain slopes of both islands is now dominated by secondary growth, including large areas of invasive guinea grass, which has led to increased frequency of wildfires and the consequent release of soil carbon stocks. In addition, these abandoned farms have provided habitat for a number of other invasive species and pests, such as yellow mite, white flies, and the African Green or Vervet monkey (*Chlorocebus sabaeus*), as well, other non-native species have also been introduced, including the Black Rat (*Rattus rattus*), the Norway or Brown Rat (*R. norvegicus*), the House Mouse (*Mus musculus*), the Indian Mongoose (*Herpestes javanicus*), and feral populations of the Domestic Pig (*Sus scrofa domesticus*). The spread of human settlements into highland areas are also having a significant negative impact on biodiversity. In the past, settlement was primarily limited to coastal, but with the closure of the sugar industry in 2005, ‘new’ lands became available for settlement, including informal settlements (squatting) in vulnerable and ecological sensitive areas that have resulted in deforestation and soil erosion, as well as tourism development in ecologically sensitive areas that also poses a threat to biodiversity.
5. Climate Variability and Climate Change: Climate change is projected to increase the severity and negative impacts of hurricanes and other natural disasters in SKN, resulting in more widespread flooding (exacerbated by poor drainage systems and maintenance); landslides; coastal damage; water contamination; and loss of arable land. Sea level rise is expected to have a significant adverse effect on coastal low-lying areas where much of the development in St. Kitts and Nevis is concentrated.
6. Vulnerability to climate events can be demonstrated by the fact that agroforestry in SKN never fully recovered after Hurricane Hugo in 1989; the large stands of coconut trees destroyed in that event have not returned, in part because of pests that became better established in the degraded landscape. The impact of climate change on supplies of freshwater is a critical issue in SKN. Already, climate change has caused shifts in rainfall patterns (shorter and more intense rainfall and longer and more severe droughts) which have negatively affected agricultural productivity and water availability in the country), and put the country into a water-insecure situation, and for the first time in the country’s history, the Government has had to ration water. Although agriculture only uses 10% of available water and historically relies on rain-fed sources, it is now at greater risk due to less rainfall and the possibility that water supplies in the dry season will be rationed. Water shortages are not only a threat to agricultural production, but also to the important tourism industry; in the last two years, SKN has been forced to refuse water to cruise ships docking in the country. Commercial hotels have taken to establishing their own water sources but this water is not shared with local communities or populations and depletes groundwater resources. The tourism sector uses 25-30% of water produced and currently pays no fees or abstraction costs. Due to over-extraction and sea level rise, some groundwater sources have been subject to salt-water intrusion.
7. Climate Resilience & Vulnerability Assessments conducted in 2018 (*Planning for the Integration of Climate Resilience in the Water Sector in the Caribbean*) reported the highest climate related risks (**extreme**) for St. Kitts and Nevis were drought and sea level rise risks to the Basseterre and other shallow aquifers and sea level rise risk to surface water sources. The next highest climate related risks (**major**) were drought, heavy rainfall and higher level of evaporation risks to surface water sources, intense rainfall risk to wells, intakes and water treatment plants, wind risk to fibreglass water storage tanks and drought, increasing water demands from domestic, commercial and agriculture users.
8. The rapid ecosystem change and degradation patterns highlighted above lead to a loss in carbon stocks in agricultural lands, forests and mangroves. Associated with the growth of energy-intensive sectors such as construction, housing and tourism, these issues are placing the country in a position to gradually become a contributor to climate change, despite having declared its intention to becoming “the first Sustainable Island State” in the region. Finally, the growing land degradation and erosion and the low agricultural productivity are accelerating rural-urban migration patterns and the dependency on food imports, which leads to diminished livelihoods, higher energy consumption, lower economic growth from potentially sustainable sectors, and an over-reliance on unsustainable practices of natural resources management.

*Barriers*

1. The preferred and most effective solution to these problems is to actively engage stakeholders in the agriculture, private, fisheries and tourism sectors, the main economic sectors in sustainable resource use pathways that will restore the degraded environment and generate global environmental benefits. A number of important barriers exist that are preventing St. Kitts and Nevis from achieving the preferred solution:
2. Inadequate policy, regulatory and planning frameworks: On one hand, there is a need to update the NPDP as well as to formulate a National Land Use Policy, which must address issues including but not limited to land tenure, value, use, development, administration and management, land information, management system, environmental consideration, among others. On the other hand, existing legislation encounters enforcement challenges due to lack of capacities and evidence-based decision-making processes. Presently, responsibility is spread among six different agencies, of which the Development Control and Planning Board has the most responsibility at the policy planning level. Coordination between the various agencies with responsibility for environmental management is generally weak, and there is very little private sector participation in the implementation of best practices.
3. Although a number of previous MEA project-driven initiatives for sustainable development have been undertaken in SKN, continued efforts are required to build and strengthen learning and knowledge management, systematic transfer of technology and or human capacity building, particularly on SLM, CSA, and CCM matters, and thus capacity building and institutional strengthening within state and non-state institutions and other stakeholders remains a priority from a human resource development perspective. While SKN has a well-functioning governmental system, the skills required for addressing environmental challenges among existing staff and potential new recruits are insufficient. There are no local training programs for emerging scientists, and no local research into biodiversity issues, sustainable land management or climate smart agriculture.
4. Land use planners and policy makers are not fully aware of the implications of zoning and physical planning decisions, and environmental concerns are not mainstreamed into the land use planning process. There is an urgent need to map and assess critical sites such as erosion hotspots (quarries, ghauts, ravines) and important biodiversity areas so that physical planning development, national planning processes, investment decisions and budgets can take these into consideration.
5. Knowledge of local species, indigenous biodiversity and pests/invasive is scarce and dispersed (the country has not had a biodiversity census since (1949) and as a result the understanding of the importance and role that biodiversity conservation plays in sustaining the SKN economy is limited and there is lack of understanding at all levels of the value and contribution of biodiversity to the national development agenda and human wellbeing. Enforcement of existing rules and guidelines has proven to be insufficient and the reliance on voluntary standards for investment planning, particularly in the tourism and construction industry, has proven inefficient. Institutional arrangements for the implementation of Building Codes both for public and privately funded developments are insufficient, and the implementation of the existing National Physical Development Plan (NPDP) is constrained by insufficient information and data on land uses and ecosystem services. Additionally, guidelines for Sustainable Land Management have been developed, but there is little evidence that they have been institutionalized. All this means that sustainability is compromised, thus the growth of the housing, tourism and other sectors could lead to rapidly increasing land degradation. For example, while tourism development is guided by high-level policy documents, challenges remain to ensure that sustainable tourism policy priorities are translated into local initiatives, and that regulatory frameworks are adequate and enforced. Thus, although environmental guidelines have been produced by the Ministry of Tourism regarding the construction of large-scale hotels and tourism facilities, these guidelines are merely shared with private tourism companies and are not enforced.
6. Consistent with the above, and overall, the institutional, regulatory and policy barriers are significant, and there is a general lack of regulations that accompany legislation in SKN (apart from the Guidelines for Mainstreaming Sustainable Land Management). Specifically, and in terms of water resources, coastal resources and protected areas, there is a need for Integrated Coastal Zone Management Plans to be developed and implemented as part of overall national development plans; policies and actions to promote and enhance integrated water resources management are lacking; there is a clear lack of community support for the conservation of biological diversity (except sea Turtles) and the designation of Protected Areas, and effective partnership for biodiversity and conservation; and the GSKN does not have adequate legislation, management policies, and institutional capability to support the management of a national protected areas conservation system, or a protected areas conservation service or agency.
7. The National Biodiversity Strategy and Action Plan (NBSAP) of 2014, as an officially approved national policy document, outlined several key barriers that are still relevant in the context of actions under this project.
8. Limited technical capacities, experience and models for implementing ecologically sustainable pathways for natural resource use and economic development: Technical capacity for enforcing current regulations and practices in St. Kitts and Nevis is low, and voluntary standards are proving insufficient to support sustainable development. Among farmers, there is limited technical capacity to adopt sustainable and efficient agricultural practices; most farmers practice cropping on a part-time basis, with limited technical means, and the sector has not yet become professionalized to a stage where small producers can operate at a viable level. As a result, significant tracts of potentially productive agricultural lands have been abandoned even as the country is becoming increasingly dependent on expensive imported food. Farmers who remain report significant challenges, for example production losses up to 60% in Nevis due to lack of proper storage and pests (particularly Vervet Monkeys), as well as low productivity due to a lack of adequate equipment and inputs (irrigation, fertilizer) and soil erosion and exhaustion.
9. There is an urgent need to work with farmers and farmer groups to identify suitable areas for crop production and diversification, and to provide training for agricultural producers to address unsustainable agricultural practices. In terms of the protection of priority areas (carbon-rich and biodiverse) such as mangroves, forests and upper watersheds, St. Kitts and Nevis has one Marine Management Area (MMA) and two National Parks, the Central Forest Reserve and National Park (CFRNP) and the Royal Basseterre Valley National Park. However, conservation activities and capacities to protect important habitats and species within these sites have been restricted to support provided by the project “Conserving Biodiversity and reducing habitat degradation in Protected Areas and their Buffer Zones” and additional capacity building in this area is clearly needed; additionally, efforts and mechanisms to protect priority habitats from impacts arising in upstream or adjoining lands are extremely limited. Despite on-going efforts to manage biodiversity, the islands are faced with rapid growth in invasive species in degraded or abandoned agricultural lands, and the destruction of potentially important habitats from unplanned urbanization.
10. Lack of knowledge, information and awareness: SKN has aspirations to become the region’s first Sustainable Island State, but the lack of updated and comprehensive data and knowledge on environmental and sustainable development conditions and challenges is a significant barrier to this goal. While opportunities for engaging in sustainable tourism or eco-tourism exist, lack of awareness and information on investment options and on proposed products mean that this potential remains untapped. There is also a need to ensure that locals and visitors are aware of practices for the sustainable use of nature and protection of biodiversity, including for example in and around mangroves, reefs, and sea grass beds, and with regard to threatened species of flora and fauna.
11. To generate the knowledge and the capacities needed to address the barriers described above, there has to be structured data collection and analysis conducted on an on-going basis to inform policy and management. In SKN, there is poor, limited, or no systematic monitoring, collection of data, data bases, inventories of existing flora, fauna and ecosystems, as well as land cover mapping and mapping of climate change impacts and environmental degradation. Since the first NBSAP, and with the exception of the Lower Coastal Section of the Basseterre Valley, there is no evidence of any significant conservation assessments conducted of the former sugar cane lands. There is a lack of land use capacities assessment and analysis which consider past and new economic scenarios such as the closure of sugar cane industries and increase of tourist visitation. Additionally, data management systems for sustainable development are inadequate, no formal information system for waste management data and pollution control has been developed and implemented; and insufficient research capacity affects the availability and quality of data that is relevant to sustainable development.
12. Coupled to the above is the need for appropriate human resource capacity. There is limited human capacity in SKN to analyse the effectiveness of existing strategies and similar national plans, to conduct spatial and demographic trends analysis. There is also very limited GIS capacity and there is lack of a national repository and clearing house on environmental data and other relevant information. There is no standing committee of key government departments to develop or supervise the development of a National Spatial Data Infrastructure (NSDI) and a National Land Information System (NLIS).
    1. Institutional, sectoral and policy context
13. Saint Kitts and Nevis is party to key international conventions and agreements that provide a policy context at the highest level for the development of the project. International conventions relevant for this project include the United Nations Convention on Biological Diversity, ratified in 1993; United Nations Framework Convention on Climate Change, ratified in 1993; and the United Nations Convention to Combat Desertification, ratified in 1997. Saint Kitts and Nevis has also shown its commitment to sustainable development through a series of regional and national policies, as well as legislation, including the St. George’s Declaration of Principles of Environmental Sustainability in the Organization of Eastern Caribbean States (OECS); the National Environment Policy (NEP); the National Environmental Management Strategy (NEMS); the National Conservation and Environment Protection Act (NCEPA); the Solid Waste Management Corporation Act; the National Physical Development Plan; and the Nevis Physical Development Plan.

There are additionally several key national policies and legislation which define the institutional, sectoral and policy context for the design and implementation of this project. The most relevant national policy document for this project is the St. Kitts National Physical Development Plan of 2006 (NPDP), developed to guide physical development in reference to land. The NPDP specifically sought to coordinate public and private sector investment decisions; provide a framework for the orderly and progressive development of land; develop “low impact” tourism strategies that minimize the environmental and socio-cultural impacts and takes advantage of the unique qualities of the island; maintain and enhance a strong sense of community; preserve and maintain St. Kitts’ attractive visual appearance; manage St. Kitts’ growth and development so as to maintain and enhance the island’s high quality of life; provide adequate, high quality, and well-maintained public utilities, services, amenities, and facilities; provide a comprehensive transportation system for the island of St. Kitts; support balanced, appropriate economic development; promote and sustain a progressive and positive planning process for St. Kitts; and proactively address St. Kitts’ housing issues. The NPDP also mentioned the issue of abandoned agricultural lands due to the closure of the sugar industry, it raised the issue on how the land should be managed to retain its productivity and facilitate its subsequent use with minimal environmental damage. Although there is some understanding of the likely land use changes expected following sugar, there is a need for more robust information, to make informed decisions on the potential land management options. It is important to note that this NPDP was developed for St. Kitts only, and a draft Physical Development Plan is being developed for Nevis.

1. The obligations of the country under international conventions, as well as the key national policies are described in more detail in Section 3.6 of this Project Document. The institutional framework for the implementation of the project consists primarily of the Ministry of Sustainable Development providing policy direction and overall institutional support for project execution and a leading role in the review and revision of environmental policies and plans. This Ministry also is the Office of the GEF Operational Focal Point and the National Designated Authority of the Green Climate Fund, and leads all coordination efforts for GEF funded projects with the other relevant focal points at the national level in project-relevant topics including biodiversity, Climate Change and Land Degradation. The Department of Physical Planning and the Department of Lands and Surveys will lead in the revision of the National Physical Development Plan (NPDP) and related maps, while the Department of Agriculture and the Forestry Department will be instrumental in the delivery of project objectives related to Assisted Natural Regeneration (ANR), reforestation, Climate Smart Agriculture, and the improvement of water infrastructure programmes to farmers. The Department of Environment will coordinate with local civil society groups in the development and implementation of mangrove reforestation on the island of St. Kitts.
2. All project interventions on the island of Nevis shall be coordinated by the Nevis Island Administration (NIA), and specifically the Physical Planning Department, the Agriculture Department, and the Forestry Department. Unlike the island of Saint Kitts, mangrove restoration will not take place in Nevis, and as such, all project interventions in this regard will be restricted to Saint Kitts, even though Nevis may benefit from the establishment of additional nursery support for its reforestation programme.
3. There are several non-governmental organizations that will be instrumental in the delivery of project activities. This is especially so in the cases of Climate-Smart Agriculture, agro-forestry, reforestation, mangrove restoration, water infrastructure for farmers, the dissemination of public awareness messages, and as data sources and users of the project’s knowledge management network. Among these organizations in St. Kitts are the St. Christopher National Trust (SCNT) and Fahies Agricultural Women’s Co-operative Society, with the latter having a key role in consolidating the participation of women in project interventions. In Nevis the project will engage the Nevis Historical and Conservation Society, REACH Hamilton Community Group, and the New River Farmers Association. These organizations in Nevis will work closely with the project, the Agriculture Department and the Forestry Department on Nevis in activities related to Climate-Smart Agriculture, agro-forestry, reforestation, water infrastructure for farmers, the dissemination of public awareness messages, and as part of the project’s knowledge management. As stated above, the project will not engage in mangrove restoration in Nevis, only on St. Kitts.

* 1. Stakeholder mapping and analysis

1. The stakeholder mapping exercise conducted identified those institutions that are most relevant, within the context of the implementation of proposed project interventions, the expected outputs to be produced, and the anticipated outcomes. Table 1 summarizes the key institutional stakeholders, their relevance to prioritized project intervention areas and project implementation, and their perceived level of influence on project implementation.

**Table 1. Key Project Stakeholders and their Perceived Level of Impact**

| **Institution** | **Relevance to Prioritized Project Intervention Areas and Project Implementation** | **Perceived Level of Influence on Project Implementation** |
| --- | --- | --- |
| Department of Physical Planning | Main lead for Component 1 of the project –Lead on revision of National Physical Development Plan, also contribute to the assessment and execution of rural public works and the revision of the National Building Codes and the National Physical Development Plan. | High |
| Department of Economic Affairs and PSIP | Lead Executing Agency: overall coordination of project; lead review and revision of environmental policies and plans | High |
| Department of Agriculture | Participate in implementation of Component 2, deploy farmer field schools and extension approaches, assist with procurement of seeds, materials and trees | High |
| Department of Water Services | Lead on the execution of water storage tanks; participate in water assessments. | Medium |
| Ministry of Tourism | Support development of eco-tourism or conservation based tourism and enforcement of green guidelines; participate in revision of legal texts. | Medium |
| Housing and Land Development Corporation | Participate in the revision of Building Codes and the National Physical Development Plan | Medium |
| Ministry of Community Development, Gender Affairs and Social Services | Participate in the implementation of Components 2 and 4 , particularly to promote the gender mainstreaming in the project’s activities and outcomes according to the recently launched National Gender Equality Policy on November 2018 | Medium |
| Saint Christopher National Trust (SCNT) | Support implementation of activities related to sustainable development, built heritage and conservation, and protection of the natural environment. | Low |
| Nevis Historical and Conservation Society | Support implementation of activities related to sustainable development, built heritage and conservation, and protection of the natural environment. | Low |
| REACH Hamilton Community Group | Key role in organizing the participation of local communities in agroforestry and agricultural production activities, based on their experience in community education and awareness on natural resource management, small-scale reforestation initiatives, small business development, and identifying local knowledge on agricultural production and the traditional uses of plants. | High |
| New River Farmers Association in Nevis | Key role in organizing the participation of local communities in agroforestry and agricultural production activities, based on their experience in community education and awareness on natural resource management, small-scale reforestation initiatives, small business development, and identifying local knowledge on agricultural production and the traditional uses of plants. | High |
| Fahies Agricultural Women’s Co-operative Society | Sustainable agricultural development and sustainable land management. | Medium |
| Nevis Turtle Monitoring Network/Department of Fisheries | Assess, regulate and promote sustainable use of the fisheries resources, and to manage the harvest of stock to ensure food security, to promote aquaculture and encourage conservation practices | Medium |
| Private Sector - Whitegate Development Corporation | Attract investment, land sale and development; influential National Physical Development Plan and National Building Codes | High |
| Department of Marine Resources | Conservation, management, development and sustainable use of St. Kitts and Nevis fisheries, aquaculture and marine resources and related ecosystems. | Medium |

* 1. Baseline analysis and gaps

1. A number of on-going initiatives in SKN are seeking to guide the country’s continued economic transition towards increased sustainability, beginning with political commitment at highest levels as embodied in key policy reforms such as the National Physical Development Plan in St. Kitts and the National Adaptation Strategy. SKN, while pursuing economic growth through tourism, is dedicated to doing so sustainably and aims to become the first fully sustainable island in the world. In order to achieve this objective, it has undertaken key policy reforms as well as a series of initiatives and projects with international partners. However, SKN does not benefit from as much international support as some of the other Caribbean states, and therefore the scope of intervention remains limited, and the country requires strategic investments to ensure that its transformation is sustainable and contributes to the livelihoods of its people.
2. The following projects provide the baseline development activities that this proposed GEF intervention will complement:

* The **Agriculture Diversification Project** (2003-2016) funded by the Government of St. Kitts and Nevis (USD 2.58 million), as well as various diversification initiatives supported by the SIDF on an on-going basis. The objective of this initiative was to facilitate the expansion of sustainable practices in agriculture to facilitate the expansion of non-sugar agriculture. Investments by the GEF can contribute to this objective by ensuring that it deploys in a low-carbon, climate smart way and that it promotes conservation and sustainable land management for the maintenance of carbon stocks in agricultural lands, reduced land degradation, conservation of forests and biodiversity of key economic significance.
* The **Agriculture Resource Management Project** (ARMP) was implemented during the period 2008-2016, to foster agricultural development and sustainability by building infrastructure, improving soil, water and land management and providing farmers with technical support and training. The ARMP was funded by the SIDF and executed by the Ministry of Agriculture; the budget of EC$ 10 million (approximately USD 3.3 million) is expected to be renewed. Work carried out to date under the ARMP has done much to create a baseline on which this proposed GEF intervention can build. For example, main access farm roads have been maintained in areas where there was considerable road erosion; new roads were cut or reshaped and earth storm drains constructed to direct drainage flows off the road and into sluices. Debris in ghauts has been cleared and in some locations the project installed gabion baskets and planted vetiver grass to protect the exposed soil. The project also built dams, reservoirs and ponds allowing for the harvesting of over 13 million gallons of water during the dry season, benefiting over 50 producer groups. The proposed GEF intervention will build on experience gained during the ARMP to replicate and upscale water harvesting, irrigation and other sustainable agricultural practices.
* The OECS/EU supported **St. Kitts Water Conservation and Drought Management Project** (CDMP) and the New River Estate Stabilization of Degraded Lands for Nevis project (10.6 million Euros through 2018). The CDMP project seeks to address recent drought and water shortage issues by improving water conservation practices and by promoting investments for the rehabilitation and retrofit of key buildings and utilities in order to reduce water demand and wastage. The project will support audits and conservation plans of public institutions (which are traditionally not metered); undertake pressure management of water distribution mains; conduct an evaluation of potential surface water sources in abandoned sugar plantations for potential use in agriculture; and retrofit six institutions, including three schools and one hospital. The GEF intervention will build on the assessments conducted by the CDMP for the construction of earth dams, ponds and other irrigation infrastructure.
* The UNDP implemented **“Conserving Biodiversity and reducing habitat degradation in Protected Areas and their Buffer Zones**” (2014-2018) project (US$3,371,630). The project seeks to expand and strengthen the terrestrial and marine protected area system, and reduce habitat destruction in PA buffer zones in protected areas in both islands of St. Kitts and Nevis. This will be achieved through strengthened protected areas regulations and the institutional framework for PA system management; development of a financial sustainability framework for the Protected Areas System; expansion of Protected Areas system; and the institutionalization of the Management of Protected Area. This GEF intervention will build on protected area data and management framework in processes to conduct biodiversity assessments, and will capitalize on experiences and lessons learnt in terms of successful strategies used in engaging communities in buffer zones of protected areas.
* The IICA project “**Retrofitting greenhouses in St. Kitts and Nevis to improve water and resource use efficiency, save seeds, upcycle plastics and develop the capacity of youth to design next-generation climate-smart agricultural systems**” (US1.2 million). This project is in an advanced stage of preparation and is expected to have a duration of 28 months, once implementation starts in 2019. This project proposes to increase capacity of youth in agriculture and agriculture technicians in using 3D technology, virtual reality and gaming as tools for designing, prototyping and up-scaling climate resilient agricultural production systems and equipment; develop technical capacity, value chain and process for upcycling discarded plastic to produce filament to 3D print specialized parts and fittings for climate-smart greenhouse designs and vegetable cloning systems; increase the capacity of greenhouse farmers to clone high-yielding adaptable varieties and shorten time to market of produce using farm-scale cost-effective and appropriate technologies; and improve productivity, profitability and sustainability of greenhouse and related activities by retrofitting structures with climate-smart and water and resource-efficient designs, systems and technologies. This GEF intervention will seek to partner with this project for joint implementation in Climate-Smart Agriculture demonstrations, the development of training materials, training to farmers, and in the involvement of farmers in public awareness campaigns.
* The OECS implemented **“Climate change adaptation and sustainable land management in the Eastern Caribbean”** (2013-2018) project (10.6 million Euros). The project seeks to improve the region’s natural resource base resilience to the impacts of climate change, through effective and sustainable land management frameworks and practices and through specific adaptation pilot projects focused on physical infrastructure and ecosystems. Activities of relevance for the baseline of this proposed GEF intervention includes undertaking policy dialogue; developing and adopting harmonized sustainable land management legislation and regulations; putting into operation the institutional mechanisms established to support national and regional land policies and strategies; and providing training on sustainable land management. New institutional and regulatory frameworks are expected to include aspects such as regulations to protect and/or restore ecological buffers, regulations to phase out development in high-hazard areas, strict building codes, and the establishment of coastal construction baselines. The project also includes activities focused at acquiring and building human and technical capacities to effectively operate a number of technical tools (e.g. cartographic tools, geographical information systems, GPS tools, computer-assisted design software) required for the collection, storage, analysis and display of geospatial data necessary to support decision making in relation to sustainable land management. Training on land use planning will also be delivered. This GEF intervention will make good use of the materials and tools developed by this project, as well as the experiences and lessons learned in the process to strengthen SLM.
* The GSKN, in partnership with bilateral and multilateral development partners, has provided substantial assistance to both farmers and agro-processors. For example, the Government of the Republic of China (Taiwan) has supported agro-processing to create more opportunities to sell to the local market and to expand exports to other islands. The Development Bank of St. Kitts and Nevis (DBSKN) has developed a number of financial mechanisms to provide funds for on-lending from the locally founded Sugar Industry Diversification Foundation (SIDF) to micro, small and medium agro-businesses, as well as opportunities provided through a partnership with the Government of the Bolivarian Republic of Venezuela. The GSKN continues to provide assistance on an on-going basis to both farmers and agro-processors through the provision of inputs (seeds, materials, small supplies etc.) as well as training in bookkeeping, improved business practices, and cultivation of new crops and/or processing of new value added products. These programmes will continue as the GSKN continues to advance the development of the agriculture sector and to diversify products to meet the requirements of the population and ensure food security.
  1. Linkages with other GEF and non-GEF interventions

1. The proposed project will build on interventions underway by the GEF-UNDP **Project “Conserving Biodiversity and Reducing Habitat Degradation in Protected Areas and their Buffer Zones”.** This project seeks to strengthen laws and regulations that govern Protected Areas (PA); buttress policy and institutional frameworks for PA system management; establish a Protected Area Agency and overall institutional framework for PA system management; operationalize Terrestrial and Marine Protected Areas; and increase awareness of and support for the PA system. Coordination will be sought with this project to ensure that interventions promoted by the project are consistent with management plans and the demarcations of terrestrial protected areas. Of particular mention is the development of a Physical Development Plan for Nevis being funded by the above-mentioned project, which will complement that to be updated for St. Kitts under this proposed project, thus resulting in updated Physical Development Plans for both islands.
2. The regional project **Integrating Water, Land and Ecosystem Management in Caribbean Small Island Developing States -** GEF IWEco covers ten Caribbean countries, including St. Kitts and Nevis. The IWEco project’s primary goal is the implementation of an integrated approach to water, land and ecosystems services management. The IWECO sub-project in SKN will implement a number of investments and infrastructure projects, including: land degradation control measures along College Street Ghaut; a feasibility study for municipal grey water treatment to treat effluent from private and commercial properties in the greater Basseterre area; construction of a retention pond at higher elevations which can facilitate gravity fed irrigation; restoration and reforestation of quarries; the deployment of artificial reefs; and beach restoration. The project will also support a cost-benefit and feasibility study for sustainable sand extraction; invest in community-based water supply and sanitation for disadvantaged communities; create a suite of IW, LD, and BD-related indicators to be integrated into national accounts; and strengthen policy and legislation for the effective management of water, land and ecosystems resources that account for climate change. Cooperation will be sought to share methodologies and lessons and to explore opportunities for joint work and work plans to avoid duplication.
3. The recently approved and launched regional **GEF project Preventing Costs of Invasive Alien Species (IAS)** in Barbados and the OECS Countries, is intended to promote prevention, early detection, control and management frameworks for Invasive Alien Species (IAS) that emphasize a risk management approach by focusing on the highest risk invasion pathways into the participating countries. In SKN, the project will promote strengthened invasive alien species management frameworks and cross-sectoral arrangements to reduce IAS threats in terrestrial, marine and coastal ecosystems. This project will coordinate closely with the regional IAS project to avoid duplication, understand the lessons learnt and support replication. Coordination between the two projects will be sought specifically in biodiversity monitoring, methodologies for public outreach and consultations, guidelines and protocols for coastal developments, and Knowledge Management Strategies as part of a broader South-South Cooperation approach.
4. Interventions by this project will also build on and complement investments by **GEF Small Grants Programme,** and particularly those in agriculture, climate change, land degradation, waste management and capacity building for communities, climate smart agroecology and landscape and seascape conservation. This project also will seek to strengthen the coordination and capacity of key community groups which have been engaged with the GEF Small Grants Programme, and include, but is not limited to the Fahies Agricultural Women’s Cooperative Society, New River Farmers’ Cooperative Society, Nevis Historical and Conservation Society, the REACH Hamilton Estate Community Group, the St. Christopher National Trust, among others.

As mentioned in Section 2.6, the Agriculture Diversification Project, the Agriculture Resource Management Project (ARMP), and the St. Kitts Water Conservation and Drought Management Project form an important part of the baseline for this project, and will provide numerous linkages for potential expansion, replication and upscaling of results.

# Section 3: Intervention strategy (Alternative)

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

1. Sustainable Land Management issues in St. Kitts and Nevis are faced with a number challenges linked to legislative, regulatory, institutional, and capacity barriers. The shift from sugar cane to tourism development as the primary economic driver has resulted in a series of use changes, not only on lands once used for sugar cane production, but also on the coastline to accommodate tourism development infrastructure. Deforestation on slopes has resulted in surface soil erosion and sedimentation, destroying suitable farm land, negatively impacting water supply and quality, and ultimately ending up on the coast with devastating consequences for mangroves, seagrass beds and coral reefs. Land degradation is also exacerbated by residential and tourism developments, by unplanned and unsustainable agricultural practices, and by land-based sources of pollution and waste disposal.
2. While the Government of St. Kitts and Nevis has made steps to address these challenges through national policy attempts such as the Medium Term Economic Strategy Paper: 2003–2005 which spoke to the enactment of legislation to address land degradation issues; the National Physical Development Plan of 2006 to guide physical development in reference to land and the Draft SKN Land Use Code; the development of a Draft Land Management Unit Framework in 2010, and the Agriculture Development Strategy 2013 – 2016, there has not been much evidence that land degradation and environmental degradation are being effectively addressed. The limited progress achieved to date is as a consequence of several deficiencies at the systemic level as described in detail above under ‘Barriers’: inadequate policy, regulatory and planning frameworks; limited technical capacities, experience and models for implementing ecologically sustainable pathways for natural resource use and economic development; and lack of knowledge, information and awareness.
3. The interventions of this proposed project are consistent with a multi-pronged approach that targets the three primary barriers identified. The project will assist SKN to strengthen its policy, regulatory and planning frameworks through the up-dating/revision of the National Physical Development Plan, revise the legal and regulatory framework to support NPDP implementation, and the production of baseline digital land use maps of areas of high priority environmental concern. Technical capacity for land use planning, natural resource management, and economic development will be supported through training and capacity building for coordinated and effective action on SLM, BD conservation and climate smart agriculture, as well as support to a post-graduate technical training for at least 6 students engaged with the local authorities.
4. The project will also support SKN in the mainstreaming of BD conservation, SLM and CCM into key development and resource management sectors through the restoration and management of key forest sites, and support for SLM and sustainable agriculture practices. Knowledge, information and awareness will be addressed through the implementation of a Public Education and Awareness Strategy and a Knowledge Management Strategy, both of which will have SLM, BD and CC as central themes, and targeted to all stakeholders across the length and breadth of the country.

The project will directly contribute towards the following GEF Strategic Focal Areas:

***Biodiversity Focal Area***

BD-1: Improve Sustainability of Protected Area Systems;

Program 1: Improving Financial Sustainability and Effective Management of the National Ecological Infrastructure;

Outcome 1.2: Improved management effectiveness of protected areas.

1. The project will specifically achieve:

* Reduced fragmentation and loss of forest habitat due to human settlement
* Tourism and other development is well planned and not in ecologically sensitive areas
* Biodiversity Intactness Index improved in and around the Cayon to Key and Ponds of Southeast Peninsula KBAs
* Globally significant biodiversity conserved and the ecosystem services provision enhanced on 20 hectares of mangroves

1. The project also will contribute to the achievement of the following Aichi Biodiversity Targets listed in Table 2.

**Table 2. Applicable Aichi Targets**

|  |  |
| --- | --- |
| **AICHI TARGETS** | **RELEVANT PROJECT ACTIVITIES** |
| Target 1: By 2020, at the latest, people are aware of the values of biodiversity and the steps they can take to conserve and use it sustainably | Environmental awareness campaigns (3.2) |
| Target 2: By 2020, at the latest, biodiversity values have been integrated into national and local development and poverty reduction strategies and planning processes and are being incorporated into national accounting, as appropriate, and reporting systems. | Baseline mapping (1.1.3) and BD assessments (1.3.1) integrated into National land use planning (1.1.1) |
| Target 7: By 2020, areas under agriculture, aquaculture and forestry are managed sustainably, ensuring conservation of biodiversity. | Agroforestry / forest conservation (2.1.1), mangrove conservation (2.1.2), sustainable agriculture (2.2.1) |
| Target 14: By 2020, ecosystems that provide essential services, including services related to water, and contribute to health, livelihoods and well-being, are restored and safeguarded, taking into account the needs of women, indigenous and local communities, and the poor and vulnerable. | Agroforestry / forest conservation (2.1.1), mangrove conservation (2.1.2), sustainable agriculture (2.2.1), and agricultural water infrastructure (2.3.1) |
| Target 15: By 2020, ecosystem resilience and the contribution of biodiversity to carbon stocks has been enhanced, through conservation and restoration, including restoration of at least 15 per cent of degraded ecosystems, thereby contributing to climate change mitigation and adaptation and to combating desertification. | Forest rehabilitation (2.1.1), mangrove rehabilitation (2.1.2), and degraded land rehabilitation (2.2.1) lead to increased carbon sequestration |

***Climate Change Mitigation Focal Area***

CCM-2: Demonstrate Systemic Impacts of Mitigation Options

Program 4: Promote conservation and enhancement of carbon stocks in forest, and other land-use, and support climate smart agriculture

Outcome B: Policy, planning and regulatory frameworks foster accelerated low GHG development and emissions mitigation

The expected direct global environmental benefits from the climate-smart agriculture and land degradation practices that will be adopted under the project are in the range of *79,342tCO2eq over a 10 year period*, consistent with the EXACT Tool for Carbon Emissions in Appendix 14.

***Land Degradation Focal Area***

LD-1: Maintain or improve flow of agro-ecosystem services to sustain food production and livelihoods

Program 2: SLM for Climate-Smart Agriculture

Outcome 1.1: Improved agricultural, rangeland and pastoral management

Outcome 1.2: Functionality and cover of agro-ecosystems maintained

Outcome 1.3: Increased investments in SLM

LD-2: Generate sustainable flows of ecosystem services from forests, including in drylands

Program 3: Landscape Management and Restoration

Outcome 2.2: Improved forest management and/or restoration

Outcome 2.3: Increased investments in SFM and restoration

1. The project will specifically achieve:

* Sustainable management of land and natural resources over at least 500 hectares (according to Table 3) that results in reduced soil erosion, halting/reversal of land degradation processes, and continued and improved provision of ecosystem services
* Improved productivity as measured by increases in Primary Production and reduced erosion rates
* Improved socio-economic returns from improved land productivity
* Improved water availability through the improvement of streamflow and quality

**Table 3. Breakdown of area allocation based on intervention type**

|  |  |  |  |
| --- | --- | --- | --- |
| **Activities** | **Area under intensive\* investment (ha)** | **Area under indirect\*\* investment**  **(ha)** | **Total (ha)\*\*\*** |
| Assisted Natural Regeneration (ANR) | 70 | 135 | 205 |
| Reforestation (agroforestry systems) | 20 | 40 | 60 |
| Mangrove rehabilitation | 20 |  | 20 |
| Sustainable Land Management (SLM) and Climate Smart Agriculture (CSA) | 215 |  | 215 |
| **Total area (ha)** | **325** | **175** | **500** |

\* **intensive investment** refers to active on-ground work targeted to 325 hectares, funded under core project resources;

\*\* **indirect investment** refers to wider areas within the scope of project interventions but subjected to extension support services with co-financing in-kind contributions from the Ministry of Agriculture

\*\*\* At PIF approval, the target number of hectares was to have been further assessed during the project preparation phase. The revision in the total area at PIF approval from 670 ha to 500 ha was based on (1) detailed cost assessment of the investments and (2) assessment of available locations within which to target for the investments.

* 1. **Project goal and objective**

1. The Project Goals are to help St. Kitts and Nevis to continue the transformation process which started in the aftermath of the closure of the sugar industry and to reorient all sectors of the economy towards sustainable resource use policies and practices, which together can provide economic opportunities for the country’s population while also sustaining ecosystem services and globally significant biodiversity. These sustainable resource use pathways will consist of: 1) rehabilitation and protection of carbon-rich and biodiverse forest and mangrove ecosystems; and 2) restoration/maintenance of soil ecosystem services, water supply, and carbon stocks through sustainable and climate smart agriculture and agroforestry (which will also reduce energy-intensive food imports).
2. The Project Objective is: To transform degraded forest landscapes into biodiversity and climate-friendly areas of sustainable agricultural production.
   1. **Project components and expected results**
3. The project consists of three (3) components and eight (8) outcomes as described below. Corresponding indicators and targets are fully developed in Appendix 4 – Project Results Framework, and the project’s detailed work plan and benchmarks are presented in Appendices 5 and 6, respectively.

**Component 1: Integrated and strengthened environmental planning and management on the islands of St. Kitts and Nevis to support island sustainability**

1. Component 1 seeks to address critical planning and management needs in order for SKN to better embrace its sustainable development challenges. In this regard, the project will strengthen the institutional and regulatory framework for land use planning to facilitate enhanced inter-agency coordination, as well as build the necessary technical capacity required for successful implementation at the levels of national institutions and stakeholders alike, with due consideration for competing land uses and the need to reduce stress on ecosystems and indicator species in Key Biodiversity Areas. While attempts were made to address land use planning under the last National Physical Development Plan (NPDP), its implementation faced difficulties with the required legal and regulatory support, the necessary institutional arrangements and implementation tools and equipment, valid land use baselines, and required human and technical capacity among key players at multiple levels of responsibility. Additionally, the lack of baseline data on critical biodiversity assets including indicator species, made it difficult to integrate land use policy planning with the need to ensure that land uses gave due consideration to the protection of biodiversity and ecosystems integrity.

**Outcome 1.1** GSKN adopts tools and regulations to reduce pressure on natural resources from competing land uses on the islands of St. Kitts and Nevis

1. **Output 1.1.1: Updated/ revised National Physical Development Plan (NPDP).** The project will support the updating of SKN’s National Physical Development Plan (NPDP) and the National Building Code to ensure an optimal allocation of land resources in order to generate development benefits and critical environmental benefits in tandem. The NPDP will be revised to better incorporate assessments of land degradation and erosion conditions and risks, links between conservation in productive and protected landscapes, and accounting for the environmental impacts of construction and urbanization. The NPDP is an integral part of the on-going policy decision-making process that guides all development and management of land and natural resources in the country, and will guide zoning and the locations of developments, as well as the program priorities of relevant ministries/departments, over the 15 years following the adoption of the updated NPDP. The existing Geographical Information System (GIS) managed by the Ministry of Sustainable Development to guide both public and private development decisions (e.g. when land is requested for a specific purpose, to indicate whether land is available for that purpose and where it is located) will be used as a critical tool to assess land use changes over the past decade and to inform and guide the updating of the NPDP.
2. The primary activities to be implemented in the delivery of this output will include the procurement of field data equipment and gear for land use baseline confirmations (and in support of Output 1.1.3) by both the Department of Physical Planning and the Department of Lands and Surveys; GIS and mapping equipment (computers, plotters, printers, software); the hiring of a Physical Planning Consultant to lead the process and develop the Revised/Updated NPDP; and the required public consultation process with all sectors of government, the private sector and civil society, before the updated NPDP may be submitted to Cabinet for consideration, deliberation and approval. It is anticipated that the NPDP in Nevis may not require support from this project, since an updated draft NPDP is already being developed for Nevis, and there are still resources available to support that process in the project “Conserving Biodiversity and Reducing Habitat Degradation in Protected Areas and their Buffer Zones” which has been extended until January 2020.
3. **Output 1.1.2: Revised legal and regulatory framework to support NPDP implementation.**  In order to actualize the implementation of the NPDP, a package of modifications in environmental legislation and related regulations, policies, standards, and Building Codes will be proposed. The project will support updating of the 1904 Forestry Ordinance and/or the 1973 Agricultural Development Act to ensure that they are in line with the country’s current sustainable development priorities. In addition, the project will propose policy changes to maintain and enhance carbon stocks or reduce emissions from agriculture and agroforestry (which will help to support project activities under Outcomes 2.1 and 2.2). The development of these multi-sectoral proposals for modifications to policies and legal instruments will require the services of a legal firm, with varying legal specializations, to ensure that the planning, environmental, and climate change aspects of the proposals are well articulated and balanced, and inclusive of recommended required institutional arrangements, to facilitate the understanding and approval by the decision makers. Such proposals will require extensive public consultations, and would not ideally start before at least a Draft Updated NPDP is available.
4. **Output 1.1.3: Baseline digital land use maps of areas of high priority environmental concern.**  In order to ensure the NPDP is based on accurate and up-to-date information, a digital land use mapping and prioritization exercise will be undertaken to identify and detail areas of high priority environmental concern, including areas subject to current or expected development pressures; areas that are at risk due to possible climate change impacts and natural risk hazards such as flooding; areas of significant land degradation (e.g. quarries, ghauts); areas of high biodiversity value (e.g. KBAs, IBAs); and areas providing critical ecosystem services[[6]](#footnote-6). This digital land use mapping and prioritization exercise will also entail the creation of a land use map based on the Restoration Opportunity Assessment Methodology (ROAM) and other tools, as InVEST, ROOT, among others, which allow for identifying the impact of the actions proposed on the provision and conservation of ecosystems services and the way to optimize them. To improve capacities in GIS, the ROAM and the other tools will be implemented within the GIS technicians unit, for this purpose, the project will provide equipment, training, capacity building, and practical application of approaches on the use of the tools and the methodology and in integrating existing platforms (Arc Map and ERDAS Imagine remote sensing), which are the base for ROAM implementation. Besides the technical component, the ROAM methodology is based on a strong consultations process, which will be carried out among the revision process involving all sectors and main stakeholders related to the NPDP application.
5. The GSKN is in the final stage of the receipt of electronic maps that have been done for the country. This initiative will provide updated information on the state of play of the current land use and will aid to inform the land use maps specific to environmental pressures that will be developed under this project. This activity will be undertaken in close coordination with the GEF-supported regional project Integrating Water, Land and Ecosystem Management in Caribbean Small Island Developing States (IWEco), which includes a sub-project for SKN titled “Addressing Impacts of Acute Land Degradation in the College Street Ghaut in St Kitts and Quarries and Sand Mining Hotspots on Nevis”.

**Outcome 1.2 -** Improved systemic capacity for promoting sustainable development in the islands of St. Kitts and Nevis through INRM:

1. **Output 1.2.1: Relevant Institutions, CSO and Communities capacitated for coordinated and effective action on SLM, BD conservation and climate smart agriculture.** The project will provide capacity building to partners who play a leading role in implementing the NPDP, in particular institutions with sectoral responsibilities for the development and conservation of the islands of SKN, together with relevant CSOs and community partners. These stakeholders will benefit from training and practical application of approaches to land use planning and policy development, reducing pressure on critical habitats and species, coordination and information management and sharing (including participatory planning methodologies and strategies for outreach to communities), and identifying and addressing existing and potential drivers of land degradation. Capacity building will focus on the prioritized areas of training identified in the capacity assessment conducted during project preparation and include the following: Land Use Planning, Urban and Community Planning, Geomatics, Policy Development, Sustainable Land Management, Biodiversity Conservation, Ecosystems/Environmental Management, Agroforestry, Sustainable/Climate Smart Agriculture, Mangrove Reforestation, Management of Coastal Resources, Public Awareness Strategies, NGO/CBO Management, Participatory Planning Methodologies, Project Management, and Grant Writing. The institutions to be targeted for training were also identified and include both government and non-government organizations, namely Department of Physical Planning, Department of Economic Affairs and PSIP, Department of Agriculture, Department of Lands & Surveys, the Department of Water Services, the Nevis Housing and Land Development Corporation, Fahies Agricultural Women’s Co-operative Society, New River Farmers Association in Nevis, REACH Hamilton Community Group, Nevis Turtle Monitoring Network, Department of Fisheries, St. Christopher National Trust (SCNT), Nevis Historical and Conservation Society, the Department of Marine Resources, the Forestry Department, and the National Housing Corporation on St. Kitts.
2. **Output 1.2.2: National capacities improved through post-graduate technical training for at least 6 students engaged with the local authorities.** Complementing these training activities, the project will also establish a Project Scholarship Initiative PSI), creating a cadre of experts to fill critical national capacity gaps. The PSI will consider applications for post-graduate study in any of the following five (5) prioritized thematic areas: Geographic Information Systems (GIS); Land Use Planning; Sustainable Land Management; Climate Change and/or Climate Smart Agriculture; and Environmental Management/Ecosystem Restoration. The GSKN has existing arrangements with institutions and administers new scholarships offered by other Governments as part of their bilateral agreements. The scholarship initiative will target existing staff in relevant government ministries; the candidates will be evaluated by the Government’s Scholarship Review Committee and selected on an established eligibility criterion. The Government’s Human Resource Management Department (HRMD) will oversee the process including any request by Government officers for study leave with or without payment. The initiative will support the post-graduate technical training with appropriate gender balance, including young professionals and women of at least six students, who will be required to provide co-financing through the provision of service to the Government of St. Kitts and Nevis through bonded agreements of service, thus ensuring that knowledge and expertise acquired benefits the Government for a minimum number of years. The complete details of the PSP are provided in Appendix 17, and includes descriptions of Eligibility Criteria, Application, Selection Process, and Thresholds; Notification of Award; Management & Administration; Monitoring, Reporting, Evaluation and Communication; and Financial Strategies to be considered for sustaining the scholarship initiative.

**Outcome 1.3 -** Reduced pressure on three indicator species at two Key Biodiversity Area (KBA) sites

1. **Output 1.3.1: BD Management Strategy based on biodiversity baseline assessments for 2 KBAs.**  Rapid biodiversity assessments will be conducted to map the presence of threatened and IBA trigger species in the two coastal KBAs – Ponds of Southeast Peninsula and Cayon to Key. These assessments will be used to confirm the selection of indicators species for the project, i.e. Leatherback turtle (*Dermochelys coriacea*), Brown Pelican (*Pelicanus occidentalis*) and Least Tern (*Sternula anti*llarum), and/or to identify other priority species for monitoring. Target species will be selected as per the IUCN-recommended Conservation Action Planning (CAP) methodology, for the selection of Conservation Objects, which also is the basis for management planning of the protected area. The application of this methodology is also recommended to assess the effectiveness and conservation impact of protected area planning (and may be modified to assess reduced pressure based on a simple abundance index measured annually), determining strategies and guiding actions. CAP is The Nature Conservancy (TNC)’s version of the Open Standards for the Practice of Conservation established by the [Conservation Measures Partnership](http://www.conservationmeasure.org/).  This method includes the adaptive management approach and the 12 Ecosystem Approach Principles (CBD, 2004; Andrade et al. 2011). For selecting target conservation objects (including species) the main criteria considered are a) Viability and ecological assessment; b) Threats and pressures. The selection of conservation objects is a positive step to achieve this standard in the conservation areas included in this proposal. Recommendations for ensuring the conservation of these species will be made, with a focus on ensuring viable populations are maintained. Based on the assessment, the project will recommend or implement management strategies and regulations to ensure the conservation and sustainable management of selected priority species. For example, the project will implement mangrove restoration activities within KBAs in order to enable conditions for the nesting of several birds, particularly the brown pelican. Mangroves are one of the preferred habitats for the brown pelican, among other ecosystems such as salt bays, beaches, and oceans.

**Component 2: Mainstreaming BD conservation, SLM and CCM into key development and resource management sectors**

1. Component 2 complements the planning, regulatory and institutional interventions of Component 1, and focuses on mainstreaming biodiversity, SLM and CCM as a means to address deforestation, land degradation, surface soil erosion, and threats to biodiversity and ecosystem services, resulting from current production models in key sectors in St. Kitts and Nevis, including agriculture, tourism, coastal development, pollution, and residential housing construction. The impacts of climate change, which may be aggravated by the particular topographical characteristics of the country, are also considered in the interventions proposed under this component. The project will support reforestation through agro-forestry and targeted planting of native species, and by Assisted Natural Regeneration on degraded landscapes, and in particular on lands once used for sugar cane production. Globally important ecosystems, in this case mangroves, will also receive restoration investments from the project, and farmers will be provided with new skills in Climate-Smart Agriculture, coupled to direct assistance in ensuring a constant and efficient water supply to enhance productivity and reduce wastage, consistent with sustainable agricultural practices.

**Outcome 2.1 -** Conservation of BD habitat and ecosystem services, and increased carbon sequestration in soil and woody vegetation, achieved through restoration and management of critical forest sites:

1. The project will target a total of 500 hectares, instead of the 650 hectares initially proposed at PIF stage. The reduction of hectarage is mainly due, to labour and materials costs which are relatively high in small island states and when applied over the initial 650 hectarage was determined to be prohibitive in consideration of the other project elements that need to be funded. In light of this, and the need to balance resources to adequately cover the other project components, the project strategy is to ensure that the practices, methods and tools that are implemented under this outcome are extended to farmers, land users, and other stakeholders at the broadest level so that as much in influence from the project is exerted over management of landscapes in the country. This will be done through the agricultural, reforestation activities, extension services to farmers and other stakeholders in order to enhance and improve the understanding and application of ANR and reforestation concepts and activities for sustainable management of crops.
2. Of the 500 hectares, 205 ha will be rehabilitated through Assisted Natural Regeneration (ANR) methods while 60 ha will be reforested through installation of agroforestry systems. Some 215 ha will be rehabilitated through Sustainable Land Management (SLM) and Climate Smart Agriculture (CSA) approaches, and 20 ha of mangrove will be rehabilitated. These restoration methods will employ a range of techniques and actions tailored to site conditions and use values of the land under treatment. Site plans that detail the nature of the investment will be defined on project inception under the advisory support of the extension and consultancy services to be engaged. This will also include capacity building actions to elicit behavioural changes among the beneficiary farmers and entities.
3. A spatial and cost-benefit analysis will determine the optimal pilot sites to demonstrate the economic and environmental benefits of the implementation of the SLM as well as agroforestry practices.
4. The pilot sites will also provide the opportunity for the project’s uptake/ replication outside the pilot areas by working at three levels: 1. At field level with farmers and beneficiaries through capacity building, trainings and mainstreaming of good agriculture practices and methodologies implemented in a “learning by doing” manner. Additionally, the basic inputs (seedling and plants) will be provided to farmers and beneficiaries. 2. At government level, through influencing policies and designing of incentives to promote SLM practices nationally, 3. At regional/international level by promoting the positioning of the restoration model implemented in SKN by encouraging GSKN to commit a national pledge above the Bonn Challenge [1] to open funding opportunity to accede international funding for restoration activities at national level.
5. On St. Kitts, upland areas adjacent to the Central Forest Reserve and National Park (CFRNP) targeted for project intervention, have been selected based on (1) high slope steepness and vulnerability to slope failure, (2) slope disturbance as a result of sugar cane cultivation and (3) high (and visible) surface soil erosion. On Nevis, critical upland areas to be targeted will be in the east to southeast part of the island, mainly around New River, in addition to locations subjected to intensive shoreline erosion due to battering wave action (based on studies conducted by OAS/USAID); these areas include Pinney’s Beach, Gallows Bay, Pinney’s Jessup, and Pinney Cotton.
6. **Output 2.1.1: Decreased soil erosion, increased carbon sequestration and agroforestry production through reforestation and Assisted Natural Regeneration (ANR) (265 ha).** As part of the Government of St. Kitts and Nevis (GSKN) sustainable growth, development and debt management agenda, state lands have been vested in a Special Purpose Vehicle (SPV) which places such areas beyond the remit of the central government for immediate intervention, and as such, the government is only able to commit lands that are under its direct and total control to project interventions. In addition, as land is a limited resource it is imperative that the interventions of the project not encroach on private property. The project’s Agricultural Specialist, along with the expertise to be secured under consultancies to update the National Physical Development Plan (NPDP), will be used early in project implementation to make the final determinations based on lands to be targeted for ANR and reforestation.
7. Estimates on costs for land restoration through ANR and reforestation methods developed during the PPG phase revealed that the per-hectare cost of intensive on-ground investment is quite high; mainly related to the cost of inputs and labour - a factor that is typical for St. Kitts and Nevis (with varying similarities to other Caribbean SIDS). Hence, the available project budget for these activities is insufficient to cover the number of hectares initially proposed at PIF approval (350 ha). In light of this, and the need to balance resources to adequately cover the other project components, the project will be implementing a total of 265 hectares for ANR and reforestation actions and will also be providing extension services to farmers and other stakeholders in order to enhance and improve the understanding and application of ANR and reforestation concepts and activities for sustainable management of crops.
8. Out of the 265 ha, some 205 ha will be allocated for Assisted Natural Regeneration (ANR). On St. Kitts these interventions will be undertaken within the upper/mid-level watershed areas that are under degraded conditions immediately adjacent to the Central Forest Reserve and National Park (CFRNP) that is defined by the 305 metre (1,000 foot) contour. These are areas upland from the adjacent communities of Fahies, Belmont and Newton Ground in the western part of the island, upland areas adjacent to the communities of Sadlers, Tabernacle, Philips and Cayon along the northern part of the island, and in the south in the Wingfield area. On the island of Nevis interventions will be concentrated in the mid to upper slopes of the island mainly in the eastern and south eastern areas around New River. Within the 205 ha, approximately 70 ha will be subject to more intensive land treatment to include land preparation, soil conservation modifications, planting and seedling maintenance. The other 135 hectares of ANR will be supported through the provision of seedling and plants, and trainings to farmers or other stakeholders involved.
9. Some 60 ha (out of the overall 265 ha) will be allocated to agroforestry systems, and will include an area of 20 ha for pilot orchards containing native fruit trees that will include land preparation, soil condition and fertility amelioration, planting and maintenance and pest and disease control. The project will also establish nurseries to supply all seedlings required for the reforestation process, farmers will enter into co-management arrangements with the Department of Agriculture in the establishment and operation of these nurseries; it is anticipated that these co-management agreements will result in long-term investment by the farmers and supported via associated farmer cooperatives. Another 40 ha will receive support in the form of provision of seedlings, training and extension support services to farmers and land owners. The selection of the most suited native species, valuable agroforestry tree species, such as Soursop, Sugar Apple, Plum, Golden Apple, Mango, Guinep and Sea Grape, along with other species with relatively high resilience to climate change stressors (drought and hurricanes) will be done based on site suitability, use value and cost-benefit.
10. Through the planned ANR and reforestation efforts,the project will increase the area of forest and improve connectivity between the upper slopes of the CFRNP, which contain Elfin and Sierra Palm Cloud Forest and Evergreen Cloud Forests on the upper slopes as well as tropical moist forest that harbours at least six Neotropical migrant bird species on the mid-level slopes, with numerous forest patches extending from the mid slopes to the coast. Reforestation will also reduce the negative impacts (increased sedimentation and reduced water infiltration) of degraded areas on downstream aquatic and coastal/marine ecosystems and biodiversity (including within the Cayon to Key KBA), improve water flow and retention to the benefit of local communities, and provide communities adjacent to the CFRNP with economic alternatives to harvesting resources within the park. These areas will be managed in partnership between local farmers, the Ministry of Sustainable Development, and the Ministry of Agriculture and the project will assist these stakeholders in undertaking reforestation and ANR.
11. In the delivery of this output, the participation of the Department of Agriculture will be key in the process of identifying the farmers who may be best suited to participate in this endeavour based on the history of farming in areas adjacent to the parks, and especially those engaged in farming at elevated slopes in the project target areas; however, there may have been recent changes in the assignment of lands in the area outside of the parks, and as such, the participation of the Department of Lands and Surveys and the Department of Physical Planning will be crucial in determining the land tenure arrangements, to guide the project’s ANR and reforestation efforts. The project will embrace the Farmer Field School (FFS) approach for the provision of training and capacity development in reforestation, ANR, agroforestry practices, mangrove restoration, and the integration of carbon considerations into agroforestry and mangroves management to all interested farmers. In addition to farmers, training will also target agencies that will provide different types of extension services, including the St. Christopher National Trust, the Nevis Historical and Conservation Society, the Department of Agriculture, the Department of Environment, and the departments under the Ministry of Sustainable Development.
12. **Output 2.1.2: Increased ecosystem integrity through 20ha of mangrove ecosystems rehabilitated and protected (Cayon to Key KBA).** The project will work to conserve and rehabilitate critically endangered mangrove ecosystems and ensure that they are adequately protected, which will ensure the maintenance and increase of carbon stocks in mangroves, the conservation of biodiverse areas that play a key role in the future economy of the country, and the increased protection of SKN’s coastal areas, including from climate change related impacts such as storm surges and salt water intrusion. The project will work with the Department of Marine Resources, local NGOs and CBOs to rehabilitate at least 20 hectares of mangroves in the Cayon to Key KBA, which will help to protect coastal areas on the eastern coast of St. Kitts (downstream of the CFRNP) that are critical nesting habitat for the Leatherback turtle (*Dermochelys coriacea*) as well as other sea turtle species. This will be done through enrichment planting of dominant species of mangrove that already occur in the area where cover has been removed through prior clearing activities. Follow-on maintenance work to ensure survivorship of plantings will be undertaken. In addition, the project will carry out a rapid assessment of mangrove ecosystems in the country in order to identify the most threatened sites. Based on this assessment, the project will develop a mangrove conservation action plan to conserve remaining mangrove areas, including the coastal mangroves in the Ponds of the Southeast Peninsula KBA, which are important for preventing coastal erosion and storm surges in that area. The action plan will consider the piloting of eco-tourism concessions in mangrove areas to establish incentives for their protection. Policy makers and resource managers will have access to the action plan and the information and recommendations generated so that conservation efforts can be better targeted.
13. The project will also carry out a cost benefit analysis to have up-dated data and specific knowledge of restoration costs in the different type of forests (including the mangroves) and the ecosystem and financial benefits of restoration. This kind of information will permit the Ministry of Sustainable Development to take informed decisions and share information for understanding and awareness raising among the general public.

**Outcome 2.2** - **Local communities adopt tested SLM practices to reduce land degradation**

1. **Output 2.2.1: Decreased soil erosion, increased carbon sequestration and agricultural crop production obtained through restored areas of degraded land (215 ha).** The project will support intensive investment for the implementation of SLM and CSA activities in at least 215 hectares of degraded and/or abandoned lands located in the upper/mid-level watershed areas adjacent to the Central Forest Reserve and National Park (CFRNP) to productive agricultural uses (this is in addition to the 265 hectares that will be restored under Component 2.1.1). The project will directly support farmers who lost their livelihoods following the decline of the sugar industry in re-establishing agricultural production on lands that are now dominated by invasive vegetation with low carbon sequestration capacity and high rates of soil erosion. Farmers in the communities of Wingfield, Belmont and Green Hill in particular, will be targeted for this intervention to improve their livelihoods and receive capacity building and trainings to implement best agricultural practices.
2. The project will build on the initial scoping in the PPG phase with stakeholder consultation in final selection of the priority 215 ha for land rehabilitation that will have the largest impact on moderation of seasonal water flow and sediment retention. This will be based on the land use map, InVEST and ROOT tools and GIS multi-criteria decision analysis, and will also consider the following criteria: (1) areas located adjacent to the CFRNP that were subject to sugar cane plantations based on documented records at the Department of Agriculture, i.e., there must be evidence that the area was in fact subject to sugar cane production; (2) those that were the subject of sugar cane plantations by the largest density of farmers who relied on sugar cane as their primary source of income, i.e., the number of hectares located in an area that resulted in the largest number of displaced farmers after sugar cane was discontinued. The project will also assist farmers in these areas in selecting resilient crop varieties by carrying out a climate-related suitability analysis of potential crops as well as a market analysis of which crops are commercially viable. The results of these analyses will be the base to define in coordination with the farmers the best practices to be carried out.
3. Restoration activities will include the removal of invasive underbrush/ regrowth (at the site level), site preparation for planting, bunding and contouring, terracing and other appropriate landscaping methods, and adoption of SLM and climate smart agricultural practices, including reduced tillage, soil improvement and conservation techniques, low GHG emissions practices, etc. The cost benefit analysis will take all these factors into account, to understand the real costs of implementation of the practices and the benefits (environmental and financial) that farmers and Kittitian society will receive. Also a financing programme will be developed by working with existing programmes (as described in the baseline). The financing programme will be a protocol of compliance to SLM best practices that will be linked to access to markets and micro-loans, among others. In this sense, the project will contribute to the review of existing credit facility and access mechanisms, including relevant existing incentive (subsidy support) schemes by government and make recommendations for SLM practice adoption within credit access schemes. This will be closely coordinated and directed by the Department of Agriculture with technical guidance and support from IICA and the FAO, based on needs articulated mainly by the agricultural cooperative societies whose members are the target farmers. The development process will be defined on project inception in which a target on number of farmers associated with a validation/test will be determined. Development of the programme will include engagement of the private sector in terms of market access, with focus on main retail outlets and hotels to build on corporate service responsibility in encouraging that produce supplied is from SLM compliant practice.
4. For better adoption of these practices, it is expected that at least 100 farmers will participate and receive training in the various land restoration and agricultural practices and will also have a better knowledge of environmental and financial aspects of restoration practices. Farmers to be targeted for training will include farmers whose livelihood comes exclusively from farming; youth farmers entering the sector for the first time; women farmers; and farmers with economic displacement after sugar production was discontinued.
5. In cooperation with the ARMP baseline project, producers will benefit from project support for the acquisition or rehabilitation of productive assets, including water-efficient irrigation equipment, climate resilient storage facilities, greenhouses and improved planting material. This will ensure that new agricultural operations use the latest available technologies for reducing land degradation and producing foods without generating added emissions.

**Outcome 2.3 -** Improved infrastructure conditions support climate resilience in agriculture.

1. **Output 2.3.1: Water storage tanks and accompanying distribution lines in place to support sustainable and climate- friendly agricultural production for at least 100 participating farmers.** The project will support the installation of 5 water storage tanks with an estimated storage capacity between 76 m3 and 114 m3 (20,000 and 30,000 gallons) that will provide additional water for irrigation during the dry season. Combined with adequate water use efficiency technologies, the water storage tanks will contribute to creating resilience in the agriculture sector, and by increasing land productivity, reduce the trend of agricultural expansion into forested areas. The water storage tanks will be located, in as far as practical, in close proximity to the newly rehabilitated agricultural and agroforestry production sites (under Outcomes 2.1), closely coordinated with the IICA project ‘Retrofitting greenhouses in St. Kitts and Nevis’, also drawing on experiences and lessons learned from the implementation of the ARMP. The aim is to improve water and resource use efficiency and develop the capacity of youth to design next-generation climate-smart agricultural systems”, for which the specific parishes of St. Pauls and St. Marys in St. Kitts have been prioritized by the Department of Agriculture. These parishes offer the farmer density needed to ensure the storage tanks can in fact realistically serve the farming production needs of at least 100 farmers, without accessibility and distance being prohibitive considerations. A further validation activity at inception will be undertaken by the consultants to determine installation configurations. The installations and associated ancillary works will be subject to systematic monitoring during extension service visits to ensure proper oversight, maintenance and purposeful functionality are sustained over time, and will be incorporated under the extension service program of the Department of Agriculture.
2. The project will provide storage capacity of between 76 m3 and 114 m3 (20,000 and 30,000 gallons) and accompanying distribution lines to assist farmers in the New River area in Nevis. During the project inception phase, further validation work will be undertaken by the consultants and the Nevis Ministry of Agriculture to define specific dimensions for the storage infrastructure and extent of distribution lines, based on a cost-benefit analysis.

**Component 3: Knowledge management and dissemination for SLM, BD and CC**

1. Component 3 seeks to create a SLM, BD and CC information and Knowledge Management (KM) framework, within the context of the proposed outputs and outcomes of the project in St. Kitts & Nevis. It is envisioned that the successful implementation of the KM framework within the life span of the project will result in a solid foundation for the extended dissemination and exchange of SLM, BD and CC knowledge in St. Kitts & Nevis, contributing directly to SLM, BD conservation and CC mitigation in the country. This component also provides support through public education and awareness interventions to communicate the objectives and actions of the project, in order to increase awareness among specific target groups, national and local authorities and CBOs, taking into account that each target group has an invaluable potential to contribute to SLM, BD and CCM. The project also specifically identifies the need to ensure that locals and visitors are aware of practices for the sustainable use of nature and protection of biodiversity, especially in and around forests, mangroves, reefs, and sea grass beds, and with regard to threatened species of flora and fauna. This component will seek to ensure sustainability of the lessons learned from the pilots under Component 2.

**Outcome 3.1 -** Public servants from key institutions have increased planning and environmental management capacity

1. **Output 3.1.1: Increased national capacity on environmental issues.** The project will support the implementation of select sections of a Knowledge Management Strategy developed specifically for the project during the preparation phase, and presented in Appendix 19. Activities will include the development of standardized data collection and reporting formats to be used in support of project management, including Progress Reports, M&E reports, work plans, etc. Activities specific to the knowledge management objectives of the project will include standardized definitions of common terminologies to be used with respect to SLM, BD and CC; KM Guidelines and Communication Guidelines including training key personnel in their use; Systematization of Experiences and Lessons Learned as a result of project interventions; implement national and regional institutional partnerships through technical exchange programs, internships, and collaborative research agreements and Memoranda of Understanding; and establish a National KM Partnership Network across key institutions of the country. The project also will support regional and south-south cooperation by assisting the GSKN in participating in national, regional and global knowledge exchanges on SLM, BD and CC issues. This will include, for example, OECS regional meetings and projects, conferences of the parties to the relevant MEAs, technology fairs and conferences, with a particular focus on low-carbon resilient agriculture and biodiversity conservation. UN Environment as the project executing agency will facilitate information sharing with the project “Sustainable Land Management in the Commonwealth of Dominica”, which has been recently approved and will address many similar issues.
2. An integrated monitoring platform will be developed to generate reports with relevant technical information on SLM, BD Conservation and CSA to be submitted by the government in order to fulfil national commitments and international commitments above conventions such as CBD, NBSAPS, and others. Information for this platform will be supplied by technicians, farmers and local communities that will be trained in the use of monitoring protocols and field information gathering.

**Outcome 3.2** - Increased understanding and awareness of relevant environmental issues among the general public, land use managers, the tourism industry and international visitors to SKN.

1. **Output 3.2.1: Increased awareness and understanding of issues related to SLM, BD Conservation and CSA**. The project also will implement a Public Education and Awareness Strategy developed during project preparation, presented in Appendix 18. The strategy will target awareness on relevant environmental issues, particularly sustainable land management, biodiversity conservation and climate smart agriculture. General awareness raising, through radio, television and print media, will target the general public and schools to ensure that they are aware of the impacts of key economic activities on natural resources such as water, biodiversity, coastal zones, Key Biodiversity Areas (KBA), among other conservation matters. This strategy will support efforts to strengthen enforcement of rules and regulations concerning zoning, sand mining, extractive industries, tourism, and construction. The project also will target agricultural sector stakeholders, starting with producers and buyers, with a view to increasing the availability of technical information on sustainable and climate smart production. Outreach to these stakeholders will be carried out primarily through learning-by-doing approaches such as farmer field schools (see Component 2), as well as through the publication of relevant guidance materials.
2. In addition, a program will be implemented to develop SLM and climate smart agriculture manuals and tools for the curricula of educational institutions, in particular agricultural training programs/institutes. A public relations campaign will support on-going efforts to promote St. Kitts and Nevis as an eco-friendly holiday destination, and to raise awareness among tourists and industry stakeholders about the tourism sector’s ecological footprint, as well as options to reduce the footprint; a local consultant will be hired to evaluate the impact of this public relations campaign. As part of this effort, the project will carry out assessments to demonstrate to policy makers the economic benefits and market value of positioning SKN as an eco-friendly destination, in order to encourage long-term support for this approach. Policy-relevant data and information collected using GIS and remote sensing technologies as primary tools, including the maps and assessments of critical sites and biodiversity carried out under outcomes 1.1 and 1.3, will be consolidated in an environmental information system, which will be used to document progress across key indicators on the basis of existing systems and data. This information will be disseminated to relevant ministries and decision-makers, with the goal of informing future land use planning and zoning decisions in a way that supports the realization of sustainability policies.
3. Public awareness messages will be relevant to the objectives of the project and will focus on gaps in policy to address SLM, BD and CC; opportunities for strengthening the institutional framework in the agriculture and forest sectors to better address SLM, BD and CC; Climate-Smart Agriculture; sustainable agricultural practices; opportunities and benefits of Agroforestry; Sustainable Land Management practices; CCM practices; practices for the sustainable use of nature and protection of biodiversity, especially in and around forests, mangroves, reefs, and sea grass beds, and with regard to threatened species of flora and fauna; illustrated examples of sustainable use of nature; specific protection of forests, mangroves, reefs and seagrass beds; protection of native species of flora and fauna; avoiding the introduction of exotic species; advocacy for policies to protect the environment and biodiversity; impacts of climate change; and advocacy for CCM policies and actions.
4. The medium chosen to communicate key messages will be audience-specific as defined in the project’s Public Education and Awareness Strategy, but will be selected from among face-to-Face Meetings, Town Hall Meetings, E-mail, website, newsletters, Field Visits, Press Conferences, Press Releases, publications, Annual Reports, broadcast media, brochures, Case Studies, workshops, Special Events/Open Days, informative video DVD, articles in magazines, posters and t-shirts.
   1. **Intervention logic and key assumptions**
5. The intervention logic of the project is guided by the ‘drivers’, ‘assumptions’, and ‘logical pathways’ needed to achieve the ultimate impact of the project: To transform degraded forest landscapes into biodiversity and climate-friendly areas of sustainable agricultural/agroforestry production, and consequently delivering on the global environmental benefits anticipated. The key drivers are those activities and processes that the project can potentially and directly sponsor, in support of project outputs and outcomes, while the assumptions are those conditions and circumstances that are necessary to achieve the desired project results, but are outside the control of the project. The logical or impact pathways are the set of steps, consisting of activities, processes and assumptions that collectively will deliver the desired project objective (see full illustration in the Project Theory of Change in Appendix 16).
6. The project’s proposed interventions/activities (drivers) build on the baseline conditions which already exist and which were described above, and seek to drive those additional steps and processes required to achieve incremental results. The project’s intervention logic also capitalizes on the enabling environment provided by the commitments of the Government of St. Kitts and Nevis with respect to various international conventions and agreements. Primary *drivers* include:

* Support NPDP revision and implementation
* The production of baseline digital land use maps of areas of high priority environmental concern
* Training and capacity building to staff of relevant institutions, Civil Society Organizations and communities for coordinated and effective action on SLM, BD conservation and climate smart agriculture
* Biodiversity baseline assessments and management strategies
* Support to a post-graduate technical training for at least 6 students engaged with the local authorities
* Support in the mainstreaming of BD conservation, SLM and CCM into key development and resource management sectors; and
* Development and implementation of strategies for Knowledge management and dissemination for SLM, BD and CC.

1. The project’s key *assumptions* are:
2. Counterpart organizations are willing to share information and recognize the usefulness of the data to be produced and knowledge to be generated.
3. Technical data and monitoring systems are robust enough to guarantee quality information on BD conservation progress, measurements of SLM success, and calculation methods for GHG emission reductions.
4. Government of SKN prioritizes policy formulation and regulatory reform as an essential first step for BD conservation, SLM, CSA and CCM.
5. Stakeholders and decision-makers are receptive to incorporating project results into policy formulation processes and value the importance of inter-institutional coordination for policy success.
6. Stakeholder institutions show an interest in collaboration and partnerships with SKN to strengthen information and capacity building for BD conservation, SLM, CSA and CCM.
7. Ministry of Agriculture is fully engaged with the goals and objectives of the project
8. Local communities and agriculture stakeholders take an interest in and/or see the benefits of BD conservation, SLM and CCM, trust the awareness- raising message and embrace its content.
9. Key institutional project stakeholders fully embrace the outputs of the project and institutionalize required processes and strategies for BD conservation, SLM, CSA and CCM.
10. The Department of Physical Planning embraces the goals and objectives of the project, and willingly shares relevant GIS data for project purposes.
11. The project’s logical pathways are summarized below:

* Pathway 1: This logical pathway advocates for a robust planning, institutional and regulatory framework as an indispensable and logical foundation, upon which other interventions in support of the project’s onward processes towards achievement of the global objective may be based. It defines an Updated/Revised National Physical Development Plan, legal and regulatory reforms for land use planning, and capacity building as the most important drivers necessary before the more optimistic goal of sustainable development may be achieved in St. Kitts and Nevis. This pathway allows for the establishment of integrated and strengthened environmental planning and management in the country, as a key step in the process to reducing land degradation and enhancing biodiversity management, but also requires that the Government of SKN prioritizes policy formulation and regulatory reform as an essential first step for BD conservation, SLM and CCM.
* Pathway 2: This logical pathway proposes that an overall Sustainable Land Management Strategy which focuses on agroforestry, reforestation, and Assisted Natural Regeneration, complemented by the regulatory and institutional framework offered by an Updated NPDP, will produce the extended SLM and CCM benefits of reduced soil erosion, increased carbon sequestration, and increased ecosystem integrity, and will additionally allow for Climate Smart Agriculture production on restored lands. This pathway assumes that the Biodiversity Management Strategy will receive timely and effective support from decision makers and that local communities and agriculture stakeholders take an interest in and/or see the benefits of BD conservation, SLM and CCM. This pathway is both dependent and complementary to Pathway 1.
* Pathway 3: This logical pathway proposes that the successful implementation of a KM framework will result in a solid foundation for the extended dissemination and exchange of SLM, BD and CC knowledge in St. Kitts and Nevis beyond the life of the project, and is thus a crucial element to sustaining the project’s anticipated outcome of contributing directly to SLM, BD conservation and CC mitigation. This pathway highlights the knowledge management and public awareness interventions of the project as critical intermediary steps between the outcomes described in pathways 1 and 2, and the global project objective of transforming degraded forest landscapes into biodiversity and climate-friendly areas of sustainable agricultural/agroforestry production. This pathway assumes that project stakeholders will trust the knowledge management approach and awareness- raising messages, and will embrace their content.
  1. **Risk analysis and risk management measures**

1. The assessed risks, rating, and proposed mitigation measures are presented in Table 3 below.

**Table 4. Project Risk Assessment**

|  |  |  |
| --- | --- | --- |
| **RISK** | **RATING** | **RISK MANAGEMENT STRATEGY** |
| Counterpart organizations may not fully cooperate or share information needed to facilitate foundational structures to support decision making; stakeholders do not fully appreciate the benefits of the integrated planning that facilitates biodiversity conservation, SLM and sustainable climate-smart agriculture. | Medium | An intensive series of consultative dialogues will be held among the relevant agencies across both technical and senior policy levels. Business processes of the various agencies will be taken into account to ensure that the project builds on already working best practices. Where possible/practical cooperation frameworks between collaborating organizations will be effected. The pilot initiatives will be instrumental in demonstrating good practice. |
| Climate change variability: major natural disasters (such as hurricanes, earthquakes, floods and droughts) strike St. Kitts and Nevis | Medium | While there is no adequate management strategy in the case of a major hurricane or natural disaster striking the islands, risk preparedness and early loss prevention measures will be put in place for project activities involving agriculture, in line with current practices for Disaster Risk Management in SKN. Should a significant disaster occur, the project will work with development partners to address damages and to implement recovery strategies. Project activities to restore vegetative cover and prevent soil erosion will help in the longer term to reduce the damage caused by extreme weather events. |
| Limited policy level buy-in during periods of financial stress shifts priorities away from sustainable resource management and diminishes national investment after the project ends | Low | Environmental sustainability is a top-level priority for the Government of SKN, as expressed in several high-level policy statements and plans. Given the urgent need to diversify SKN’s economy, and the potentially important savings this could bring in terms of energy, food imports, and avoided costs of land degradation, the project is expected to mobilize continued high-level support. |
| Legislative process may prove to be slow and extend beyond the life of the project with planned regulatory reforms not getting formally enacted/adopted by end of project. | Medium | The project and the Ministry of Sustainable Development will ensure proper due diligence and timely presentation of proposals to the relevant levels and decision makers in Government |
| Farmers may not have faith in Climate Smart Agriculture concept and show preference to continue to do things as they traditionally did. | Low | The project will ensure early and sustained engagement of farmers in all efforts to introduce and demonstrate the socio-economic benefits of CSA, and will launch the public education and awareness campaign early with specific messages tailor-made for farmers and including farmers participation in the campaign. |
| The multi-sectoral nature of land use planning results in slow sector support, resulting in delays for approval by Cabinet. | Low | The project and the Ministry of Sustainable Development will adopt a policy which ensures broad public consultations and full and total engagement of sector ministries at the level of the Permanent Secretaries, in all proposals under consideration, and securing sector and individual ministry buy-in before proposals are presented to Cabinet for consideration. |
| Undefined land tenure situation results in delays in project interventions in areas adjacent to national parks and in areas once used for sugar cane production. | High | This is an issue that requires the early engagement of the Department of Lands and Surveys at the start of the project and on the Project Steering Committee. Ministry-to-Ministry agreement on the level of priority to be given to the definition of land tenure situation in areas intended for project intervention may be key. |

* 1. **Consistency with national priorities or plans**

1. The aims of this project are consistent with the overall national policy priorities established by the Government of St. Kitts and Nevis (GSKN), such as the National Poverty Reduction Strategy and the National Adaption Strategy (NAS, 2006), which outlines the strategy for the fiscal, economic, social, physical and environmental transformation of the Federation in the aftermath of the closure of the sugarcane industry. The NAS identifies four pillars of development to advance this process: non- sugar Agriculture, Tourism, Financial Services and Information and Communication Technology. Several crosscutting areas were also identified, including housing, infrastructural development, health and wellness, offshore education and private sector development. In order to choose the most suitable land uses, the project will also support a revision or updating of the National Physical Development Plan (NPDP), which identifies appropriate physical planning and land use strategies to allow for sustainable utilization of the natural resource base and to direct the use of public sector and private industry resources for planned and orderly urban development. The Nevis Physical Development Plan is still in the development phase. The project is also in line with the Sustainable Land Management Plan, which contains guidelines on land management with linkages to environmental conservation and adaptation to climate change, and the National Environmental Management Strategy, which seeks to reduce environmental degradation, raise awareness on environmental issues, promote environmentally friendly technologies, and protect biodiversity. The project will be consistent with the National Conservation and Environmental Protection Act (NCEPA), which outlines a framework for the declaration of sensitive ecological and historic sites as protected areas, as well as the Development Control and Planning Act, which makes provisions for the development of land in urban and rural areas.
2. The project is also aligned with the St. Kitts Strategy and Action Plan for Agriculture 2017-2021, which prioritizes the following eight priority areas: create an environment for agribusiness to be more productive and profitable via capacity building and innovation; enhance national food security with emphasis on food safety; assist in development of value added chains domestic and export; develop and strengthen appropriate institutional structures mechanisms and human resource capacities; create an environment to attract and retain youth and women involvement in agriculture; adopt an Integrated Water Resource Management approach; reduce crop and livestock losses; adopt and develop profitable measures to adopt and mitigate to climate change.
3. Of overall relevance for the development of the project, is the recently developed Draft Land Use Policy of 26th February 2018, which once approved, will provide overarching policy direction and context for land distribution, land tenure, land use, land administration and management, and taxation. Other policy documents of continued relevance include the Capacity Building and Mainstreaming of Sustainable Land Management in St. Kitts and Nevis - Strategic Framework for Investment Planning and Resource Mobilization of Sustainable Land Management Interventions, October 2010, as well as the Proposal for the Organizational Framework for the Land Management Unit, March 2010. These documents will be instrumental as influential baselines in the planning, institutional and regulatory reforms proposed by the project.
4. Finally, this project makes a significant contribution to the implementation of SKN’s commitments to the three Rio Conventions, as expressed in the country’s UNCCD National Action Plan, the NBSAP, and the INDC and National Communications to the UNFCCC. The UNCCD NAP aims to address the main causes of land degradation and to combat drought through the promotion of alternative livelihoods, sustainable agricultural practices, the development and efficient use of energy, and the strengthening of capacities for assessment and observation. The GSKN is currently working with the Partnership Initiative on Sustainable Land Management (PISLM) to establish LDN targets; during the implementation phase, the project will identify ways in which it can provide inputs to this process, including the baseline, work plans and final LDN targets. The NBSAP establishes that the management of natural resources should be based on scientific grounds in order to ensure continuity of the natural ecological balance and prevent deterioration of ecosystems. The NBSAP also identifies as priorities efforts to develop SKN’s scientific and technological capacity, to strengthen legal frameworks, and to establish socio-economic incentives for conservation and sustainable development of natural resources. The INDC and National Communications note key priorities to address climate change, including managing water demand and extraction and promoting adaptation to climate change through sustainable resilient livelihoods.
   1. **Incremental cost reasoning**
5. The Incremental Cost Reasoning of the project is summarized in the table below, and may be appreciated throughout the description of the intervention logic and alternative scenario, as well as in Appendix 3.

**Table 5. Incremental Cost Reasoning**

|  |  |
| --- | --- |
| **Baseline Scenario** | **Incremental Cost** |
| In the baseline scenario, existing institutional, legal and regulatory frameworks governing land use planning, and environmental issues will not support sustainable development, land use plans will not be based on accurate environmental information, and enforcement capacity will remain weak and fines and penalties will not be applied consistently.  There would continue to be poor, limited, or no systematic monitoring, collecting of data, data bases, inventories of existing flora, fauna and ecosystems, land cover mapping and mapping of climate change impacts and environmental degradation.  Without the GEF’s intervention there would not be an overall Sustainable Land Management Strategy which focuses on agroforestry, reforestation, and Assisted Natural Regeneration, resulting in lost opportunities for improvement in the conservation and sustainable management of Key Biodiversity Areas and at least 3 indicator species, and no possibility of extended benefits in SLM, CCM, reduced soil erosion, increased carbon sequestration, and increased ecosystem integrity.  Finally, none of the secondary and tertiary level) institutions on SKN offer comprehensive curricula in environmental sciences, climate smart agriculture or land management, and therefore, without the GEF investment, access to training and education opportunities relevant to environmental conservation and sustainable development will remain very limited. | With the GEF incremental investment, critical information on land use planning and trends, land degradation processes and ecological carrying capacities, and priority sites for erosion control and habitat conservation will be consolidated and integrated into national planning processes. By the end of the project, environmental regulations and the National Physical Development Plan will have been revised and brought in line with environmental policy priorities. The Ministry of Tourism and other partners will have received training for enforcing green guidelines in the construction sector, as well as regulations governing illegal extractive practices such as sand mining. Finally, national technical capacities in data collection and monitoring and in fields relevant to sustainable development and environmental conservation will have been greatly increased, with at least 6 post graduate students having acquired knowledge and experience, and with implementation partners trained in the NPDP implementation approaches.  With GEF investments, biodiversity conservation would be mainstreamed into SLM and CCM strategies, resulting in enhanced protection to Key Biodiversity Areas, three (3) key indicator species, increased carbon sequestration in soils and forest, reduced land degradation. |
| In the baseline scenario, investments in agricultural diversification and production will remain insufficient to enable SKN to revive its national food supply and markets. Policy makers will not have the information necessary to assess the suitability of land for new types of crops. Agricultural operations will not have implemented climate smart practices or the operation of integrated food systems such as agro-forestry, and in the absence of sufficient guidelines and infrastructure, agricultural enterprises will be unable to convert to new and more sustainable systems. Without GEF investment, water supplies will remain insufficient to guarantee year-round water supply for agriculture, in particular since information provided by the Water Services Department indicates that other options to ensure adequate supply of water in the future (desalination or deeper boreholes) are onerous and risky and are focused on providing potable water not water for irrigation Forest cover will continue to be degraded and land degradation will accelerate. Mangroves, which play a key provisioning and protecting function, will continue to be degraded (less than 70 ha remain, and they are under threat from unsustainable use and unsustainable tourism).  Although SKN has declared several national parks and forest reserves, there has been only one major baseline investment targeting an inventory of terrestrial biological diversity and this area is often ignored during planning and investment making. As a result, without the GEF investment, critical natural ecosystems will continue to be degraded in the absence of any effective protection and conservation measures. | With the GEF investment, sustainable agricultural production will be implemented on 215 hectares of restored lands. These agroforestry-based systems provide food resources and livelihoods opportunities while also maintaining ecosystem services, including water conservation, carbon sequestration, and flood and erosion control. In addition, by the end of the project water storage tanks will be helping to compensate for increasing water scarcity and competition for water on the islands, as well as reducing energy demands for water mobilization. Through the project, at least 265 hectares of forests will have been restored, primarily in upper watershed areas, which play a key protective and provisioning role. Using reforestation and Assisted Natural Regeneration approaches, and utilizing local / endemic tree species such as fruit trees and coconuts, functional agroforestry ecosystems will be in place to sustain livelihoods. In coastal areas, mangroves will have been protected and at least 20 hectares of mangroves will have been rehabilitated. In addition, policy makers and resource managers will have access to updated biodiversity data so that conservation efforts can be better targeted. |

* 1. **Sustainability**

1. The sustainability of the project will be built from the outset in all interventions. In terms of policies and regulations, sustainability will be supported by incorporating land / forest restoration and SLM practices into the revised NPDP, which will be the guiding document for development planning and permitting in the country for at least fifteen years. Sustainability also will be increased by establishing the baseline data and information management systems necessary for monitoring of land degradation processes and trends over the long term. The project will also strengthen institutional capacities and expertise, including removing critical gaps in the country’s technical capacity regarding climate-related agricultural issues and land use planning, which will enable the Government to make more cost effective and sustainable policy decisions in the future. Project activities are also designed to establish new incentives for conservation and sustainable management of natural resources, such as assessments to demonstrate to policy makers the economic benefits and market value of positioning SKN as an eco-friendly destination. The project will also create visible economic incentives for the establishment of integrated agricultural systems, such as the establishment of tangible infrastructure and assets, as well as enhanced market opportunities, to incentivize farmers to undertake SLM agriculture and agroforestry activities, which will not only help combat land degradation and curb biodiversity loss, but will also lead to a gradual increase in income for producers. It is expected that, in the long term, restoration of abandoned land to agricultural production will help the country become less dependent on imports of food. The project’s investment in the implementation of a Knowledge Management Strategy and a Public Education and Awareness Strategy, will be a key contributor in the establishment of a cadre of stakeholders championing biodiversity conservation, SLM and CCM in St. Kitts and Nevis, way beyond the life of the project.
   1. **Replication**
2. The implementation of the proposed project provides numerous opportunities for the upscaling of SLM, Biodiversity Conservation and CSA to encompass an area way beyond the 488 hectares identified to date. Because SKN is a very small country, project results will be visible to a large number of people, and therefore replication and upscaling will occur naturally provided that mechanisms and financial support are identified. Technologies and approaches promoted by the project, in particular those targeting the agricultural and forestry sectors, will be immediately adaptable to the entire country, and will be integrated into key policy documents such as the National Physical Development Plan, Building Codes, and the Nevis Physical Development Plan, as well as important norms and standards. Farmer Field Schools, the targeted inclusion of youth farmers, and other farmer-based extension systems will play a key role in ensuring the replicability of results from one farm to the next, and from one generation to another, by promoting a learning-by-doing approach in which results are usually immediately visible and transferable, and are easily handed down between generations of farmers. Through Component 3, the project will disseminate its key achievements so that a larger group of stakeholders can become inspired to take up the proposed technologies and approaches. The successful demonstration of Climate Smart Agriculture will incentivize other farmers and other projects to expand and upscale the scale and magnitude of small scale rural agriculture through-out the country, as an important means of livelihood for rural families.
3. Furthermore, through the project’s Knowledge Management strategy, numerous opportunities for upscaling at both the national and regional level will be made available through the Systematization of Experiences and Lessons Learned as a result of project interventions; the implementation of national and regional institutional partnerships through technical exchange programs, internships, and collaborative research agreements and Memoranda of Understanding; the establishment of a National KM Partnership Network across key institutions of the country; support to regional and south-south cooperation by assisting the GSKN in participating in national, regional and global knowledge exchanges on SLM, BD and CC issues, for example, OECS regional meetings and projects, conferences of the parties to the relevant MEAs, technology fairs and conferences, with a particular focus on low-carbon resilient agriculture and biodiversity conservation.
   1. **Public awareness, communications and mainstreaming strategy**
4. As described above in Component 3, the project will implement the most relevant sections of the Public Education and Awareness Strategy developed during project preparation (Appendix 17), focusing on relevant environmental issues, particularly sustainable land management, biodiversity conservation and climate smart agriculture. General awareness raising, through radio, television and print media, will target the general public and schools to ensure that they are aware of the impacts of key economic activities on natural resources such as water, biodiversity, coastal zones, energy, etc. This strategy will support efforts to strengthen enforcement of rules and regulations concerning zoning, sand mining, extractive industries, tourism, and construction. The project also will target agricultural sector stakeholders, starting with producers and buyers, with a view to increasing the availability of technical information on sustainable and climate smart production. Outreach to these stakeholders will be carried out primarily through learning-by-doing approaches such as farmer field schools (see Component 2), as well as through the publication of relevant guidance materials.
5. In addition, a program will be implemented to develop SLM and climate smart agriculture manuals and tools for the curricula of educational institutions, in particular agricultural training programs/institutes. A public relations campaign will support on-going efforts to promote St. Kitts and Nevis as an eco-friendly holiday destination, and to raise awareness about among tourists and industry stakeholders about the tourism sector’s ecological footprint, as well as options to reduce the footprint. As part of this effort, the project will carry out assessments to demonstrate to policy makers the economic benefits and market value of positioning SKN as an eco-friendly destination, in order to encourage long-term support for this approach. Policy-relevant data and information collected using GIS technologies as a primary tool, including the maps and assessments of critical sites and biodiversity carried out under outcomes 1.1 and 1.3, will be consolidated in an environmental information system, which will be used to document progress across key indicators on the basis of existing systems and data. This information will be disseminated to relevant ministries and decision-makers, with the goal of informing future land use planning and zoning decisions in a way that supports the realization of sustainability policies.
6. Public awareness messages will be relevant to the objectives of the project and will focus on gaps in policy to address SLM, BD and CC; opportunities for strengthening the institutional framework in the agriculture and forest sectors to better address SLM, BD and CC; Climate-Smart Agriculture; sustainable agricultural practices; opportunities and benefits of Agroforestry; Sustainable Land Management practices; CCM practices; practices for the sustainable use of nature and protection of biodiversity, especially in and around forests, mangroves, reefs, and sea grass beds, and with regard to threatened species of flora and fauna; illustrated examples of sustainable use of nature; specific protection of forests, mangroves, reefs and seagrass beds; protection of native species of flora and fauna; avoiding the introduction of exotic species; advocacy for policies to protect the environment and biodiversity; impacts of climate change; and advocacy for CCM policies and actions.
7. The medium chosen to communicate key messages will be audience-specific as defined in the project’s Public Education and Awareness Strategy, but will be selected from among face-to-Face Meetings, Town Hall Meetings, E-mail, website, newsletters, Field Visits, Press Conferences, Press Releases, publications, Annual Reports, broadcast media, brochures, Case Studies, workshops, Special Events/Open Days, informative video DVD, articles in magazines, posters and t-shirts.
8. The Public Education and Awareness Strategy will be complemented by the selective implementation of a Knowledge Management Strategy developed specifically for the project during the preparation phase (Appendix 18). Under this KM strategy, activities will include the development of standardized data collection and reporting formats for use by all project documents (Progress Reports, M&E reports, work plans, etc.); standardized definitions of common terminologies to be used with respect to SLM, BD and CC; KM Guidelines and Communication Guidelines and train key personnel in their use; Systematization of Experiences and Lessons Learned as a result of project interventions; implement national and regional institutional partnerships through technical exchange programs, internships, and collaborative research agreements and Memoranda of Understanding; and establish a National KM Partnership Network across key institutions of the country.
   1. **Environmental and social safeguards**
9. In accordance with the GEF Policy on Environmental and Social Safeguards, safeguard measures will be built into national project design and implementation. Under this project, Strategic Environmental and Socio-economic Assessments (SEAs) using UN Environment Environmental, Social and Economic Sustainability Framework (ESES) framework standards including guidelines and templates will help to streamline and focus the incorporation of environmental and social concerns into the decision-making process, making project-level EIA a more effective process. National regulations and policies of relevance in terms of environmental and social considerations will also be given due attention, and shall be a responsibility of both the Project Steering Committee and the Technical Advisory Committee to ensure that the project team implements the project as per all required safeguards, policies and regulations.
10. The Project will seek to institutionalize gender mainstreaming in line with the National Gender Equality policy, at all levels of intervention and operation of the project. In its efforts to fully integrate gender mainstreaming, the Project will be guided by the principles that gender elements are important drivers and incentives for achieving global environmental benefits, and in ensuring gender equity and social inclusion. The Project also embraces the fact that the needs, interest, and capabilities of women are habitually structurally different from those of men, in relation to the access, use, and management of biodiversity resources within project intervention areas, and thus, must be given special consideration in ensuring equal access to the resources and services of the Project.
11. In the context of training and capacity building programmes, both women and men will be involved in a balanced way, ensuring that the selection criteria for training include gender-specific characteristics that will ensure meaningful and significant participation by women in all trainings offered by the project (not less than 25%). The gender aspect will also be taken into account in the information and communication strategy of the project, by formulating messages specifically tailored to women and men independently, whenever relevant, and by taking into account gender aspects and the representation of both genders in all communication and information materials. All efforts will be made to ensure that project implementation incorporates and recognizes the relevant differences between gender labor, knowledge, needs, priorities, and responsibilities at the productive farm level, especially in relation to CSA and in the selection of farmers to benefit from SLA interventions, including access to materials, seedlings, technical assistance, fencing, and access to enhance water infrastructure for farms. Additionally, women will be given priority to access support and work in the establishment and operations of plant nurseries to be supported by the project, and to be used in the reforestation efforts of the project on both islands. The project also identifies in its Results Framework a specific indicator relevant to women: Number of women benefitting directly from the project through access to training, reforestation support, and CSA support: 30 women direct beneficiaries. .
12. The monitoring and evaluation of project impacts will enable the Project Management Team to reassess project intervention strategies and make revisions as needed to strengthen environmental and social outcomes.

# Section 4: Institutional Framework and Implementation Arrangements

## DIVISION OF RESPONSIBILITIES

1. **Project Implementing Agency** – The United Nations Environment Program (UN Environment) is the GEF’s Implementing Agency for this project. UN Environment is tasked with the overall responsibility of ensuring that GEF policies and criteria are adhered to and that the project meets its objectives and deliver on expected outcomes. Other specific Implementing Agency responsibilities include ensuring compliance with GEF policies and standards for results-based M&E, fiduciary oversight, safeguards compliance, project budget approvals, technical guidance and oversight of project outputs, approval of Project Implementation Reports (PIRs), and participation in the project’s superior governance structure.

## INTERNAL STRUCTURE

1. **Project Executing Agency** – The International Union for the Conservation of Nature, Regional Office for Mexico, Central America and the Caribbean (IUCN-ORMACC) will perform the role of executing agency. This decision was made by the GSKN, which has adopted a collaborative approach with partners to facilitate execution of the myriad of initiatives on sustainable development in the country. This is due on part to resource constraints, but is also the government’s approach to strengthening networks for collaboration with regional and international partners. This has been a precedent with several other initiatives implemented by organizations such as FAO, UNDP, etc.

1. IUCN-ORMACC will establish a Project Coordinating Unit (PCU) to oversee day-to-day project execution. The PCU will be mostly based in SKN, and is responsible for the fiduciary oversight and reporting of the project, including technical and financial reporting to the IA, financial management and procurement consolidation according to the projects operational manual and procurement plan. It is also responsible for monitoring and evaluation (M&E), provides and coordinates technical advice, and coordinates and assists overall orientation concerning project conception, strategies, criteria and methodologies. The PCU will be staffed with a **Project Coordinator,** a **Sustainable Agriculture Specialist**, who will be based in SKN, and an **Administrative Assistant,** who will provide support from Costa Rica. The Administrative Assistant needs to be based in IUCN ORMACC offices in Costa Rica as the majority of the position’s key duties cannot be performed from abroad as it requires handling of administrative related paperwork for internal review and approval processes which imply printing, delivery and follow up of the same with relevant IUCN staff. However, when deemed necessary, the project will ensure administrative/logistical support to staff based in St. Kitts and Nevis via the provision of professional services. One representative of the Ministry of Sustainable Development together with IUCN staff will take part in the recruitment process of the PCU staff and decide about the most suitable candidate for each position according to IUCN recruitment procedures. The PCU Project Coordinator will have a double reporting line (IUCN and the Ministry of Sustainable Development). The administrative support and financial management and procurement services will be provided directly by IUCN-ORMACC, and technical delivery of project outputs will be complemented by IUCN experts’ backstopping, other relevant national government agencies and specialist consultants on an as needed basis.
2. A **Technical Advisory Committee (TAC)** will be appointed to provide technical oversight, guidance and support during project implementation. The TAC is also responsible for reviewing and providing recommendations on project methodological processes (technical quality) and activities to the PCU for its consideration. The TAC will meet at least quarterly and will be facilitated by IUCN as executing agency. Members of the TAC will include the Project Coordinator and senior technical officers from the key ministries of government, CSOs and academia with thematic competence and/or authority of relevance to the areas of interest and objectives of the project. The TAC shall be Chaired by the Project Coordinator and consist of seven more members, at least 3 of which must be from non-government institutions. The specific roles and responsibilities of the Technical Advisory Committee are as follows:

* Review and make recommendations to the PCU and PSC on technical matters related to the Annual Operational Plans, Procurement Plan, Annual Reports and Project Progress Reports;
* Ensure that project activities adhere to the Annual Operating Plan, the GEF and UN Environment Social & Environmental Safeguards, and those of the Government of St. Kitts & Nevis;
* Review and make recommendations for improving the Terms of References for the recruitment of consultants, while ensuring that this review does not constitute undue delay to the project’s procurement processes;
* Participate in key meetings, workshops, consultations, trainings and other related activities as required;
* Provide the project with access to information, data, and technical advice of specialized areas of competence of the Member;
* Ensure accountability by making decisions in accordance with standards that ensure management brings about development results, best value for the money, fairness, integrity, transparency, and effective international competition.

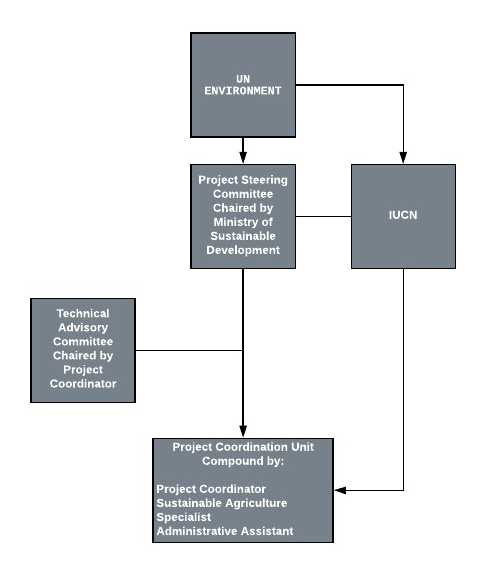
## OVERSIGHT MECHANISMS

1. The project’s superior governing body is the **Project Steering Committee (PSC).** The PSC is responsible for ensuring that the project meets goals announced in the Project Results Framework by helping to balance conflicting priorities and resources. Conclusions and recommendations produced by the PSC will be used by IUCN-ORMACC to modify implementation strategies, annual work plans and resources allocation budget and, when necessary, to adjust the project’s Result Framework in consultation with UN Environment and the Government of St. Kitts and Nevis. This committee will meet every six months, either physically or virtually. The PSC shall be chaired by the Ministry of Sustainable Development, and will include the Permanent Secretaries or their delegate from the Ministries with responsibility for (1) Sustainable Development; (2) Lands and Surveys; (3) Physical Planning; (4) Agriculture/Forestry; (5) Tourism and (6) Environment, and the GEF Operational Focal Point. The UN Environment Task Manager and the IUCN-ORMACC will also be members of the PSC. The specific roles and responsibilities of the Project Steering Committee are as follows:

* Provide input into planning and coordination of the project;
* Review and approve project policies and procedures;
* Review and approve Annual Operational Plans and Budgets at the beginning of each fiscal year, to allow for smooth project execution through-out the rest of the fiscal year
* Review the progress of the project and ensure activities are in line with approved annual operational plan and budget;
* Review and approve all project technical and financial reports (quarterly, semi-annual reports, PIRs, and audited financial statements);
* Ensures that required resources are committed and arbitrates any conflicts within the project or negotiates a solution to any problems between the project and external entities
* Promote partnerships with relevant Government Ministries/agencies/departments for monitoring and execution of the project;
* Facilitate the coordination of project financed activities with other related investments and institutions in St. Kitts & Nevis where applicable;
* Ensure accountability by making decisions in accordance with standards that ensure management brings about development results, best value for the money, fairness, integrity, transparency, and effective international competition.

The project´s Institutional and Implementation Structure is presented below.

**Figure 1. Project Institutional & Implementation Structure**



IUCN Backstopping and/or external consultants / national ministries and agencies involved may include experts in the following areas:

* Physical Planning,
* Natural Resource Management,
* Legal assistance,
* Sustainable Land Management
* Climate Smart Agriculture
* Knowledge Management & Public Awareness

# Section 5: Stakeholder participation

1. Stakeholders participated in the identification of project priorities and in the definition of planned outputs and outcomes during interviews and consultations. Project stakeholders had the opportunity to review and comment on proposed project activities and to provide specific inputs to the project formulation process. During project implementation, stakeholder participation will include the provision of co-financing, participation of technical staff in workshops, training, and tools development, the facilitation of local project events and processes, the provision of project oversight through participation on the PSC or TAC, as data sources, technical expertise and knowledge management through the institutionalization of project results and lessons learned to allow for up-scaling, replication, and sustainability. Project Stakeholders and their roles are project implementation is presented in Table 5.
2. The inclusion and engagement of Civil Society Organizations (CSOs) and the public in the implementation of the project will be ensured via their direct participation in the governance and decision-making bodies of the project. Special effort will be made to ensure that CSOs active or present in the area of influence of the project are represented in project decision-making and in interventions which may affect their interests. In all instances, the standards and guidelines of the GEF Policy on Environmental and Social Safeguards shall apply, especially as it relates to ensuring appropriate stakeholder participation. The UNEP Environment and Social Safeguards is presented in Appendix 15.

**Table 6. Project Stakeholders and their Roles in Project Implementation**

| **Stakeholders** | **Current Mandates / Responsibilities** | **Roles in Project Implementation** |
| --- | --- | --- |
| Department of Economic Affairs and PSIP | GEF Operational Focal Point  Charged with the prioritization of investments, review of progress made in key public investment policies and measures, and to provide technical support to ensure that barriers to success are removed. | Lead Executing Agency: overall coordination of project; lead review and revision of environmental policies and plans |
| Department of Physical Planning | The Department of Physical Planning of the Ministry of Sustainable Development is the government body charged with providing a framework to support the implementation of policies, programmes and measures to control and regulate the development of land and buildings | Main lead for Component 1 of the project Lead on revision of National Physical Development Plan, also contributes to the assessment and execution of rural public works and the revision of the National Building Codes and the National Physical Development Plan. |
| Department of Agriculture | Responsible for national agriculture policy development, agriculture research and the provision of extension services for agriculture production and national food security. | Participate in implementation of Component 2, deploy farmer field schools and extension approaches, assist with procurement of seeds, materials and trees |
| Department of Water Services | Tasked with providing an affordable and reliable service to businesses, institutions and households whilst ensuring the sustainability of the country’s water resources | Lead on the execution of water storage tanks, reservoirs participate in water resource assessments. |
| Ministry of Tourism | Responsible for tourism policy development and implementation, industry regulation, industry statistics, strategic development of the tourism sector | Support development of eco-tourism or conservation based tourism and enforcement of green guidelines; participate in revision of legal texts. |
| Housing and Land Development Corporation | To provide for the systematic development and alienation of land in respect of Agriculture, Industry, and Tourism, and to set up a fund for development | Participate in the revision of Building Codes and the National Physical Development Plan |
| Ministry of Community Development, Gender Affairs and Social Services | Charged with the responsibility for community development, social development, gender issues, poverty alleviation services and community cohesion activities. | Participate in the implementation of Components 2 and 4, and in ensuring all gender issues are addressed, including compliance the GEF-7 Core Indicator on gender |
| Saint Christopher National Trust (SCNT) | To preserve and promote the natural, historical, ecological and cultural heritage of the island of St. Christopher (St. Kitts), and to educate the public locally, regionally and internationally on the history of the Federation of St. Kitts and Nevis. | Support implementation of activities related to sustainable development, built heritage and conservation, and protection of the natural environment. |
| Nevis Historical and Conservation Society | To promote effective management of the historical, cultural and natural resources of the island of Nevis for the benefit of all of its people. | Support implementation of activities related to sustainable development, built heritage and conservation, and protection of the natural environment. |
| REACH Hamilton Community Group | Environmental education and awareness group in the village of Hamilton Estate on Nevis, engaged in advocacy, capacity building, and the implementation of local environmental projects focused at solid waste and agro-forestry. | Key role in organizing the participation of local communities in agroforestry and agricultural production activities, based on their experience in community education and awareness on natural resource management, small-scale reforestation initiatives, small business development, and identifying local knowledge on agricultural production and the traditional uses of plants. |
| New River Farmers Association in Nevis | Farmers Cooperative in Nevis engaged in agroforestry and adaptation to climate change initiatives in farming, the preservation of local farming knowledge, and capacity building to farmers. | Key role in organizing the participation of local communities in agroforestry and agricultural production activities, based on their experience in community education and awareness on natural resource management, small-scale reforestation initiatives, small business development, and identifying local knowledge on agricultural production and the traditional uses of plants. |
| Fahies Agricultural Women’s Co-operative Society | Women’s group engaged farming and agroprocessing activities; its goal is to provide value-added nutritious foods by utilizing local agricultural crops while partnering with the community and improving the livelihoods of its members. | Key role in sustainable agricultural development and sustainable land management, and instrumental in ensuring the participation of women in agriculture |
| Nevis Turtle Monitoring Network/Department of Fisheries | Dedicated to the development of a Turtle Conservation Program for Nevis that involves local communities, to ensure that sea turtles are preserved for future generations. Involved in systematic monitoring of turtle nesting. | Assess, regulate and promote sustainable use of the fisheries resources, and to manage the harvest of stock to ensure food security, to promote aquaculture and encourage conservation practices |
| International Union for the Conservation of Nature (IUCN) | Key regional player in biodiversity conservation; gender mainstreaming; climate change, and water resources management. Responsibility for project design. | Project Executing Agency with responsibility for day-to-day delivery of project activities and results, monitoring, evaluation and fiduciary responsibility for project resources. |

# Section 6: Monitoring and evaluation Plan

1. The project will follow UN Environment standard monitoring, reporting and evaluation processes and procedures. Substantive and financial project reporting requirements are summarized in Appendix 8. Reporting requirements and templates are an integral part of the Environment legal instrument to be signed by the executing agency and UN Environment.
2. The project M&E plan is consistent with the GEF Monitoring and Evaluation policy. The Project Results Framework presented in Appendix 4 includes SMART indicators for each expected outcome, means of verification, as well as mid-term and end-of-project targets. These indicators along with the key deliverables and benchmarks included in Appendix 6 will be the main tools for assessing project implementation progress and whether project results are being achieved. A draft of the project’s Costed M&E Plan is presented in Appendix 7, with all mentioned M&E costs fully integrated in the overall budget of the project, presented in Appendix 1.
3. The M&E plan will be reviewed and revised as necessary during the project inception workshop to ensure project stakeholders understand their roles and responsibilities vis-à-vis project monitoring and evaluation. Indicators and their means of verification may also be fine-tuned at the inception workshop. Day-to-day project monitoring is the responsibility of the project management team but other project partners will have responsibilities to collect specific information to track the indicators. It is the responsibility of the Project Coordinator to inform UN Environment of any delays or difficulties faced during implementation so that the appropriate support or corrective measures can be adopted in a timely fashion.
4. The project Steering Committee will receive periodic reports on progress and will make recommendations to UN Environment concerning the need to revise any aspects of the Results Framework or the M&E plan. Project oversight to ensure that the project meets UN Environment and GEF policies and procedures is the responsibility of the Task Manager in UN Environment -GEF. The Task Manager will also review the quality of draft project outputs, provide feedback to the project partners, and establish peer review procedures to ensure adequate quality of scientific and technical outputs and publications.
5. Project supervision will take an adaptive management approach. The Task Manager will develop a project supervision plan at the inception of the project which will be communicated to the project partners during the inception workshop. The emphasis of the Task Manager supervision will be on outcome monitoring but without neglecting project financial management and implementation monitoring. Progress vis-à-vis delivering the agreed project global environmental benefits will be assessed with the Steering Committee at agreed intervals. Project risks and assumptions will be regularly monitored both by project partners and UN Environment. Risk assessment and rating is an integral part of the Project Implementation Review (PIR). The quality of project monitoring and evaluation will also be reviewed and rated as part of the PIR. Key financial parameters will be monitored quarterly to ensure cost-effective use of financial resources.
6. A mid-term management review or evaluation will be commissioned and launched by the Project Manager at the end of September 2021 as indicated in the project milestones. The review will include all parameters recommended by the GEF Evaluation Office for terminal evaluations and will verify information gathered through the project PIRs and quarterly progress reports, as relevant. The review will be carried out using a participatory approach whereby parties that may benefit or be affected by the project will be consulted. Such parties were identified during the stakeholder analysis (see section 2.5 of the project document). The project Steering Committee will participate in the mid-term review and develop a management response to the evaluation recommendations along with an implementation plan. It is the responsibility of the UN Environment Task Manager to monitor whether the agreed recommendations are being implemented.
7. An independent Terminal Evaluation (TE) will take place at the end of project implementation. The Evaluation Office (EO) of UN Environment will manage the terminal evaluation process; the EO will liaise with UN Environment’s Task Manager and the Executing Agency 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, the GEF, executing partners and other stakeholders. The direct costs of the evaluation will be charged against the project evaluation budget. A review of the quality of the evaluation report will be done by EO and submitted along with the report to the GEF Evaluation Office not later than 6 months after the completion of the evaluation. The standard terms of reference for the terminal evaluation are included in Appendix 10, along with terms of reference for other key positions of the project. These will be adjusted to the special needs of the project at the appropriate time.
8. The UN Environment Capacity Development Scorecard is attached as Appendix 20. This 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.

# Section 7: Project Financing and Budget

* 1. **Overall project budget**

1. The overall project budget consists of GEF financing (US$3,015,982, or 12.08% of the total project cost); and co-financing (US$21,947,343 or 87.92% of the total project cost). The budget was prepared for the GEF in accordance with UN Environment Budget Line/Object of Expenditure format and is detailed in Appendices 1 and 2. Detailed Consultants Costs are presented in Appendix 9, Terms of Reference for key project staff are presented in Appendix 10, and the project’s Draft Procurement Plan is presented in Appendix 13. The distribution of the GEF funding and corresponding co-financing is presented in Table 6.

**Table 7. Project Costs**

|  |  |  |  |
| --- | --- | --- | --- |
| **Component** | **GEF Trust Fund** | **Co-Financing** | **Total** |
| 1: Integrated and strengthened environmental planning and management on the islands of St. Kitts and Nevis to support island sustainability | 835,000 | 4,604,770 | 5,439,770 |
| 2: Mainstreaming BD conservation, SLM and CCM into key development and resource management sectors | 1,674,800 | 15,076,480 | 16,751,280 |
| 3: Knowledge management and dissemination for SLM, BD and CC | 362,500 | 1,168,727 | 1,531,227 |
| Project Management Cost | 143,682 | 1,097,367 | 1,241,049 |
| **TOTAL** | **3,015,982** | **21,947,343** | **24,963,325** |

* 1. **Project co-financing**

The project co-financing (US$21,947,343 or 87.92% of the total project cost) is distributed between three Government sources: the Ministry of Sustainable Development; the Ministry of Finance through the National Authorizing Office for the European Union; and the Ministry of Public Infrastructure, Post, Urban Development and Transport. Of the total co-financing amount, 85.36% is cash and 2.55% is in-kind, with the Government of St. Kitts & Nevis providing in-kind contributions in the form of staff time, salaries of government staff attending to project activities, transportation, and indirect administrative support and follow-up to project processes. Cash co-financing will support complementary activities geared at informed and proper siting for human settlements, the layout of roads and drainage, complementary equipment and training for NPDP and Building Code development, informed land management to allow for proper overall allocation of land in the transformation of the energy sector, and in water management and infrastructure. Co-finance commitment letters are included in Appendix 11 and Endorsement Letters of GEF National Focal Points are presented in Appendix 12.

* 1. **Project cost-effectiveness**

1. The design of this project focuses on an integrated approach aimed at achieving efficiencies in addressing key issues and gaps impacting the sustainable development of St. Kitts and Nevis, with particular attention on land degradation, biodiversity conservation and climate change. The project embraces the legislative and regulatory framework, institutional capacity, human capacity, and direct support to sustainable production in agriculture as the primary pillars upon which project interventions will be based.
2. Project intervention measures were chosen based on a qualitative analysis of their alignment with national policies and priorities, their technical feasibility, estimated individual costs, probable execution times, availability of favorable enabling frameworks (in the political, legal, institutional, private sector willingness, and environmental aspects), and the estimated time for their design and implementation. This approach allowed for an effective identification of those interventions that can be implemented in the project cycle, have the highest probability of co-financing, and those that are most likely to consolidate alliances, not just nationally, but which also provide opportunities for regional and other possible south-south exchanges, while achieving tangible economy of scale in knowledge management through the maximization of experiences and lessons learned.
3. The project is expected to be cost-effective by complementing the baseline investments defined under the ‘GEF Alternative’, and as a result of its ability to bring together various partners from regulatory and productive agencies relevant to the agriculture, forestry, environment, and tourism sectors. The project is expected to achieve a far-reaching impact with the relatively limited amount of resources available, at the local and national scales, with direct socio-economic benefits to at least 30 women and 70 men in St. Kitts and Nevis.

**Appendices**

**Appendix 1: Budget by project components and UNEP budget lines**

(see separate Excel File)

**Appendix 2: Co-financing by source and UNEP budget lines**

(see separate Excel File)

**Appendix 3: Incremental cost analysis**

The incremental costs and benefits of the proposed project are summarized in the following incremental cost matrix. The incremental cost of the project**, USD$24,963,325.01**, is required to achieve the project’s global environmental benefits. Of this amount **USD$3,015,982** (representing 12.08%) is being requested from GEF. The remaining amount of **USD$21,947,343.01** (87.92%) of the total cost will come from the Government of St. Kitts & Nevis and other national and international partners. The figure includes both in-kind and cash contributions.

| **Component** | **Baseline (B)**  ***(excluding PM and M&E costs)*** | **Alternative (A)**  ***(excluding PM and M&E costs)*** | **Increment (A-B)**  ***(excluding PM and M&E costs)*** |
| --- | --- | --- | --- |
| **Component1: Integrated and strengthened environmental planning and management on the islands of St. Kitts and Nevis to support island sustainability** | | | |
| Outcome 1.1: GSKN adopts tools and regulations toreduce pressure on natural resources from competing land uses on the islands of St. Kitts and Nevis | Attempts made thus far to address land use planning under the last National Physical Development Plan (NPDP) have had difficulties with the required legal and regulatory support, the necessary institutional arrangements and implementation tools and equipment, valid land use baselines, and required human and technical capacity among key players at multiple levels of responsibility.  Enforcement of existing rules and guidelines has proven to be insufficient and the reliance on voluntary standards for investment planning, particularly in the tourism and construction industry, has proven inefficient. Institutional arrangements for the implementation of Building Codes both for public and privately funded developments are insufficient.  In the baseline scenario, existing institutional, legal and regulatory frameworks governing land use planning, and environmental issues will not support sustainable development, land use plans will not be based on accurate environmental information, and enforcement capacity will remain weak and fines and penalties will not be applied consistently. | GEF resources will support the updating of St. Kitts National Physical Development Plan (NPDP) and Building Codes to ensure an optimal allocation of land resources in order to generate development benefits and critical environmental benefits in tandem. The GEF incremental investment will ensure that critical information on land use planning and trends, land degradation processes and ecological carrying capacities, and priority sites for erosion control and habitat conservation are consolidated and integrated into national planning processes.  GEF incremental investments will provide for the procurement of field data equipment and gear including GIS and mapping equipment; and the hiring of a Physical Planning Consultant to develop the Revised/Updated NPDP including the required exhaustive public consultation process.  GEF support will update the 1904 Forestry Ordinance and/or the 1973 Agricultural Development Act to ensure that they are in line with the country’s current sustainable development priorities, and will propose policy changes to maintain and enhance carbon stocks or reduce emissions from agriculture and agroforestry.  A digital land use mapping and prioritization exercise will be undertaken using GEF funds, to identify and detail areas of high priority environmental concern, including the creation of a land use map; this will be complemented by the provision of training to improve capacities in GIS tools and methodologies and in integrating existing platforms (Arc Map and ERDAS Imagine remote sensing). | The institutional and regulatory framework for land use planning strengthened and the technical capacity required for successful implementation and the promotion of sustainable development of St. Kitts & Nevis established at all relevant levels, with concrete strategies in place to sustainably manage select species in two Key Biodiversity Areas of the country.  **Total Cost: 5,439,770**  **Cost to GEF: 835,000**  **Co-financing:4,604,770** |
| Outcome 1.2: Improved systemic capacity for promoting sustainable development in the islands of St. Kitts and Nevis through INRM | Capacity building and institutional strengthening within state and non-state institutions and other stakeholders is an identified priority from a human resource development perspective; the skills required for addressing environmental challenges among existing staff and potential new recruits are insufficient.  There are no local training programs for emerging scientists, and no local research into biodiversity issues, sustainable land management or climate smart agriculture.  None of the secondary and tertiary institutions on SKN offer comprehensive curricula in environmental sciences, climate smart agriculture or land management, and therefore, without the GEF investment, access to training and education opportunities relevant to environmental conservation and sustainable development will remain very limited. | The GEF intervention will provide capacity building to partners who play a leading role in implementing the NPDP, in particular institutions with sectoral responsibilities for the development and conservation of the islands of SKN, together with relevant CSOs and community partners. This support will allow for NPDP implementing partners to benefit from training and practical application of approaches to land use planning and policy development, reducing pressure on critical habitats and species, coordination and information management and sharing, and identifying and addressing existing and potential drivers of land degradation. Implementing partners, including the Ministry of Tourism, will receive training for enforcing green guidelines in the construction sector, as well as regulations governing illegal extractive practices such as sand mining.  The GEF resources also will support formal training to six government professionals to create a cadre of experts to fill critical national capacity gaps, in prioritized thematic areas: Geographic Information Systems (GIS); Land Use Planning; Sustainable Land Management; Climate Change and/or Climate Smart Agriculture; and Environmental Management/Ecosystem Restoration. |
| Outcome 1.3: Conservation and sustainable management of selected priority species improved in 2 Key Biodiversity Area (KBA) sites: Cayon to Key and Ponds of the Southeast peninsula. | The lack of baseline data on critical biodiversity assets including indicator species, makes it difficult to integrate land use policy planning with the need to ensure that land uses give due consideration to the protection of biodiversity and ecosystems integrity.  There is a clear lack of community support for the conservation of biological diversity (except sea Turtles) and the designation of Protected Areas, and effective partnerships for biodiversity and conservation. There is an urgent need to map and assess critical sites such as erosion hotspots and important biodiversity areas so that physical planning development, national planning processes, investment decisions and budgets can take these into considerations.  Without the GEF’s intervention, there would continue to be poor, limited, or no systematic monitoring, collecting of data, data bases, inventories of existing flora, fauna and ecosystems, land cover mapping and mapping of climate change impacts and environmental degradation. | GEF resources will fund rapid biodiversity assessments to map the presence of threatened and IBA trigger species in the two coastal KBAs – Ponds of Southeast Peninsula and Cayon to Key.  The GEF intervention will also develop and recommend management strategies and regulations to ensure the conservation and sustainable management of selected priority species, while mainstreaming biodiversity conservation into SLM and CCM strategies, resulting in enhanced protection to Key Biodiversity Areas, key indicator species, increased carbon sequestration in soils and forest, and reduced land degradation. |
| **Component 2: Mainstreaming BD conservation, SLM and CCM into key development and resource management sectors** | | | |
| Outcome 2.1: Conservation of BD habitat and ecosystem services, and increased carbon sequestration in soil and woody vegetation, achieved through restoration and management of critical forest sites. | Without the GEF resources, conservation activities and capacities to protect important habitats and species within these sites will continue to be minimal, and efforts and mechanisms to protect priority habitats from impacts arising in upstream or adjoining lands will continue to be extremely limited, resulting in continued rapid growth in invasive species in degraded or abandoned agricultural lands, and the destruction of potentially important habitats from unplanned urbanization.    Similarly, in the absence of GEF support, mangroves, which play a key provisioning and protecting function, will continue to be degraded (less than 70 ha remain, and they are under threat from unsustainable use and unsustainable tourism). | With the GEF investment, sustainable agricultural production will be implemented on 60 hectares of restored lands. These agroforestry-based systems provide food resources and livelihoods opportunities while also maintaining ecosystem services, including water conservation, carbon sequestration, and flood and erosion control. In addition, by the end of the project water storage will be helping to compensate for increasing water scarcity and competition for water on the islands, as well as reducing energy demands for water mobilization.  Through the project, a total of 215 hectares of forests will have been restored, primarily in upper watershed areas, which play a key protective and provisioning role. In so doing, the project will increase the area of forest and improve connectivity between the upper slopes of the CFRNP, and will reduce the negative impacts of degraded areas on downstream aquatic and coastal/marine ecosystems and biodiversity, improve water flow and retention to the benefit of local communities, and provide communities adjacent to the CFRNP with economic alternatives to harvesting resources within the park.  Using reforestation and Assisted Natural Regeneration approaches, and utilizing local/endemic tree species such as fruit trees and coconuts, functional agroforestry ecosystems will be in place to sustain livelihoods.  In coastal areas, the project will work to conserve and rehabilitate 20 hectares of critically endangered mangrove ecosystems and ensure that they are adequately protected, which will ensure the maintenance and increase of carbon stocks in mangroves, the conservation of biodiverse areas that play a key role in the future economy of the country, and the increased protection of SKN’s coastal areas, including from climate change related impacts such as storm surges and salt water intrusion  In addition, policy makers and resource managers will have access to updated biodiversity data so that conservation efforts can be better targeted. | SLM and sustainable practices incorporated into agriculture production and leading to reduced LD, with increased carbon sequestration as a result of restoration of critical ecosystems and habitats, and the enhanced conservation of biodiversity.  **Total Cost: 16,751,280**  **Cost to GEF: 1,674,800**  **Co-financing: 15,076,480** |
| Outcome 2.2: Local communities adopt tested SLM practices to reduce land degradation | Limited technical capacity to adopt sustainable and efficient agricultural practices will continue to affect farmers without timely GEF support. Farmers would continue to face significant challenges and low productivity due to a lack of adequate equipment and inputs (irrigation, fertilizer) and soil erosion and exhaustion; and the need to work with farmers and farmer groups to identify suitable areas for crop production and diversification, and to provide training for agricultural producers to address unsustainable agricultural practices would remain unaddressed.  Without the GEF’s intervention there would not be an overall Biodiversity Management Strategy which focuses on agroforestry, reforestation, and Assisted Natural Regeneration, resulting in lost opportunities for improvement in the conservation and sustainable management of Key Biodiversity Areas and indicator species, and no possibility of extended benefits in SLM, CCM, reduced soil erosion, increased carbon sequestration, and increased ecosystem integrity  Without the GEF support, agricultural operations will not have implemented climate smart practices or the operation of integrated food systems such as agro-forestry, and in the absence of sufficient guidelines and infrastructure, agricultural enterprises will be unable to convert to new and more sustainable systems. | The project will support the restoration of at least 215 hectares of degraded and/or abandoned lands located in the upper/mid-level watershed areas adjacent to the Central Forest Reserve and National Park (CFRNP) to productive agricultural uses. The project will also assist farmers in these areas in selecting resilient crop varieties by carrying out a climate-related suitability analysis of potential crops as well as a market analysis of which crops are commercially viable.  GEF resources will provide for at least at least 100 farmers to participate and receive training in the various land restoration and agricultural practices; and producers will benefit from project support for the acquisition or rehabilitation of productive assets, including water efficient irrigation equipment, climate resilient storage facilities, greenhouses, fencing, and improved plant material. |
| Outcome 2.3: Improved infrastructure conditions support climate resilience in agriculture. | Without GEF investment, water supplies will remain insufficient to guarantee year-round water supply for agriculture, in particular since information provided by the Water Services Department indicates that other options to ensure adequate supply of water in the future (desalination or deeper boreholes) are onerous and risky and will be focused on providing potable water Forest cover will continue to be at risk of being degraded and land degradation will accelerate. | GEF resources will support the installation of up to 5 water storage tanks that will provide additional water for irrigation during dry season, reduce erosion including the risk of flooding during severe rainfall events, and reduce the energy use involved in water extraction (wells, boreholes) and adduction. Combined with adequate water use efficiency technologies, the water storage tanks will contribute to creating resilience in the agriculture sector, and by increasing land productivity, reduce the trend of agricultural expansion into forested areas. |
| **Component 3: Knowledge management and dissemination for SLM, BD and CC** | | | |
| Outcome 3.1: Public servants from key institutions have increased planning and environmental management capacity | GEF support will be indispensable to generate the knowledge and the capacities needed for proper dissemination of SLM, BC and CC, and to allow for structured data collection and analysis to be introduced to inform policy and management. Without GEF investments, there will continue to be poor, limited, or a total lack of systematic monitoring, collection of data, the creation of databases, the elaboration of inventories of existing flora, fauna and ecosystems, as well as land cover mapping and mapping of climate change impacts and environmental degradation. | GEF funds will support the implementation of a Knowledge Management Strategy, including the development of standardized data collection and reporting formats for use by the project, standardized definitions of common terminologies to be used with respect to SLM, BD and CC; KM Guidelines and Communication Guidelines and train key personnel in their use; Systematization of Experiences and Lessons Learned as a result of project interventions; implement national and regional institutional partnerships through technical exchange programs, internships, and collaborative research agreements; and establish a National KM Partnership Network across key institutions of the country.  GEF support will also allow for regional and south-south cooperation by assisting the GSKN in participating in national, regional and global knowledge exchanges on SLM, BD and CC issues. Also, an integrated monitoring platform will be developed to generate cross data reports for SLM, BD Conservation and CSA in accordance with international or national commitments. | A solid foundation for the extended dissemination and exchange of SLM, BD and CC knowledge in St. Kitts and Nevis established, contributing directly to SLM, BD conservation and CC mitigation in the country.  Enhanced awareness among specific target groups, national and local authorities and CBOs on to SLM, BD and CCM, with locals and visitors informed and aware of practices for the sustainable use of nature and protection of biodiversity.  **Total Cost: 1,531,227**  **Cost to GEF: 362,500**  **Co-financing: 1,168,727** |
| Outcome 3.2: Increased understanding and awareness of relevant environmental issues among the general public, land use managers, the tourism industry and international visitors to SKN | Without GEF investments, the lack of updated and comprehensive data and knowledge on environmental and sustainable development conditions and challenges will continue to be a significant barrier to SKN achieving its aspirations in becoming the region’s first Sustainable Island State.  While opportunities for engaging in sustainable tourism or eco-tourism exist, in the absence of GEF funding there will continue to be a lack of awareness and information on investment options and on proposed sustainable tourism products SKN may offer, and locals and visitors will continue to be unaware of practices for the sustainable use of nature and protection of biodiversity, including in and around mangroves, reefs, and sea grass beds, and with regard to threatened species of flora and fauna  Without GEF resources, land use planners and policy makers will continue not to be fully aware of the implications of zoning and physical planning decisions, and the lack of understanding at all levels of the value and contribution of biodiversity to the national development agenda and human wellbeing will continue. | The GEF alternative will support the implementation of a Public Education and Awareness Strategy, focusing on general awareness raising, through a variety of media, targeting the general public and schools to ensure that they are aware of the impacts of key economic activities on natural resources such as water, biodiversity, coastal zones, energy, etc.  GEF support will strengthen enforcement of rules and regulations concerning zoning, sand mining, extractive industries, tourism, and construction. The project also will target agricultural sector stakeholders, starting with producers and buyers, with a view to increasing the availability of technical information on sustainable and climate smart production.  SLM and climate smart agriculture manuals and tools for the curricula of educational institutions will also be supported by GEF resources, and a public relations campaign will support on-going efforts to promote St. Kitts and Nevis as an eco-friendly holiday destination, and to raise awareness among tourists and industry stakeholders about the tourism sector’s ecological footprint, as well as options to reduce the footprint. |

**Appendix 4: Results Framework**

| **Outcomes** | **Indicators** | **Baseline** | **Mid-term Targets** | **End of Project Targets** | **Means of Verification** | **Assumptions** |
| --- | --- | --- | --- | --- | --- | --- |
| **Project Objective:** To transform degraded forest landscapes into biodiversity and climate-friendly areas of sustainable agricultural/agroforestry production. | | | | | | |
| **Component 1: Integrated and strengthened environmental planning and management on the islands of St. Kitts and Nevis to support island sustainability** | | | | | | |
| **Outcome 1.1:** GSKN adopts tools and regulations to reduce pressure on natural resources from competing land uses on the islands of St. Kitts and Nevis | Number of land use planning and management tools approved by parliament and adopted | 1 | 2 | 2 | Updated / revised National Physical Development Plan and Land Use Maps  Publication in gazette of revised legal and regulatory instruments to support NPDP implementation  Copies of baseline and actual digital land use maps and Building Codes | Government of SKN prioritizes policy formulation and regulatory reform as an essential first step for BD conservation, SLM, CSA and CCM.  Stakeholders and decision-makers are receptive to incorporating project results into policy formulation processes and value the importance of inter-institutional coordination for policy success.  Key institutional project stakeholders fully embrace the outputs of the project and institutionalize required processes and strategies for BD conservation, SLM, CSA and CCM. |
| Number of legal and/or regulatory instruments developed to support land use planning implementation | 0 | 1 | 2 |
| **Outcome 1.2:** Improved systemic capacity for promoting sustainable development in the islands of St. Kitts and Nevis through INRM | Number of stakeholder institutions capacitated for coordinated action in SLM, BD and CSA | 0 | 4 | 8 | Training registration forms, participants lists, certificates  Copies of undergraduate or post-graduate degrees obtained  Capacity Development Scorecard at Mid-Term and End of Project | Key institutional project stakeholders fully embrace the outputs of the project and institutionalize required processes and strategies for BD conservation, SLM, CSA and CCM.  Stakeholder institutions show an interest in collaboration and partnerships with SKN to strengthen information and capacity building for BD conservation, SLM, and CCM. |
| Number of technical persons in the government service who have completed post-graduate training in the fields of Geographic Information Systems (GIS); Land Use Planning; Sustainable Land Management; Climate Change and/or Climate Smart Agriculture; and Environmental Management/Ecosystem Restoration | 0 | 3 | 6 |
| Increase in score of Capacity Development Scorecard (score out of a maximum of 39) | 19 | 18 | 30 |
| **Outcome 1.3:** Reduced pressure on three indicator species at two Key Biodiversity Area (KBA) sites | Number of KBAs with Biodiversity Baseline Assessments | 0 | 1 | 2 | Baseline Assessment Reports  Species Inventory, Population Density Reports, and Abundance Index Reports  Turtle Nesting Reports  Participants’ list of turtle conservation activities  Project Progress Reports  Least Tern and Brown Pelican Nesting Reports    Project Progress Reports  Biodiversity Monitoring Reports | Counterpart organizations are willing to share information and recognize the usefulness of the data to be produced and knowledge to be generated.  Technical data and monitoring systems are robust enough to guarantee quality information on BD conservation progress  Stakeholder institutions show an interest in collaboration and partnerships with SKN to strengthen information and capacity building for BD conservation  The Department of Physical Planning embraces the goals and objectives of the project, and willingly shares relevant GIS data for project purposes. |
| Number of Indicator Species with increase in population | 0 | 1 | 3 |
| Area in M2 available for Leatherback Turtle nesting on beaches within the targeted KBAs  % change in number of successful leatherback turtle nests over baseline  Number of locals engaged in Leatherback turtle conservations activities  % change in recorded successful nesting of the Least Terns and Brown Pelicans within KBAs over baseline  Number of hectares of mangroves restored within KBAs | TBD in Year 1  TBD in Year 1  0  TBD in Year 1  TBD in Year 1 | Baseline is maintained  At least 10% change in nesting success  At least 30 persons engaged  At least 5% change in nesting success  TBD according to baseline | Baseline is maintained  At least 15% change in nesting success  At least 60 persons engaged  At least 10%  change in nesting success  TBD according to baseline |
| **Outputs under Component 1**  Output 1.1.1: Updated/ revised National Physical Development Plan (NPDP) and Building Codes  Output 1.1.2: Revised legal and regulatory framework to support NPDP implementation  Output 1.1.3: Baseline digital land use maps of areas of high priority environmental concern  Output 1.2.1: Relevant Institutions, CSO and Communities capacitated for coordinated and effective action on SLM, BD conservation and climate smart agriculture  Output 1.2.2: National capacities improved through post-graduate technical training for at least 6 students engaged with the local authorities.  Output 1.3.1: BD Management Strategy based on biodiversity baseline assessments for 2 KBAs | | | | | | |
| **Component 2: Mainstreaming BD conservation, SLM and CCM into key development and resource management sectors** | | | | | | |
| **Outcome 2.1:** Conservation of BD habitat and ecosystem services, and increased carbon sequestration in soil and woody vegetation, achieved through restoration and management of critical forest sites | Number of hectares restored through reforestation / ANR and/or trees planted in agroforestry | 0 | 100 | 265 | Project Progress Reports  Biodiversity Monitoring Reports  Annual Agriculture Sector Report  Carbon sequestration assessment report measuring CO2 emissions mitigated | The Department of Physical Planning embraces the goals and objectives of the project, and willingly shares relevant GIS data for project purposes.  Ministry of Agriculture is fully engaged with the goals and objectives of the project |
|  |  |  |  |
| Number of hectares of mangrove ecosystems rehabilitated and protected  Metric tons of CO2 emissions directly mitigated as a consequence of project investments in reforestation, ANR, CSA, and SLM | 0  0 | 10  0 | 20  *79,342tCO2eq over a 10 year period* |
| Number of men producers’ direct beneficiaries in 215 ha. on CSA and SLM | 0 | 40 | 70 | Project Progress Reports  Signed beneficiary agreement | Local communities and agriculture stakeholders take an interest in and/or see the benefits of SLM and CSA |
|  | Number of women producers’ direct beneficiaries in 215 ha. on CSA and SLM | 0 | 15 | 30 | Project progress reports  Signed beneficiary agreement | Local communities and agriculture stakeholders take an interest in and/or see the benefits of SLM and CSA |
| **Outcome 2.2:** Local communities adopt tested SLM practices to reduce land degradation, increased soil carbon sequestration, and enabled sustainable agricultural production on degraded / abandoned lands | Number of hectares of degraded land restored (removal of invasive underbrush/ regrowth, sustainable clearing, bunding and contouring, terracing, etc) resulting in decreased soil erosion, increased carbon sequestration, agricultural crop production and increased BD conservation and ecosystem services | 0 | 80 | 215 | Project Progress Reports  Biodiversity Monitoring Reports  Annual Agriculture Sector Report  Carbon sequestration assessment report | Ministry of Agriculture is fully engaged with the goals and objectives of the project  Local communities and agriculture stakeholders take an interest in and/or see the benefits of SLM and CSA |
| **Outcome 2.3:** Improved infrastructure conditions support climate resilience in agriculture | Number of hectares benefitting from improved water infrastructure (irrigation) for agricultural production in support of SLM measures | 0 | 50 | 100 | Project Progress Reports  Annual Agriculture Sector Report | Ministry of Agriculture is fully engaged with the goals and objectives of the project  The Department of Physical Planning embraces the goals and objectives of the project, and willingly shares relevant GIS data for project purposes. |
| **Outputs under Component 2**  Output 2.1.1: Decreased soil erosion, increased carbon sequestration and agroforestry production through reforestation and Assisted Natural Regeneration (ANR) (265 ha)  Output 2.1.2: Increased ecosystem integrity through 20ha\* of mangrove ecosystems rehabilitated and Protected (Cayon to Keys).  Output 2.2.1: Decreased soil erosion, increased carbon sequestration and agricultural crop production obtained through restored areas of degraded land (215 ha).  Output 2.3.1: Water storage tanks and accompanying distribution lines in place to support sustainable and climate-friendly agricultural production for at least 100 participating farmers. | | | | | | |
| **Component 3: Knowledge management and dissemination for SLM, BD and CC** | | | | | | |
| **Outcome 3.1:** Public servants from key institutions have increased planning and environmental management capacity | Number of reports produced for international commitments using SLM, BD conservation and CSA data of integrated monitoring platform | 0 | 3 | 6 | SLM, BD conservation and CSA reports  Partnership Agreements or MOUs  Project Progress Reports  Mid-Term and Terminal Evaluation Reports | Stakeholder institutions show an interest in collaboration and partnerships with SKN to strengthen information and capacity building for BD conservation, SLM, CSA and CCM. |
| Number of partnerships established with regional research institutions or platforms. | 0 | 1 | 3 |
| Number of stakeholder institutions participating in the project’s Knowledge Management Network | 0 | 7 | 12 |
| **Outcome 3.2:** Increased understanding and awareness of relevant environmental issues among the general public, land use managers, the tourism industry and international visitors to SKN | Number of government institutions, schools, CSOs, and productive sectors specifically targeted by key messages of the Public Awareness Campaign | 0 | 15 | 25 | Public Awareness Survey Reports  Project Progress Reports  Mid-Term and Terminal Evaluation Reports | Local communities and agriculture stakeholders take an interest in and/or see the benefits of BD conservation, SLM and CCM, trust the awareness- raising message and embrace its content. |
| Number of farmers who have heard, seen, or read public awareness messages on SLM, CSA and Biodiversity conservation communicated by the project. | 0 | 100 | 200 |
| Percentage increase in number of visitors and residents interviewed departing from airports and seaports in St. Kitts & Nevis who have seen, heard or read public awareness messages on BD conservation and sustainable use of natural resources communicated by the project. | TBD at inception | 20% | 50% |
|  |  |  |  |  |  |  |
| **Outputs under Component 3**  Output 3.1.1: A plan for knowledge management and information exchange on environmental issues is developed and under implementation  Output 3.2.1: Increased awareness and understanding of issues related to SLM, BD Conservation and CSA | | | | | | |

**Appendix 5: Workplan and timetable**

|  | **Year 1** | | | | **Year 2** | | | | **Year 3** | | | | **Year 4** | | | | **Year 5** | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Activity** | **Q1** | **Q2** | **Q3** | **Q4** | **Q1** | **Q2** | **Q3** | **Q4** | **Q1** | **Q2** | **Q3** | **Q4** | **Q1** | **Q2** | **Q3** | **Q4** | **Q1** | **Q2** | **Q3** | **Q4** |
| **Component 1: Integrated and strengthened environmental planning and management on the islands of St. Kitts and Nevis to support island sustainability** | | | | | | | | | | | | | | | | | | | | |
| **Outcome 1.1: GSKN adopts tools and regulations to reduce pressure on natural resources from competing land uses on the islands of St. Kitts and Nevis** | | | | | | | | | | | | | | | | | | | | |
| **Output 1.1.1: Updated/ revised National Physical Development Plan (NPDP)** | | | | | | | | | | | | | | | | | | | | |
| 1. Field Data Equipment & Gear for Dept of Physical Planning and Lands & Surveys Department |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2. GIS & Mapping Equipment (plotter, printers, computers, software…also to be used for Output 1.1.3) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 3. Physical Planning Consultant hired to develop NPDP |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 4. National Physical Planning Consultation Process targeting all sectors |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 5. Publication of NPDP |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Output 1.1.2: Revised legal and regulatory framework to support NPDP implementation** | | | | | | | | | | | | | | | | | | | | |
| 1. Hiring of Legal Consultant Firm with Multi-sectoral Specializations |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2. National Country Wide Legal Consultation Process |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 3. Legislative review and approval process |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 4. Publication of adopted regulations in Government Gazette |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Output 1.1.3: Baseline digital land use maps of areas of high priority environmental concern** | | | | | | | | | | | | | | | | | | | | |
| 1. Digital Assessment |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2. Training in GIS Tools and integrating existing platforms (Arc Map and ERDAS Imagine remote sensing) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 3. Ground Truthing of baseline field data |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 4. Production of land use and other baseline maps |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 5. Baseline Map Publication & Dissemination |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Outcome 1.2: Improved systemic capacity for promoting sustainable development in the islands of St. Kitts and Nevis through INRM** | | | | | | | | | | | | | | | | | | | | |
| **Output 1.2.1: Relevant Institutions, CSO and Communities capacitated for coordinated and effective action on SLM, BD conservation and climate smart agriculture** | | | | | | | | | | | | | | | | | | | | |
| 1. Development of NPDP Training Implementation Manual |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2. Training to NDPD Implementation Partners |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Output 1.2.2: National capacities improved through post-graduate technical training for at least 6 students engaged with the local authorities.** | | | | | | | | | | | | | | | | | | | | |
| 1. Appointment of Scholarship Committee |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2. Advertising of Scholarships in national media |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 3. Selections and Award Notification to successful applicants |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 4. Scholarship awardees on post-graduate training |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 5. Closure of Scholarship Program and corresponding Closure Report |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Outcome 1.3: Reduced pressure on three indicator species at two Key Biodiversity Area (KBA) sites** | | | | | | | | | | | | | | | | | | | | |
| **Output 1.3.1: BD Management Strategy based on biodiversity baseline assessments for 2 KBAs** | | | | | | | | | | | | | | | | | | | | |
| 1. Training in Biodiversity Baseline Assessment Tool and Conservation Action Planning Tool (CAP) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2. Biodiversity Baseline Assessments |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 3. Report Preparation & Publication including recommended management strategies and regulations for biodiversity |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Component 2: Mainstreaming BD conservation, SLM and CCM into key development and resource management sectors** | | | | | | | | | | | | | | | | | | | | |
| **Outcome 2.1: Conservation of BD habitat and ecosystem services, and increased carbon sequestration in soil and woody vegetation, achieved through restoration and management of critical forest sites.** | | | | | | | | | | | | | | | | | | | | |
| **Output 2.1.1: Decreased soil erosion, increased carbon sequestration and agroforestry production through reforestation and Assisted Natural Regeneration (ANR) (265 ha\*)** | | | | | | | | | | | | | | | | | | | | |
| 1. Development of ANR & Reforestation Manual, inclusive of monitoring techniques and protocols |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2. Conduct Training in ANR & Reforestation to targeted extension personnel and selected farmers and NGOs |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 3. Establishment of Agroforestry Nurseries including the sourcing of seedlings and procurement of all start-up materials |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 4. Conduct ANR & Reforestation in the field |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 5. Monitoring of ANR & Reforestation performance using methods delivered in training |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Output 2.1.2: Increased ecosystem integrity through 20ha of mangrove ecosystems rehabilitated and Protected (Cayon to key)** | | | | | | | | | | | | | | | | | | | | |
| 1. Conduct a Rapid Mangrove Ecosystem Assessment |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2. Develop Mangrove Conservation Action Plan |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1. Conduct a spatial priorization analysis of 500 Ha using INVEST and ROOT |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2. Conduct Cost-Benefit Analysis of Forest Restoration |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2. Develop Mangrove Reforestation Training Manual, inclusive of monitoring techniques and protocols |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 3. Conduct Training in Mangrove Reforestation to personnel of the Department of Marine Resources and selected NGOs |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 4. Conduct Mangrove Reforestation Exercise on 20 Ha of mangroves in St. Kitts |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 5. Monitoring of Mangrove Growth |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Outcome 2.2: Local communities adopt tested SLM practices to reduce land degradation** | | | | | | | | | | | | | | | | | | | | |
| **Output 2.2.1: Decreased soil erosion, increased carbon sequestration and agricultural crop production obtained through restored areas of degraded land (215 ha\*)** | | | | | | | | | | | | | | | | | | | | |
| 1. Identify the priority 215 ha for land rehabilitation, with the largest impact on seasonal water flow and sediment retention, based on the land use map and InVEST and ROOT tools, |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2. Conduct Farm Land Restoration Process (removal of invasive underbrush/ regrowth, sustainable clearing, bunding and contouring, terracing) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 4. Conduct Crop climate suitability Analysis |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 4. Crop Market Suitability Analysis |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 3. Conduct Training in SLM and CSA and select farmers to engage in CSA |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 4. Procure selected seedlings, equipment and materials, and launch demonstration of SLM and CSA on participating farms |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 5. Deliver Extension services support to participating farmers in SLM and CSA |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Outcome 2.3: Improved infrastructure conditions support climate resilience in agriculture** | | | | | | | | | | | | | | | | | | | | |
| **Output 2.3.1: Water storage tanks and accompanying distribution lines in place to support sustainable and climate- friendly agricultural production for at least 100 participating farmers** | | | | | | | | | | | | | | | | | | | | |
| 1. Technical and Environmental Feasibility Study, including technical designs and construction plans (drawings and rendering) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2. Confirmation of Land Tenure of Selected Sites for pond/dam construction |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 3. Water Storage Tank Installation |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 4. Assess Auxiliary water distribution equipment needs for farmers in Nevis |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 5. Procurement of water distribution system (Pond or Reservoir) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2. Hydrological Extension Service Support to Farmers |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Component 3: Knowledge management and dissemination for SLM, BD and CC** | | | | | | | | | | | | | | | | | | | | |
| **Outcome 3.1:** Public servants from key institutions have increased planning and environmental management capacitythrough training and knowledge exchanges | | | | | | | | | | | | | | | | | | | | |
| **Output 3.1.1: A plan for knowledge management and information exchange on environmental issues is developed and under implementation** | | | | | | | | | | | | | | | | | | | | |
| 1. Identify and/or Develop Knowledge Management Tools (data depository, social media platform and project account, interactive project website) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2. Integrated monitoring platform will be developed to generate cross data reports for SLM, BD Conservation and CSA for international or national commitments |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2. Systematization Reports |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 3. Knowledge Management Networking & Participation in Regional KM Exchanges |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Outcome 3.2: Increased understanding and awareness of relevant environmental issues among the general public, land use managers, the tourism industry and international visitors to SKN** | | | | | | | | | | | | | | | | | | | | |
| **Output 3.2.1: Increased awareness and understanding of issues related to SLM, BD Conservation and CSA** | | | | | | | | | | | | | | | | | | | | |
| 1. Development of Public Education & Awareness Materials and Messages |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2. Dissemination of Materials and Messages |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 3. Evaluation of the Effectiveness of the Public Awareness Campaign |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

**Appendix 6: Key deliverables and benchmarks**

| **Components / Outcomes / Outputs** | **Activities** | **Deliverables** | **Benchmarks** |
| --- | --- | --- | --- |
| **Component 1: Component 1: Integrated and strengthened environmental planning and management on the islands of St. Kitts and Nevis to support island sustainability** | | | |
| **Outcome 1.1:** GSKN adopts tools and regulations to reduce pressure on natural resources from competing land uses on the islands of St. Kitts and Nevis | | | |
| Output 1.1.1: Updated/ revised National Physical Development Plan (NPDP) | 1. Field Data Equipment & Gear for Dept of Physical Planning and Lands & Surveys Department 2. GIS & Mapping Equipment (plotter, printers, computers, software…also to be used for Output 1.1.3) 3. Physical Planning Consultant hired to develop NPDP 4. National Physical Planning Consultation Process targeting all sectors 5. Publication of NPDP | Field data equipment and gear procured and being used in process to update NPDP.  GIS & mapping equipment procured and being used along with field data equipment to inform the NPDP updating process.  Physical Planning Consultant contracted and leads the NPDP and Building Codes updating process  National-level consultations on the Updated NPDP held to obtain inputs and consensus | Number of land use planning and management tools developed and adopted (at least 2). |
| Output 1.1.2: Revised legal and regulatory framework to support NPDP implementation | 1. Hiring of Legal Consultant Firm with Multi-sectoral Specializations 2. National Country Wide Legal Consultation Process 3. Legislative review and approval process 4. Publication of adopted regulations in Government Gazette | Multi-disciplinary legal team hired to develop the legal and regulatory framework for the Updated NPDP  National-level consultations on the legal and regulatory framework to support the Updated NPDP held to obtain inputs and consensus  The Ministry of Sustainable Development champions review process, leading to the approval of the legal framework by Parliament. | Number of legal and/or regulatory instruments developed to support land use planning implementation (at least 1) |
| Output 1.1.3: Baseline digital land use maps of areas of high priority environmental concern | 1. Digital Assessment 2. Training in GIS Tools and integrating existing platforms (Arc Map and ERDAS Imagine remote sensing) 3. Ground Truthing of baseline field data 4. Production of land use and other baseline maps 5. Baseline Map Publication & Dissemination | Initial baseline data collected to inform the development of land use maps  Relevant staff in agencies such as the Department of Physical Planning, Environment, Lands & Survey, etc equipped with knowledge and practical training in land use map technology.  Baseline maps developed and in use to complement the Updated NPDP and assist in guiding land use decisions through-out the country. | Number of staff of relevant agencies trained in tools and platforms needed in the application of land use maps  Number of land use and other baseline maps produced (at least 2). |
| **Outcome 1.2:** Improved systemic capacity for promoting sustainable development in the islands of St. Kitts and Nevis through INRM | | | |
| Output 1.2.1: Relevant Institutions, CSO and Communities capacitated for coordinated and effective action on SLM, BD conservation and climate smart agriculture | 1. Development of NPDP Training Implementation Manual 2. Training to NDPD Implementation Partners | Training Material developed and available to guide NPDP Training Program  Relevant persons from a critical number of institutions trained in the implementation of the Updated NPDP. | Number of stakeholder institutions capacitated for coordinated action in SLM, BD and CSA (at least 8) |
| Output 1.2.2: National capacities improved through post-graduate technical training for at least 6 students engaged with the local authorities | 1. Appointment of Scholarship Committee 2. Advertising of Scholarships in national media 3. Selections and Award Notification to successful applicants 4. Scholarship awardees on post-graduate training 5. Closure of Scholarship Program and corresponding Closure Report | Transparent mechanism installed and formalized to guide the selection of public service individuals competing for undergraduate or post graduate training opportunities.  Scholarship recipients successfully enrolled and completed undergraduate or post-graduate training in areas relevant to SLM, CSA and BD conservation, and are back working at government institutions, and contributing significantly to the national capacity for environmental management. | Number of technical persons in the government service who have completed undergraduate or post-graduate training (at least 6)  Increase in score of Capacity Development Scorecard (at least 23 out of a maximum of 39) |
| **Outcome 1.3:** Reduced pressure on three indicator species at two Key Biodiversity Area (KBA) sites | | | |
| Output 1.3.1: BD Management Strategy based on biodiversity baseline assessments for 2 KBAs | 1. Training in Biodiversity Baseline Assessment Tool and Conservation Action Planning Tool (CAP) 2. Biodiversity Baseline Assessments 3. Report Preparation & Publication including recommended management strategies and regulations for biodiversity | Relevant persons from key institutions trained in Biodiversity Assessment Methodologies, adding to the national capacity needed for enhanced environmental management.  Recommended management strategies and regulations for biodiversity developed and presented for consideration, based on up-to-dated Biodiversity Baseline Assessments. | Number of KBAs with Biodiversity Baseline Assessments (at least 2)  Number of Indicator Species with increase in population (at least 2)  Number of KBAs having Indicator Species with increase in population (at least 2) |
| **Component 2: Mainstreaming BD conservation, SLM and CCM into key development and resource management sectors** | | | |
| **Outcome 2.1:** Conservation of BD habitat and ecosystem services, and increased carbon sequestration in soil and woody vegetation, achieved through restoration and management of critical forest sites | | | |
| Output 2.1.1: Decreased soil erosion, increased carbon sequestration and agroforestry production through reforestation and Assisted Natural Regeneration (ANR) (257ha) | 1. Development of ANR & Reforestation Manual, inclusive of monitoring techniques and protocols 2. Conduct Training in ANR & Reforestation to targeted extension personnel and selected farmers and NGOs 3. Establishment of Agroforestry Nurseries including the sourcing of seedlings and procurement of all start-up materials 4. Conduct ANR & Reforestation in the field 5. Monitoring of ANR & Reforestation performance using methods delivered in training | Training Material developed and available to guide ANR & Reforestation Training Program and actual efforts in the field.  Farmers trained and equipped with knowledge necessary to effectively implement ANR and reforestation efforts in the field.  Plant nurseries established to provide necessary seedlings to farmers and field equipment secured for the implementation of ANR and reforestation efforts.  Monitoring reports available to validate and confirm advances and progress made in ANR and reforestation. | Number of pilot farms (orchards) established (at least 17)  Number of farmers trained in ANR and /or reforestation techniques (at least 50)  Number of hectares with decreased soil erosion (at least 500)  Number of hectares subject to restoration by ANR and/or trees planted in agroforestry (at least 265) |
| Output 2.1.2: Increased ecosystem integrity through 20ha of mangrove ecosystems rehabilitated and Protected (Cayon to key). | 1. Conduct a Rapid Mangrove Ecosystem Assessment 2. Develop Mangrove Conservation Action Plan 3. Conduct a spatial priorization analysis of 500 Ha using INVEST and ROOT 4. Conduct Cost-Benefit Analysis of Forest Restoration 5. Develop Mangrove Reforestation Training Manual, inclusive of monitoring techniques and protocols 6. Conduct Training in Mangrove Reforestation to personnel of the Department of Marine Resources and selected NGOs 7. Conduct Mangrove Reforestation Exercise on 20 Ha of mangroves in St. Kitts 8. Monitoring of Mangrove Growth | Updated mangrove ecosystem data available to inform the development of a Mangrove Conservation Action Plan as a strategic guide for the country.  Training Material developed and available to guide Mangrove Reforestation Training Program and actual efforts in the field.  Personnel of key government institutions and NGOs trained and equipped with knowledge necessary to effectively implement mangrove reforestation and monitoring in the field.  Mangrove reforestation implemented and monitoring reports available to validate and confirm advances and progress made. | Number of persons trained in mangrove restoration methodology (at least 10)  Number of hectares of mangrove ecosystems rehabilitated and Protected (at least 20) |
| **Outcome 2.2:** **Local communities adopt tested SLM practices to reduce land degradation** | | | |
| Output 2.2.1: Decreased soil erosion, increased carbon sequestration and agricultural crop production obtained through restored areas of degraded land (215 ha). | 1. Identify the priority areas for land rehabilitation, with the largest impact on seasonal water flow and sediment retention, based on the land use map and InVEST and ROOT tools, 2. Conduct Farm Land Restoration Process (removal of invasive underbrush/ regrowth, sustainable clearing, bunding and contouring, terracing) 3. Conduct Crop climate suitability Analysis 4. Crop Market Suitability Analysis 5. Conduct Training in SLM and CSA and select farmers to engage in CSA 6. Procure selected seedlings, equipment and materials, and launch demonstration of SLM and CSA on participating farms 7. Deliver Extension services support to participating farmers in SLM and CSA | Farm land targeted for SLM and CSA interventions restored and ready.  Farmers trained and equipped with knowledge necessary to effectively implement SLM and CSA efforts in the field.  Demonstration of SLM and CSA conducted, followed by extension support services to farmers to ensure appropriate SLM and CSA implementation. | Number of farmers trained in SLM and CSA (at least 100)  Number of hectares of degraded land restored (removal of invasive underbrush/ regrowth, sustainable clearing, bunding and contouring, terracing, etc) resulting in decreased soil erosion, increased carbon sequestration, agricultural crop production and increased BD conservation and ecosystem services (at least 211 ha). |
| **Outcome 2.3:** Improved infrastructure conditions support climate resilience in agriculture | | | |
| Output 2.3.1: Water storage tanks and accompanying distribution lines in place to support sustainable and climate- friendly agricultural production for at least 100 participating farmers | 1. Technical and Environmental Feasibility Study, including technical designs and construction plans (drawings and rendering) 2. Confirmation of Land Tenure of Selected Sites for pond/dam/water storage tanks construction 3. Pond/Dam/ water storage tanks construction 4. Assess Auxiliary water distribution equipment needs for farmers in Nevis 5. Procurement of water distribution system (Pond or Reservoir) 6. Hydrological Extension Service Support to Farmers | Ownership of land targeted for water storage tanks construction certified in order to determine eligibility to receive project support. | Number of water storage tanks constructed (at least 5). |
| **Component 3: Knowledge management and dissemination for SLM, BD and CC** | | | |
| **Outcome 3.1: Public servants from key institutions have increased planning and environmental management capacity through training and knowledge exchanges** | | | |
| Output 3.1.1: A plan for knowledge management and information exchange on environmental issues is developed and under implementation | 1. Identify and/or Develop Knowledge Management Tools (data depository, social media platform and project account, interactive project website) 2. Integrated monitoring platform will be developed to generate cross data reports for SLM, BD Conservation and CSA for international or national commitments 3. Systematization Reports 4. Knowledge Management Networking & Participation in Regional KM Exchanges | All required tools to ensure successful implementation of the project’s Knowledge Management Strategy developed and being used.  KM monitoring platforms developed to ensure integration of SLM, BD, and CSA reports from all sources.  A series of individual project reports systematized to capture project results, lessons and experiences.  Practical and hands-on exchange of knowledge realized in regional meetings | Number of cross data reports for SLM, BD conservation and CSA on integrated monitoring platform (at least 6)  Number of partnerships established with regional research institutions or platforms (at least 3)    Number of stakeholder institutions participating in the project’s Knowledge Management Network (at least 12) |
| **Outcome 3.2:** Increased understanding and awareness of relevant environmental issues among the general public, land use managers, the tourism industry and international visitors to SKN | | | |
| Output 3.2.1: Increased awareness and understanding of issues related to SLM, BD Conservation and CSA | 1. Development of Public Education & Awareness Materials and Messages 2. Dissemination of Materials and Messages 3. Evaluation of the Effectiveness of the Public Awareness Campaign | Key elements needed for the effective implementation of the project’s Public Education and Awareness Strategy developed and being used.  Project’s stakeholders exposed to and engaged with the project’s targeted messages on SLM, BD conservation and CSA  Appropriate metrics developed and measured to inform progress and success of the project’s Public Education & Awareness Strategy, and providing timely data to adjust implementation strategies where necessary. | Number of government institutions, schools, CSOs, and productive sectors specifically targeted by key messages of the Public Awareness Campaign (at least 25)  Number of farmers who have heard, seen, or read public awareness messages on SLM, CSA and Biodiversity conservation communicated by the project (at least 100)  Percent of visitors and locals interviewed departing from the Robert L. Bradshaw Airport or seaports in St. Kitts and Nevis who have seen, heard or read public awareness messages on BD conservation and sustainable use of natural resources communicated by the project (at least 50%) |

**Appendix 7: Costed M&E plan**

The indicative Monitoring and Evaluation Work Plan is provided in the table below.

| **Type of M&E**  **Activity** | **Responsible Parties** | **GEF Budget**  **(USD)** | **IUCN**  **Co-finance in kind**  **(USD)** | **Time Frame** |
| --- | --- | --- | --- | --- |
| Inception Workshop | * IUCN * Government of St-Kitts and Nevis – Ministry of Sustainable Development | 5000 | 2.000 | Within 2 months of project start-up |
| Inception Report | * IUCN | 1000 | 1.000 | 1 month after project inception meeting |
| Measurement of project indicators (outcome, progress and performance indicators, GEF tracking tools) including baseline data collection | * IUCN * International Consultants (related project outputs 1.3.1, 2.1.1, 2.1.2, 3.1.1.) Please ref. to consultants cost. Appendix 9. | 60000 |  | Outcome indicators: start, mid and end of project  Progress/performance indicators: annually |
| Semi-annual Progress / Operational reports to UN Environment | * IUCN | 20000 |  | Within 1 month of the end of reporting period i.e. on or before 31 Jan. and 31 Jul. |
| Project Steering Committee (PSC) meetings + advisory technical group | * IUCN * Government of St-Kitts and Nevis – Ministry of Sustainable Development | 20000 |  | Once a year minimum for 5 years |
| Reports of PSC meetings | * IUCN | 7500 | 2.000 | Annually |
| Project Implementation Review (PIR) | * IUCN | 10000 | 2.000 | Annually, part of reporting routine |
| Mid Term Review/ Evaluation | * UN Environment | 30000 |  | At mid-point of project implementation |
| Terminal Evaluation | * UN Environment | 40000 |  | Within 6 months of end of project implementation |
| Financial Audits | * IUCN | 25000 | 5.000 | Annually |
| Project Final Report | * IUCN | 2000 | 2.000 | Within 2 months of the project completion date |
| Co-financing report | * Government of St-Kitts and Nevis – Ministry of Sustainable Development * IUCN |  | 4.000 | Within 1 month of the PIR reporting period, i.e. on or before 31 July |
| Publication of Lessons Learnt and other project documents | * IUCN (related project outputs 3.2.1.) Please ref. to consultants cost. Appendix 9 | 15000 |  | Annually, part of Semi-annual reports & Project Final Report |
| **Total M&E Plan cost** | | **235500** | **18.000** |  |

**Appendix 8: Summary of reporting requirements and responsibilities**

|  |  |  |  |
| --- | --- | --- | --- |
| **Reporting requirements** | **Due date** | **Format appended to legal instrument as** | **Responsibility of** |
| Procurement plan  (goods and services) | 2 weeks before project inception meeting | N/A | Project Coordinator |
| Inception Report | 1 month after project inception meeting | N/A | Project Coordinator |
| Expenditure report accompanied by explanatory notes | Quarterly on or before 31 July, 31 October, 31 January, 30 April | Annex 11 (in Anubis system) | Project Coordinator |
| Cash Advance request and details of anticipated disbursements | Quarterly or when required | Annex 7B (in Anubis system) | Project Coordinator |
| Progress report | Half-yearly on or before 31 January | Annex 8 (to be uploaded in Anubis) | Project Coordinator |
| Audited report for expenditures for year ending 31 December | Yearly on or before 30 June | N/A | IUCN to contract auditing firm |
| Inventory of non-expendable equipment | Yearly on or before 31 January | Annex 6 | Project Coordinator |
| Co-financing report | Yearly on or before 31 July | Annex 12 | Project Coordinator |
| Project implementation review (PIR) report | Yearly on or before 31 August | Annex 9 | Project Coordinator, PSC |
| Minutes of steering committee meetings | Yearly (or as relevant) | N/A | Project Coordinator |
| Mission reports and “aide memoire” for executing agency | Within 2 weeks of return | N/A | Project Coordinator |
| Final report | 2 months of project completion date | Annex 10 | Project Coordinator, IUCN |
| Final inventory of non-expendable equipment | Annex 9 | Project Coordinator/Auditor |
| Equipment transfer letter | Annex 10 | IUCN/Project Coordinator |
| Final expenditure statement | 3 months of project completion date | Annex 11 | IUCN |
| Mid-term review or Mid-term evaluation | Midway through project | N/A | Task Manager or UN Environment |
| Final audited report for expenditures of project | 6 months of project completion date | N/A | IUCN to contract auditing firm |
| Independent terminal evaluation report | 6 months of project completion date | Appendix 9 to Annex 1 | UN Environment |

**Appendix 9: Consultant Costs**

| **Consultant** | **Activities** | **Related Project Outputs** | **Consultant Type\*** | **# of Days** | **Rate (US$/day)** | **Total (US$)** |
| --- | --- | --- | --- | --- | --- | --- |
| 1. National Physical Development Plan Legal Consultancy | * To revise and/or update NPDP. * Conduct national consultation processes for revision and/or update of NPDP at a multisector level. * To revise legal and regulatory framework for NPDP implementation and Building Codes * To provide recommendations and strategies for key line sectors to implement the NPDP. * To present the recommendations above pertinent government bodies and other relevant sectors. * To support and follow up adoption of specific strategies and measures * Carry out workshops and other interventions to build/enhance the capacity of authorities. | 1.1.1 and 1.1.2 | IC | 200 | $400 | $80,000 |
| 2. Design and validation of training manuals and trainings facilitation | * Design and validate a training manual that includes a training methodology for the implementation of the NPDP. * Design and validate a technical manual on ANR, reforestation, agroforestry and nurseries. * Design a training manual on practices of mangrove restoration that includes a training methodology for the implementation of reforestation practices * Design a technical manual on practices of SLM and CSA that technicians and farmers will implement. * Carry out workshops and other interventions to build/enhance the capacity of relevant stakeholders at different sectors. | 1.2.1; 2.1.1; 2.1.2; 2.2.1; | IC | 150 | $400 | $60,000 |
| 3. Biodiversity Baseline Assessments and Training to build and use Baseline Assessment Tool | * Design and carry out at least 3 training of trainers for local organizations and relevant stakeholders to build capacity on biodiversity monitoring, which includes: identification and prioritization of baseline needs, indicators, data collection, data management, analysis and interpretation. * Design materials and select existing guidelines to be used in the trainings. * Collect information to build a baseline on the status of biodiversity in areas of intervention. * Develop recommendations for conservation strategies and monitoring of indicative species. | 1.3.1 | LC | 100 | $200 | $20,000 |
| 4. Economic cost benefit analysis | * Develop a specific methodological framework for implementation of the following assessment tools: Rapid biodiversity assessment; Cost-benefit analysis and cost-effectiveness analysis considering the ecosystem services provided by that species. Value costs of the mangrove rehabilitation practices, including: equipment, required workforce, preparation of the field. * Assessment of the economic and environmental benefits that owner of the land and the society will receive from the mangrove restoration practices. | 1.3.1; 2.1.2; | IC | 70 | $500 | $35,000 |
| 5. Mangrove Ecosystem Assessment | * Assessment of the state of art of the mangroves and identification of the potential areas for mangrove restoration. | 2.1.2 | LC | 60 | $250 | $15,000 |
| 6. Crop Market Suitability Analysis and Economic cost benefit analysis CBA | * Identification of different crops used in other Caribbean islands with similar conditions. * Carry out a market analysis for commercial viability based on the list of suitable crops. * A CBA (including market options) will be carried out to identify the most profitable SLM and CSA which will be key for the development of incentive mechanisms and other tools to promote the adoption of the practices. * Cost assessment of SLM and CSA best practices: specialized equipment, workforce, preparation of the field. * Assessment of the economic and environmental benefits that land owners and the society will receive from SLM and CSA practices. | 2.2.1 | IC | 50 | $400 | $20,000 |
| 7. Financial programme for SLM and CSA practices | * Based on the CBA, develop a financial mechanisms program based on existing programs and new options to providing farmers access to markets, micro-loans and marketing of products. | 2.2.1 | IC | 50 | $400 | $20,000 |
| 8. Technical and Environmental Feasibility Study | * Carry out a technical and environmental feasibility study for the installation of water storage tanks, reservoirs and distribution lines, including technical designs and construction plans (drawings and rendering). * Installation of water storage tanks, reservoirs and distribution lines | 2.3.1 | IC | 40 | $500 | $20,000 |
| 9. Project communication strategy | * To develop a communication strategy, that includes main messages and signs to position the project at different sectors and levels. * To disseminate oral and written messages through social media at local and national level. | 3.1.1 | LC | 80 | $250 | $20,000 |
| 10. Development of Knowledge Management Strategy and implementation | * To identify main project products to be disseminated and socialized among key target stakeholders. * To build a baseline, identify capacity building needs and propose tailor made trainings and workshops for dissemination of main project products, considering the gender and rights based approach. * To facilitate tailor made trainings and workshops, considering the gender and rights based approach. * To systematize results of the strategy and main topics to follow up. | 3.1.1 | IC | 80 | $437,5 | $35,000 |
| 11. Development of integrated monitoring platform to generate cross data reports of SLM, BD, conservation and CSA | * Identification of the reports that should be generated with the data collection at national and international level. * Identification of the indicators that will integrate the monitoring platform based on the practices of restoration, SLM and CSA and conservation of BD. * Development of the monitoring protocols sheets to implement the data collection program for the monitoring system. * Creation of the monitoring platform. * Design training for the monitoring protocol and collection of data in the field. * Facilitate the trainings. | 3.1.1 | IC | 100 | $350 | $35,000 |
| 12. Development of Public Education & Awareness Materials and Messages | * To design and validate brochures, signs, radio spot and other relevant materials for target audiences. * To select main messages and disseminate them through radio, TV and social media. | 3.2.1 | LC | 100 | $200 | $20,000 |
| 13. Evaluation of the Effectiveness of the Public Awareness Campaign | * To systematize and evaluate the impacts of the public awareness campaign. * To present results to the GSK and relevant sectors. | 3.2.1 | LC | 80 | $250 | $25,000 |
| **Total** |  |  |  |  |  | **$405,000** |

**\* IC = International Consultant; LC = Local Consultant**

**Appendix 10: Terms of Reference (Key Staff Positions)**

**Terms of Reference of the Project Coordinator (PC)**

The Project Executing Agency, in consultation with the Project Steering Committee will appoint a Project Coordinator through a transparent and competitive process. The Project Coordinator will be responsible for the overall day-to-day operations of the project.

The primary functions of the Project Coordinator follow the functions that are typical for a Project Manager or Project Coordinator, and may be tweaked at the moment of advertising. These are as follows:

**Functions**

* Review reports and other products of project Consultants
* Coordinate and actively participate in meetings with stakeholders
* Draft technical ToRs
* Observe project management procedures in order to facilitate project implementation and ensure delivery of high quality outcomes
* In consultation with local partners, prepare national work plans and annual updates including annual budget allocations
* Facilitate communications and linkages at local and national levels
* Participate in PSC meetings and provide support as required
* Organize project meetings, draft the agenda, and record decisions of national meetings
* Participate in the public relations activities for the project
* Coordinate work among Project Coordinating Unit (PCU) staff and consultants
* Supervise the management of the project budget in accordance with the agreed work plan and approved disbursal of project funds
* Maintain good communications with project partners and others
* Coordinate committed in-kind and in-cash contributions for the project
* Coordinate consultant teams as necessary

**Outputs**

* Project Coordinating Unit is fully functional
* At least 4 Technical Advisory Committee (TAC) meetings held each year with corresponding minutes prepared and submitted
* Scheduled project activities completed successfully
* Project activities coordinated with other relevant projects at national level
* Annual operational plan including budget prepared and submitted on time to IUCN and (UN Environment)
* Quarterly and bi-annual technical (Progress Reports, Project Implementation Reports) prepared and submitted to the Executing Agency completely and timely
* National, local and site level workshops and other monitoring meetings convened as needed
* Assist IUCN, UN Environment-GEF Task Manager, and the independent evaluator (to be appointed by UN Environment) with the Mid-Term Review and the Final Evaluation of the project

**Relationships**

The Project Coordinator (PC) will:

* Be accountable at national level for the achievement of project objectives, results, and all fundamental aspects of project execution
* Present project status reports to the Project Steering Committee
* Be accountable to the IUCN and the Ministry of Sustainable Development of the Government of St. Kitts & Nevis for the achievement of project objectives, results and all technical aspects of project execution
* Maintain regular communication with local and national project partners interested in furthering the project outcomes
* Maintain regular communication with project stakeholders and the IUCN
* Supervise the work of project support staff
* Supervise the work of the consultants and project partners.

**Qualifications**

* Master’s Degree/Academic level or equivalent professional experience in Project Management, Planning, Sustainable Development/Natural Resource Management (NRM), with college courses/academic level or certification in project management preferred
* A good understanding of biodiversity, Climate Change and Land Degradation, monitoring, and evaluation

**General Professional Experience:**

* Minimum of 5 years’ experience in administration/management of international projects
* Minimum of 10 years’ experience in Sustainable Development Planning
* Experience in facilitating stakeholder meetings or discussions
* Experience working with regional or international partners
* Ability to work with senior government officials, non-governmental organizations (NGOs), and local communities
* Fluency in written and spoken English and strong communication skills.

**Terms of Reference for Project Administrative Assistant**

The Project Administrative Assistant will provide project accounting services, as well as project procurement support services.

**Functions**

The Project Administrative Assistant will undertake the following duties:

* Provide procurement support to the project
* Provide support to IUCN and the PC in the financial and administrative management of the project
* Act as Secretary to the PCU
* Assist in project administration by assembling and preparing necessary documentation, monitor budgets and liaise with accounting staff in IUCN regarding payments and financial reports, interact with external agencies on non- technical and administrative matters
* Assist in recording and monitoring project expenditures and funds availability in close consultation with IUCN and the PC
* Assist the PC in preparing quarterly financial reports and reimbursement claims for submission to the Implementing Agency
* Responsible for the registration and filing of all project files
* Responsible for scheduling and securing maintenance and insurance of project equipment as required
* Undertake office fixed assets inventory and report on same to IUCN
* Format reports, proceedings and other relevant documents
* Assist the PC to organize and hold TAC and PSC Meetings and workshops
* Assist the PC with communications with national partners and local authorities
* Prepare material for update of project website
* Assist the PC in assembling necessary information to prepare project reports.

**Outputs**

* Project support activities are implemented successfully, especially those related to procurement, financial management, and administration
* Information and data required for the elaboration of the annual operational plan and budget, prepared and submitted in timely manner
* Inputs to quarterly and annual project reports prepared and submitted in timely manner
* TAC and PSC minutes prepared in a timely manner
* Contribution of material for the project’s website is developed and available for timely upload online

**Relationships**

The Project Administrative Assistant will:

* Report directly to the PC
* Maintain regular communication with the PC and IUCN
* Be accountable to PC for the functioning of the PCU
* Provide administrative assistance to the PCU
* Carry out official responses to project stakeholders at the request of the PC

**Qualifications**

* Minimum of three years of relevant professional experience in international or government organizations
* Proven ability to manage spreadsheets and budgets
* Proven knowledge of procurement procedures of international organizations
* Experience in word processing and other relevant office applications software packages
* Fluency in written and spoken English. Spanish is desirable.
* At least an Associate’s Degree in Administration, Business or other related field.

**Terms of Reference for Agriculture Specialist**

The Agriculture Specialist will in coordination with the PC, provide leadership and direction in matters of technical quality related to Assisted Natural Regeneration (ANR), Reforestation, Climate-Smart Agriculture, Water Infrastructure for Agricultural Production, and Training to Farmers.

**Functions:**

* In coordination with the PC and IUCN, lead the final determination of the identification and prioritization of the specific areas to be intervened by the project in ANR efforts
* In coordination with the PC and IUCN, lead the final determination of the identification and prioritization of the specific areas to be intervened by the project in overall reforestation efforts
* Lead the process for the conceptualization, establishment and operations of nurseries to be used in the project’s reforestation and ANR efforts.
* In coordination with the PC and IUCN, lead the final determination of the identification and prioritization of the specific areas to be intervened by the project in land restoration and Climate-Smart Agriculture (CSA) efforts.
* Lead the process to identify the 10 hectares and corresponding farmers to be engaged in the 10 pilot farms to be supported by the project in reforestation efforts
* Lead all Climate-Smart Agriculture efforts by the project, including the prioritization and organization of training and extension services to farmers
* Be the primary liaison and lead of the project in engaging schools and other project stakeholders in all education and awareness efforts relating SLM, BD conservation, and CSA
* Lead the process to oversee the construction of at least 5 water storage tanks to support agricultural production, ensuring proper due diligence and quality of outputs
* Responsible for the development of appropriate draft Terms of Reference for the technical outputs of the project, especially for component 2
* Has primary responsibility for the technical quality of the project’s progress reports

**Outputs**

* The project’s ANR and reforestation programs successfully developed and implemented, including all related training, nurseries, pilot farms, and extension service activities
* The project’s land restoration activities successfully developed and implemented
* Climate-Smart Agriculture successfully developed and implemented with the participation of at least 100 farmers
* Water storage tanks to support at least 100 farmers in agricultural production successfully installed
* Technical feedback on the quality and compliance with ToRs of all project consultant outputs provided in a timely manner, to inform the project’s decision on acceptance or rejection of said outputs
* Technical inputs to the project’s progress reports and PIRs prepared and submitted to the PC in a timely manner
* Communication and feedback to project partners and stakeholders as necessary, on technical matters of relevance to the project

**Relationships**

* Be accountable to the PC and the TAC
* Present clarifications on technical matters to the TAC when requested
* Be accountable to the PC for the achievement of project objectives, results and all technical aspects related to component 2
* Maintain regular communication with local and national project partners interested in furthering the project’s planned outcomes for component 2
* Maintain regular communication with project stakeholders and the IUCN as necessary
* Supervise the work of project consultants and project partners delivering products under component 2
* Work with the Project Administrative Assistant and the PC in the development of project progress reports and PIRs

**Qualifications**

* Graduate degree in agriculture or forestry
* A background of at least 7 years in the field of agriculture or forestry
* Practical experience in the field of monitoring and evaluation is a plus;
* Relevant experience in producing technical reports
* Advanced PC skills
* Good capacity to communicate with people from different backgrounds and positions, as well as with local and national authorities;
* Good command of spoken and written English is a must.

**Terms of Reference for Monitoring and Evaluation Specialist**

The M&E Specialist will oversee all monitoring and evaluation (M&E) activities, analyses and assessments and will be responsible for the reporting and quantifying of direct and indirect project results, monitoring and reporting of pertinent indicators as well as for maintaining a database of M&E data to include milestones and targeted results. The M&E Specialist will also be responsible for the design, quality development and use or disclosure of data and project information

**Functions:**

* Design and implement the M&E system for the overall project
* Train and orient the project team in all aspects of M&E
* Support the drafting of all assessments and periodic reports to be submitted to the donor as well as to update the IUCN project portal
* Follow up on project technical implementation
* Follow up on project financial implementation and expenses, in close collaboration with the Financial Officer
* Design and implement systematic monitoring data collection methods and practices, especially for field activities and field studies with a gender-sensitive focus

**Outputs**

* M&E system in place and being implemented accordingly
* Project team understands all aspects of M&E
* Project activities are implemented in a timely manner
* Project budget is being spent in accordance with the agreed work plan and approved disbursal of project funds
* Follow up on preparation and timely delivery of annual operational plan and budget
* Follow up on preparation and timely delivery of quarterly and annual project reports

**Relationships**

The M&E Specialist will:

* Maintain regular communication with the PCU
* Develop and support effective communication mechanisms between the PCU and IUCN ORMACC headquarters in San José
* Be accountable for following up on the achievement of project objectives, results and all technical and financial aspects of project execution

**Qualifications**

This position will not represent an additional procurement as it will be carried out by IUCN ORMACC.

**Appendix 11: Co-financing commitment letters from project partners**

(see separate PDF File)

**Appendix 12a: Endorsement letters of GEF National Focal Point**

(see separate PDF file)

**Appendix 12b: Letter designating IUCN as Executing Agency**

(see separate PDF file)

**Appendix 13: Draft Procurement Plan**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **UNEP Budget Line** | | **List of Goods and Services required** | **Budget** | **Year**  **{Note 1}** | **Brief description of anticipated procurement process {Note 2}** |
| **1200** | **Consultants** |  |  |  |  |
| 1201 | National Physical Development Plan Legal Consultancy (related to output 1.1.1 and 1.1.2) | To revise and/or update NPDP.  Conduct national consultation processes for revision and/or update of NPDP at a multisector level.  To revise legal and regulatory framework for NPDP implementation and Building Codes  To provide recommendations and strategies for key line sectors to implement the NPDP.  To present the recommendations above pertinent government bodies and other relevant sectors.  To support and follow up adoption of specific strategies and measures  Carry out workshops and other interventions to build/enhance the capacity of authorities. | $80,000 | 1-3 | A request for offers is published on IUCN’s website and distributed across networks, providing TORs and a deadline for offers as well as evaluation criteria. A minimum of 3 technical and financial offers, with corresponding CVs, will be reviewed. The consultant will be selected based on qualifications, relevant experience, proposed methodological approach, price, and other specific criteria. |
| 1201 | Design and validation of training manuals and trainings facilitation (related to output 1.2.1, 2.1.1, 2.1.2, 2.2.1) | Design and validate a training manual that includes a training methodology for the implementation of the NPDP.  Design and validate a technical manual on ANR, reforestation, agroforestry and nurseries.  Design a training manual on practices of mangrove restoration that includes a training methodology for the implementation of reforestation practices  Design a technical manual on practices of SLM and CSA that technicians and farmers will implement.  Carry out workshops and other interventions to build/enhance the capacity of relevant stakeholders at different sectors. | $60,000 | 1-3 | A request for offers is published on IUCN’s website and distributed across networks, providing TORs and a deadline for offers as well as evaluation criteria. A minimum of 3 technical and financial offers, with corresponding CVs, will be reviewed. The consultant will be selected based on qualifications, relevant experience, proposed methodological approach, price, and other specific criteria. |
| 1202 | Biodiversity Baseline Assessments and Training to build and use Baseline Assessment Tool (related to output 1.3.1) | Design and carry out at least 3 training of trainers for local organizations and relevant stakeholders to build capacity on biodiversity monitoring, which includes: identification and prioritization of baseline needs, indicators, data collection, data management, analysis and interpretation.  Design materials and select existing guidelines to be used in the trainings  Collect information to build a baseline on the state of art of biodiversity in areas of intervention.  Develop recommendations for conservation strategies and monitoring of indicative species. | $20,000 | 1 | A request for offers is published on IUCN’s website and distributed across networks, providing TORs and a deadline for offers as well as evaluation criteria. A minimum of 3 technical and financial offers, with corresponding CVs, will be reviewed. The consultant will be selected based on qualifications, relevant experience, proposed methodological approach, price, and other specific criteria. |
| 1201 | Economic cost-benefit analysis (related to output 1.3.1, 2.1.2) | Develop a specific methodological framework for implementation of the following assessment tools: Rapid biodiversity assessment; Cost-benefit analysis and cost-effectiveness analysis considering the ecosystem services provided by that species. | $35,000 | 2 | A request for offers is published on IUCN’s website and distributed across networks, providing TORs and a deadline for offers as well as evaluation criteria. A minimum of 3 technical and financial offers, with corresponding CVs, will be reviewed. The consultant will be selected based on qualifications, relevant experience, proposed methodological approach, price, and other specific criteria. |
| 1202 | Mangrove Ecosystem Assessment (related to output 2.1.2) | Assessment of the state of art of the mangroves and identification of the potential areas for mangrove restoration. | $15,000 | 1 | A request for offers is published on IUCN’s website and distributed across networks, providing TORs and a deadline for offers as well as evaluation criteria. A minimum of 3 technical and financial offers, with corresponding CVs, will be reviewed. The consultant will be selected based on qualifications, relevant experience, proposed methodological approach, price, and other specific criteria. |
| 1201 | Crop market suitability analysis and economic cost benefit analysis (related to output 2.2.1) | Identification of different crops used in other Caribbean islands with similar conditions.  Carry out a market analysis for commercial viability based on the list of suitable crops.  A CBA (including market options) will be carried out to identify the most profitable SLM and CSA which will be key for the development of incentive mechanisms and other tools to promote the adoption of the practices.  Cost assessment of SLM and CSA best practices: specialized equipment, workforce, preparation of the field.  Assessment of the economic and environmental benefits that land owners and the society will receive from SLM and CSA practices. | $20,000 | 1 | A request for offers is published on IUCN’s website and distributed across networks, providing TORs and a deadline for offers as well as evaluation criteria. A minimum of 3 technical and financial offers, with corresponding CVs, will be reviewed. The consultant will be selected based on qualifications, relevant experience, proposed methodological approach, price, and other specific criteria. |
| 1201 | Financial programme for SLM and CSA practices (related to output 2.2.1) | Based on the CBA, develop a financial mechanisms program based on existing programs and new options to providing farmers access to markets, micro-loans and marketing of products. | $20,000 | 2-3 | A request for offers is published on IUCN’s website and distributed across networks, providing TORs and a deadline for offers as well as evaluation criteria. A minimum of 3 technical and financial offers, with corresponding CVs, will be reviewed. The consultant will be selected based on qualifications, relevant experience, proposed methodological approach, price, and other specific criteria. |
| 1201 | Technical and Environmental Feasibility Study (related to output 2.3.1) | Carry out a technical and environmental feasibility study for the installation of water storage tanks, including technical designs and construction plans (drawings and rendering).  Installation of water storage tanks, reservoirs and distribution lines. | $20,000 | 1-2 | A request for offers is distributed across networks, providing TORs and a deadline for offers as well as evaluation criteria. A minimum of 3 technical and financial offers, with corresponding CVs, will be reviewed. The consultant will be selected based on qualifications, relevant experience, proposed methodological approach, price, and other specific criteria. |
| 1202 | Project communication strategy (related to output 3.1.1) | To develop a communication strategy, that includes main messages and signs to position the project at different sectors and levels.  To disseminate oral and written messages through social media at local and national level. | $20,000 | 1 | A request for offers is distributed across networks, providing TORs and a deadline for offers as well as evaluation criteria. A minimum of 3 technical and financial offers, with corresponding CVs, will be reviewed. The consultant will be selected based on qualifications, relevant experience, proposed methodological approach, price, and other specific criteria. |
| 1201 | Development of Knowledge Management Strategy and Implementation (related to output 3.1.1) | To identify main project products to be disseminated and socialized among key target stakeholders.  To build a baseline, identify capacity building needs and propose tailor made trainings and workshops for dissemination of main project products, considering the gender and rights based approach.  To systematize results of the strategy and main topics to follow up.  To systematize results of the strategy and main topics to follow up. | $35,000 | 3 | A request for offers is published on IUCN’s website and distributed across networks, providing TORs and a deadline for offers as well as evaluation criteria. A minimum of 3 technical and financial offers, with corresponding CVs, will be reviewed. The consultant will be selected based on qualifications, relevant experience, proposed methodological approach, price, and other specific criteria. |
| 1201 | Development of integrated monitoring platform to generate reports for international conventions and (related to output 3.1.1) | Identification of the reports that should be generated with the data collection at national and international level.  Identification of the indicators that will integrate the monitoring platform based on the practices of restoration, SLM and CSA and conservation of BD.  Development of the monitoring protocols sheets to implement the data collection program for the monitoring system.  Creation of the monitoring platform.  Design training for the monitoring protocol and collection of data in the field.  Facilitate the trainings. | $35,000 | 2 | A request for offers is published on IUCN’s website and distributed across networks, providing TORs and a deadline for offers as well as evaluation criteria. A minimum of 3 technical and financial offers, with corresponding CVs, will be reviewed. The consultant will be selected based on qualifications, relevant experience, proposed methodological approach, price, and other specific criteria. |
| 1202 | Development of Public Education & Awareness Materials and Messages (related to output 3.2.1) | To design and validate brochures, signs, radio spot and other relevant materials for target audiences.  To select main messages and disseminate them through radio, TV and social media. | $20,000 | 1-5 | A request for offers is distributed across networks, providing TORs and a deadline for offers as well as evaluation criteria. A minimum of 3 technical and financial offers, with corresponding CVs, will be reviewed. The consultant will be selected based on qualifications, relevant experience, proposed methodological approach, price, and other specific criteria. |
| 1202 | Evaluation of the Effectiveness of the Public Awareness Campaign (related to output 3.2.1) | To systematize and evaluate the impacts of the public awareness campaign.  To present results to the GSK and relevant sectors. | $25,000 | 2-5 | A request for offers is distributed across networks, providing TORs and a deadline for offers as well as evaluation criteria. A minimum of 3 technical and financial offers, with corresponding CVs, will be reviewed. The consultant will be selected based on qualifications, relevant experience, proposed methodological approach, price, and other specific criteria. |
| **2100** | **Sub-contracts (MOUs/LOAs for cooperating agencies)** |  |  |  |  |
| 2201 |  |  |  |  |  |
| **2300** | **Sub-contracts to private firms** |  |  |  |  |
| 2301 | Scholarship program (related to output 1.2.2) | For initial deployment of 6 students to create a cadre of experts to fill critical national capacity gaps in fields related to sustainable land management, biodiversity conservation and climate smart agriculture. | $315,000 | 1-5 | The GSKN has existing arrangements with academic institutions. The candidates will be evaluated by the Government’s Scholarship Review Committee and selected according to the Project Scholarship Initiative (PSI). The PSI includes descriptions of Eligibility Criteria, Application, Selection Process, and Thresholds; Notification of Award; Management & Administration; Monitoring, Reporting, Evaluation and Communication; and Financial Strategies to be considered for sustaining the scholarship initiative. |
| **4200** | **Non-expendable equipment** |  |  |  |  |
| 4201 | Computer equipment | 3 laptop computers, 1 projector, and 1 printer. | $8,000 | 1 | A competitive process is not required for purchase of laptop computers as IUCN has a preselected vendor for these purchases.  For purchase of other computer equipment, under CHF 500, competitive bidding is not essential but should be considered where the benefits of competitive tendering in terms of price and quality will outweigh the costs. For purchases over CHF 500, a request for offers will be distributed amongst reliable providers; a minimum of 3 financial offers will be reviewed. The provider will be selected based on price, quality of the proposal and product, and other specific criteria. |
| 4201 | Project vehicle | 4X4 vehicle  This is a substantially a field project, which will require significant coordination and mobilisation of project staff to the project sites and will necessitate engagement with stakeholders in the field. Reliance on the small number of existing vehicles of the department of Agriculture will be problematic in terms of ensuring timeliness and responsiveness to the project needs. This was conveyed by the Ministry of Sustainable Development and Department of Agriculture during the project development process. | $50,000 | 1 | A request for offers will be distributed amongst reliable providers; a minimum of 3 financial offers will be reviewed. The provider will be selected based on price, quality of the proposal and product, and other specific criteria. |
| 4201 | Drones | At least 4 drones to take quality photos and to verify maps accuracy as well as data quality control. | $8,000 | 1-2 | For purchases under CHF 500, competitive bidding is not essential but should be considered where the benefits of competitive tendering in terms of price and quality will outweigh the costs. For purchases over CHF 500, a request for offers will be distributed amongst reliable providers; a minimum of 3 financial offers will be reviewed. The provider will be selected based on price, quality of the proposal and product, and other specific criteria. |
| 4201 | GPS | Approximately 10 GPS. | $3,500 | 1-2 | For purchases under CHF 500, competitive bidding is not essential but should be considered where the benefits of competitive tendering in terms of price and quality will outweigh the costs. For purchases over CHF 500, a request for offers will be distributed amongst reliable providers; a minimum of 3 financial offers will be reviewed. The provider will be selected based on price, quality of the proposal and product, and other specific criteria. |
| 4201 | ARGIS GIS and Mapping Software | GIS and mapping equipment, 1 unit (one time purchase) for the Government of St. Kitts and Nevis to support update and/or revision of NPDP. | $20,000 | 1 | A request for offers will be distributed amongst reliable providers; a minimum of 3 financial offers will be reviewed. The provider will be selected based on price, quality of the proposal and product, and other specific criteria. |
| 4201 | ERDAS Remote Sensing Software | 1 unit for IUCN staff to perform digital assessments on land use maps of areas of high priority environmental concern. | $15,000 | 1 | A request for offers will be distributed amongst reliable providers; a minimum of 3 financial offers will be reviewed. The provider will be selected based on price, quality of the proposal and product, and other specific criteria. |
| 4201 | Equipment for ANR and Reforestation | To perform ANR and reforestation practices in the field (e.g. shovels, boots, compost, fertilizer, gloves, pesticides, barbed wire, fencing post caps, cement, etc.)  Same as the establishment of nurseries, this will be coordinated with the Ministry of Agriculture and local communities. In addition, some of these practices will be performed under the ANR and Reforestation Training Consultancy. | $161,000 | 2-5 | For purchases under CHF 500, competitive bidding is not essential but should be considered where the benefits of competitive tendering in terms of price and quality will outweigh the costs. For purchases over CHF 500, a request for offers will be distributed amongst reliable providers; a minimum of 3 financial offers will be reviewed. The provider will be selected based on price, quality of the proposal and product, and other specific criteria. |
| 4201 | Equipment for reforestation of mangroves and biological (species) monitoring | Equipment to perform mangrove reforestation (e.g. boots, gloves, shovels, bags, etc.)  Mangrove reforestation will be coordinated with the Ministry of Agriculture and local communities that are located in intervention areas. The project will also take advantage of the Training of Mangrove Reforestation Consultancy to mobilize local resources to practice mangrove reforestation in a learning-by-doing modality. For biological species) monitoring: monitoring bands, electronic devices, binoculars, tags, etc. | $20,000 | 2-3 | For purchases under CHF 500, competitive bidding is not essential but should be considered where the benefits of competitive tendering in terms of price and quality will outweigh the costs. For purchases over CHF 500, a request for offers will be distributed amongst reliable providers; a minimum of 3 financial offers will be reviewed. The provider will be selected based on price, quality of the proposal and product, and other specific criteria. |
| 4201 | Equipment for SLM and CSA exercise | Equipment to perform SLM and CSA exercise (e.g. building materials, agricultural equipment, seeds, fencing materials, binoculars, red light flashlights, notebooks, etc.) | $120,000 | 2 | For purchases under CHF 500, competitive bidding is not essential but should be considered where the benefits of competitive tendering in terms of price and quality will outweigh the costs. For purchases over CHF 500, a request for offers will be distributed amongst reliable providers; a minimum of 3 financial offers will be reviewed. The provider will be selected based on price, quality of the proposal and product, and other specific criteria. |
| 4201 | Productive assets | E.g. water efficient irrigation equipment, climate resilient storage facilities, greenhouses, fencing, and improved plant material. | $163,500 | 2-5 | For purchases under CHF 500, competitive bidding is not essential but should be considered where the benefits of competitive tendering in terms of price and quality will outweigh the costs. For purchases over CHF 500, a request for offers will be distributed amongst reliable providers; a minimum of 3 financial offers will be reviewed. The provider will be selected based on price, quality of the proposal and product, and other specific criteria. |
| 4201 | Auxiliary water distribution equipment for farmers | Improved water infrastructure for agricultural production (e.g. pipes, pumps, drip irrigation, droppers, etc.) | $20,000 | 2-5 | For purchases under CHF 500, competitive bidding is not essential but should be considered where the benefits of competitive tendering in terms of price and quality will outweigh the costs. For purchases over CHF 500, a request for offers will be distributed amongst reliable providers; a minimum of 3 financial offers will be reviewed. The provider will be selected based on price, quality of the proposal and product, and other specific criteria. |
|  | **GRAND TOTAL** |  | **$1,309,000** |  |  |

**Appendix 14: EXACT Tool for Carbon Emissions**

(see separate Excel File)

**Appendix 15: UNEP Environmental and Social Safeguards**

**UNEP Environmental, Social and Economic Review Note (ESERN)**

1. Project Overview

|  |  |
| --- | --- |
| **Identification** |  |
| Project Title | *Improving environmental management towards low carbon, resilient and sustainable development in SKN* |
| Managing Division | *Ecosystem Division* |
| **Type/Location** | *National* |
| **Region** | *Latin America Caribbean* |
| List Countries | *St. Kitts and Nevis* |
| Project Description | *The project addresses biodiversity, land degradation and climate change issues around the central concept of low-carbon development in rural and urban settings.* |
| Estimated duration of project: | *48 months* |
| Estimated cost of the project : | *3,015,982 USD* |

**II. Environmental Social and Economic Screening Determination**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **A. Summary of the Safeguard Risks Triggered**   |  |  |  |  | | --- | --- | --- | --- | | **Safeguard Standard Triggered by the Project** | Impact of Risk[[7]](#footnote-7) (1-5) | Probability of Risk (1-5) | Significance of Risk (L, M, H) | | SS 1: Biodiversity, natural habitat and Sustainable Management of Living Resources | 1 | 1 | L | | SS 2: Resource Efficiency, Pollution Prevention and Management of Chemicals and Wastes | N/A | N/A | N/A | | SS 3: Safety of Dams | N/A | N/A | N/A | | SS 4: Involuntary resettlement | N/A | N/A | N/A | | SS 5: Indigenous peoples | N/A | N/A | N/A | | SS 6: Labor and working conditions | N/A | N/A | N/A | | SS 7: Cultural Heritage | N/A | N/A | N/A | | SS 8: Gender equity | N/A | N/A | N/A | | SS 9: Economic Sustainability | 1 | 1 | L | | Additional Safeguard questions for projects seeking GCF-funding (Section IV) |  |  |  |   **B.** **ESE Screening Decision**[[8]](#footnote-8) (Refer to the UNEP ESES Framework (Chapter 2) and the UNEP’s ESES Guidelines.)  Low risk X Moderate risk High risk Additional information required  **C. Development of ESE Review Note and Screening Decision:**  Prepared by: Name: \_\_\_Noel Jacobs\_\_\_\_\_ Date: \_\_\_\_\_\_4-3-19\_\_    Safeguard Advisor: Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_    Project Manager: Name: Christopher Cox\_\_\_\_ Date: 14 May 2019 |
| **D**. **Recommended further action from the Safeguard Advisor:** |

**III. ESES Principle and Safeguard checklist**

(Section III and IV should be retained in UNEP)

|  |
| --- |
| **Precautionary Approach** |
| The project will take precautionary measures even if some cause and effect relationships are not fully established scientifically and there is risk of causing harm to the people or to the environment. |
| **Human Rights Principle** |
| The project will make an effort to include any potentially affected stakeholders, in particular vulnerable and marginalized groups; from the decision making process that may affect them. |
| The project will respond to any significant concerns or disputes raised during the stakeholder engagement process. |
| The project will make an effort to avoid inequitable or discriminatory negative impacts on the quality of and access to resources or basic services, on affected populations, particularly people living in poverty or marginalized or excluded individuals or groups.[[9]](#footnote-9) |

|  |  |  |
| --- | --- | --- |
| **Screening checklist** | **Y/N/**  **Maybe** | **Comment** |
| **Safeguard Standard 1: Biodiversity, natural habitat and Sustainable Management of Living Resources** | | |
| Will the proposed project support directly or indirectly any activities that significantly convert or degrade biodiversity and habitat including modified habitat, natural habitat and critical natural habitat? | n | The project will in opposition support the restoration of degraded lands/seascapes through reforestation and Assisted Natural Regeneration. |
| Will the proposed project likely convert or degrade habitats that are legally protected? | n |  |
| Will the proposed project likely convert or degrade habitats that are officially proposed for protection? (e.g.; National Park, Nature Conservancy, Indigenous Community Conserved Area, (ICCA); etc.) | n | The project will act in abandoned lands, and in restoring lands. |
| Will the proposed project likely convert or degrade habitats that are identified by authoritative sources for their high conservation and biodiversity value? | n |  |
| Will the proposed project likely convert or degrade habitats that are recognized- including by authoritative sources and /or the national and local government entity, as protected and conserved by traditional local communities? | n |  |
| Will the proposed project approach possibly not be legally permitted or inconsistent with any officially recognized management plans for the area? | n |  |
| Will the proposed project activities result in soils deterioration and land degradation? | n | No, the project will instead restore degraded lands. |
| Will the proposed project interventions cause any changes to the quality or quantity of water in rivers, ponds, lakes or other wetlands? | n | No, the project will help to restore vegetation on slopes, reducing sedimentation to water bodies and coast |
| Will the proposed project possibly introduce or utilize any invasive alien species of flora and fauna, whether accidental or intentional? | n | It will instead propose measures for IAS management through biodiversity management assessments and plans. |
| **Safeguard Standard 2: Resource Efficiency, Pollution Prevention and Management of Chemicals and Wastes** | | |
| Will the proposed project likely result in the significant release of pollutants to air, water or soil? | n |  |
| Will the proposed project likely consume or cause significant consumption of water, energy or other resources through its own footprint or through the boundary of influence of the activity? | n |  |
| Will the proposed project likely cause significant generation of Green House Gas (GHG) emissions during and/or after the project? | n | The opposite, the project will mitigate **79,342** tCO2eq metric tonnes over a 10 year period |
| Will the proposed project likely generate wastes, including hazardous waste that cannot be reused, recycled or disposed in an [environmentally sound and safe manner](#ESMGlossary)? | n |  |
| Will the proposed project use, cause the use of, or manage the use of, storage and disposal of hazardous chemicals, including pesticides? | n |  |
| Will the proposed project involve the manufacturing, trade, release and/or use of hazardous materials subject to international action bans or phase-outs, such as DDT, PCBs and other chemicals listed in international conventions such as the Stockholm Convention on Persistent Organic Pollutants or the Montreal Protocol? | n |  |
| Will the proposed project require the procurement of chemical pesticides that is not a component of integrated pest management (IPM)[[10]](#footnote-10) or integrated vector management (IVM)[[11]](#footnote-11) approaches? | n |  |
| Will the proposed project require inclusion of chemical pesticides that are included in IPM or IVM but high in human toxicity? | n |  |
| Will the proposed project have difficulty in abiding to FAO’s International Code of Conduct[[12]](#footnote-12) in terms of handling, storage, application and disposal of pesticides? | n |  |
| Will the proposed project potentially expose the public to hazardous materials and substances and pose potentially serious risk to human health and the environment? | n |  |
| **Safeguard Standard 3: Safety of Dams** | | |
| Will the proposed project involve constructing a new dam(s)? | n |  |
| Will the proposed project involve rehabilitating an existing dam(s)? | n |  |
| Will the proposed project activities involve dam safety operations? | n |  |
| **Safeguard Standard 4: Involuntary resettlement** | | |
| Will the proposed project likely involve full or partial physical displacement or relocation of people? | n |  |
| Will the proposed project involve involuntary restrictions on land use that deny a community the use of resources to which they have traditional or recognizable use rights? | n |  |
| Will the proposed project likely cause restrictions on access to land or use of resources that are sources of livelihood? | n |  |
| Will the proposed project likely cause or involve temporary/permanent loss of land? | n |  |
| Will the proposed project likely cause or involve economic displacements affecting their crops, businesses, income generation sources and assets? | n |  |
| Will the proposed project likely cause or involve forced eviction? | n |  |
| Will the proposed project likely affect land tenure arrangements, including communal and/or customary/traditional land tenure patterns negatively? | n |  |
| **Safeguard Standard 5: Indigenous peoples[[13]](#footnote-13)** | | |
| Will indigenous peoples be present in the proposed project area or area of influence? | n |  |
| Will the proposed project be located on lands and territories claimed by indigenous peoples? | n |  |
| Will the proposed project likely affect livelihoods of indigenous peoples negatively through affecting the rights, lands and territories claimed by them? | n |  |
| Will the proposed project involve the utilization and/or commercial development of natural resources on lands and territories claimed by indigenous peoples? | n |  |
| Will the project negatively affect the development priorities of indigenous peoples defined by them? | n |  |
| Will the project potentially affect the traditional livelihoods, physical and cultural survival of indigenous peoples? | n |  |
| Will the project potentially affect the Cultural Heritage of indigenous peoples, including through the commercialization or use of their traditional knowledge and practices? | n |  |
| **Safeguard Standard 6: Labor and working conditions** | | |
| Will the proposed project involve the use of forced labor and child labor? | n |  |
| Will the proposed project cause the increase of local or regional un-employment? | n |  |
| **Safeguard Standard 7: Cultural Heritage** | | |
| Will the proposed project potentially have negative impact on objects with historical, cultural, artistic, traditional or religious values and archeological sites that are internationally recognized or legally protected? | n |  |
| Will the proposed project rely on or profit from tangible cultural heritage (e.g., tourism)? | n |  |
| Will the proposed project involve land clearing or excavation with the possibility of encountering previously undetected tangible cultural heritage? | n |  |
| Will the proposed project involve in land clearing or excavation? | n |  |
| **Safeguard Standard 8: Gender equity** | | |
| Will the proposed project likely have inequitable negative impacts on gender equality and/or the situation of women and girls? | n |  |
| Will the proposed project potentially discriminate against women or other groups based on gender, especially regarding participation in the design and implementation or access to opportunities and benefits? | n |  |
| Will the proposed project have impacts that could negatively affect women’s and men’s ability to use, develop and protect natural resources, taking into account different roles and positions of women and men in accessing environmental goods and services? | n |  |
| **Safeguard Standard 9: Economic Sustainability** | | |
| Will the proposed project likely bring immediate or short-term net gain to the local communities or countries at the risk of generating long-term economic burden (e.g., agriculture for food vs. biofuel; mangrove vs. commercial shrimp farm in terms of fishing, forest products and protection, etc.)? | n |  |
| Will the proposed project likely bring unequal economic benefits to a limited subset of the target group? | n |  |

**IV. Additional Safeguard Questions for Projects seeking GCF-funding**

|  |  |  |  |
| --- | --- | --- | --- |
| **Community Health, Safety, and Security** | | | |
| Will there be potential risks and negative impacts to the health and safety of the Affected Communities during the project life-cycle? |  |  |  |
| Will the proposed project involve design, construction, operation and decommissioning of the structural elements such as new buildings or structures? |  |  |  |
| Will the proposed project involve constructing new buildings or structures that will be accessed by public? |  |  |  |
| Will the proposed project possibly cause direct or indirect health-related risks and impacts to the Affected Communities due to the diminution or degradation of natural resources, and ecosystem services? |  |  |  |
| Will the proposed project activities potentially cause community exposure to health issues such as water-born, water-based, water-related, vector-borne diseases, and communicable diseases? |  |  |  |
| In case of an emergency event, will the project team, including partners, have the capacity to respond together with relevant local and national authorities? |  |  |  |
| Will the proposed project need to retain workers to provide security to safeguard its personnel and property? |  |  |  |
| **Labor and Supply Chain** | | | |
| Will UNEP or the implementing/executing partner(s) involve suppliers of goods and services who may have high risk of significant safety issues related to their own workers? |  |  |  |

**Appendix 16: Theory of Change**

**ASSUMPTIONS**:

Counterpart organizations share information

Technical data and monitoring systems are robust

GSKN prioritizes regulatory reform

Stakeholders and decision makers are receptive to incorporate project results

Stakeholder institutions show interest in collaborating with project objectives

Min. of Agriculture is fully engaged

LC and agriculture stakeholders see benefits of BD, SLM, CSA and CCM

Institutional stakeholders embrace outputs and institutionalize BD, SLM, and CSA

Dept. of Physical Planning embraces the project

Impact

Intermediate states

Outcomes

Outputs

1.1 Updated/ revised National Physical Development Plan

Outcome 1.1 - GSKN adopts tools and regulations to reduce pressure on natural resources from competing land uses on the islands of St. Kitts and Nevis

Integrated and strengthened sustainable environmental planning and management through updated policy and regulatory frameworks, enhanced institutional capacity, informed decision-making on biodiversity, and the creation of a cadre of professionals in planning, SLM, BD conservation and CSA.

1.1.2 Revised legal and regulatory framework to support NPDP implementation

1.1.3 Baseline digital land use maps of areas of high priority environmental concern

Outcome 1.2 - Improved systemic capacity for promoting sustainable development in the islands of St. Kitts and Nevis through INRM

Degraded forest landscapes are transformed into more biodiverse and climate-friendly areas of sustainable agricultural/agroforestry production

1.2.1 Institutions, CSO and Communities capacitated for coordinated action on SLM, BD conservation and CSA

Outcome 1.3 - Reduced pressure on three indicator species at two Key Biodiversity Areas

1.2.2 national capacities improved through post-graduate technical training for at least 6 students

**DRIVERS:**

Inter-agency participation put in place early in project implementation

NDP Revision & implementation

Baseline digital land use maps

Training and capacity building

Biodiversity assessment and management

Post-graduate technical training

Mainstreaming of BD, SLM and CSA

Knowledge Management strategies

Education and awareness

Outcome 2.2 **-** Local communities adopt tested SLM practices to reduce land degradationgradation, increased soil carbon sequestration

Strengthened national and regional knowledge exchange at different levels and sectors, as well increased of awareness and understanding of biodiversity conservation and SLM practices.

1.3.1 BD management strategy based on biodiversity baseline assessments for 2 KBA

Outcome 2.1 -Conservation of BD habitat and ecosystem services, and increased carbon sequestration through restoration and management of critical forest sites

Enhanced conservation of significant BD, ecosystem services, and carbon sequestration benefitting from ANR, SLM and reforestation.

Outcome 2.3 **-** Improved infrastructure conditions support climate resilience in agriculture

Outcome 3.1 **-** Public servants from key institutions have increased planning and environmental management capacity

Outcome 3.2- Increased understanding and awareness of relevant environmental issues ….

2.2.1 Decreased soil erosion, increased carbon sequestration and agricultural crop production obtained through restored areas of degraded land

2.1.1 Decreased soil erosion, increased carbon sequestration and agroforestry production

2.1.2 Increased ecosystem integrity through 20ha\* of mangrove **ecosystems rehabilitated**

2.3.1 Water storage tanks and accompanying distribution lines in place to support sustainable and climate friendly agricultural production for at least 100 participating farmers

3.1.1 A plan for knowledge management and information exchange on environmental issues is developed and under implementation

3.2.1 Increased awareness and understanding of issues related to SLM, BD Conservation and CSA

**Appendix 17 - Scholarship Initiative for Post-Graduate Technical Training**

1. Background

The project “Improving Environmental Management through Sustainable Land Management in St. Kitts and Nevis” will include technical assistance investments in the form of a Project Scholarship Program, as part of a broader capacity building effort to create a cadre of experts to fill critical national capacity gaps in fields related to the focus of the project. The program will support the initial deployment of at least six students, who will be required to provide co-financing through the provision of service to the SKN government through bonded agreements of service, thus ensuring that knowledge and expertise acquired benefits the government for a minimum number of years.

1. Objectives

The objective of the Project Scholarship Program (PSP) is to guide the Government of St. Kitts & Nevis in assisting eligible applicants in formulating good quality and thoughtful applications for scholarships to pursue post-graduate training in topics relevant to the country and to the project “Improving Environmental Management through Sustainable Land Management in St. Kitts and Nevis”.

The PSP will consider applications for post-graduate study in any of the following five (5) prioritized thematic areas:

1. Geographic Information Systems (GIS)
2. Land Use Planning
3. Sustainable Land Management
4. Climate Change and/or Climate Smart Agriculture
5. Environmental Management/Ecosystem Restoration
6. Eligibility Criteria

The Project Scholarship Program (PSP) grants scholarships at the Master’s degree level. Scholarships are designed to provide financial assistance to dynamic and successful mid-career and/or senior professional citizens of St. Kitts & Nevis who are employees of the Government, and who have been accepted to attend recognized institutions regionally, internationally or distance learning programs.

Specifically, applicants must meet the following eligibility criteria:

* Be a citizen of St. Kitts & Nevis, has no other nationality, and resident in St. Kitts & Nevis
* Be between 23 and 40 years of age
* Preferably have at least 3 years professional experience in the proposed field of study
* Be accepted in a graduate study program at a recognized institution within one of the thematic areas or fields listed above
* Be an employee of the Government of St. Kitts and Nevis for at least the last 3 consecutive years
* Demonstrate a minimum semester GPA of 3.5 on a 4 point scale or the equivalent for the last period in which the applicant was engaged in academic study
* Demonstrate at an interview that they possess the personal qualities to benefit from their scholarship and use it to benefit the development of St. Kitts & Nevis
* Must have a clear idea how their scholarship will benefit St. Kitts & Nevis on completion
* Demonstrate that they possess the personal, intellectual and interpersonal attributes needed to exercise leadership upon their return to St. Kitts & Nevis
* Commit to work in the Government Service in St. Kitts & Nevis for at least three (3) consecutive years at the end of the study period
* Applicants must not have more than one scholarship or grant ongoing simultaneously, unless declared at the time of application and specifically approved by the Selection Committee.
* Applicants must be ready to take up the scholarship and pursue the prescribed course of study immediately if granted a scholarship. The start of any awarded scholarship may not be postponed for any period exceeding three (3) consecutive calendar months following the date of notification of award.

1. Application, Selection Process, & Thresholds

The Selection Committee will publicize the availability of opportunities under the PSP through public media within the first quarter of each calendar year or at any time to be agreed by resolution of the Selection Committee. A ‘Call for Applications’ is published and the information is disseminated through emails, social media, public radio and print press releases.

The official notice and other publications about the PSP will include information on the maximum ceiling of funds per scholarship, number of scholarships, eligibility and how to apply. The deadline for application is stipulated in the notice and the duration of the notice shall be for at least two months. The maximum scholarship amount to be granted shall not exceed US$35,000 per academic year and shall be inclusive of **all** related expenses and costs. Scholarships for Master’s Degree shall not exceed two (2) consecutive years inclusive of thesis.

To apply, students must submit the following:

* 1. Completed application form
  2. Curriculum Vitae
  3. One original certified copy of transcripts showing academic performance from last two institutions of study
  4. An essay of 250 words that describes clear career interests and objectives, financial need, and the link between the selected field of study and the sustainable management and use of St. Kitts & Nevis’ natural heritage
  5. Proof of citizenship of St. Kitts & Nevis e.g. passport, birth certificate, and certificate of naturalization
  6. Letter of acceptance, copy of program outline and copy of fee schedule from the institution
  7. Applicant’s completed financial statement form (based on most recent Income Tax Filing)
  8. Two letters of recommendation – one from a recent lecturer in the relevant subject and one from current or immediate past employer.

Within two working days of the deadline, the Scholarship Committee screens all the scholarship applications for completeness and eligibility. All applicants are notified of receipt of their applications in writing immediately after the deadline. Fields of study that are not relevant to the thematic areas listed above, late and incomplete applications are eliminated during the screening. The applicants whose applications are late, incomplete or ineligible are notified in writing on completion of screening.

The Scholarship Committee will develop a shortlist of (not more than 12 applicants) of potential scholarship recipients within one week of the deadline. The applicants on the shortlist are interviewed within two weeks after the shortlisting process. The 6 most qualified applicants shall be granted scholarships, consistent with the 2-year maximum time period and the financial threshold defined above.

1. Notification of Award

The Scholarship Committee notifies the successful applicant(s) within one week of the formal approval. The recipient is required to submit a letter indicating their acceptance of the award within one week of the notification by the Scholarship Committee. The Chairperson of the Scholarship Committee dialogues with the successful applicant to finalize the Bond Agreement, which will also include the requirement of the awardee to maintain an academic performance above 80% or above 3.0 on a 4 point scale. The Agreement outlines the terms and conditions of the scholarship and the obligations of the parties.

After granting the scholarship, the Scholarship Committee issues a press release that includes the name and community of origin of the successful applicants receiving the scholarship, the field of study that will be undertaken, and the institution where the studies will be pursued. The press release shall also reiterate the conditions of the fellowship.

1. Management & Administration

Once approved, the Scholarship Committee contacts the educational institution to give notice of the Scholarship Award. At that time, discussions are held with the educational institution to finalize how the disbursements will be made. The schedule of disbursements varies by school and funds are disbursed directly to the institution, except the portion for living expenses and travel, as may be applicable, the disbursement of which shall be agreed with the awardee.

1. Monitoring, Reporting, Evaluation & Communication

The recipients are responsible for submitting official grade reports at the end of each semester/module. Grantees who do not meet the minimum eligibility grade requirements as per the bond agreement will not be eligible to continue receiving the Scholarship. The Scholarship Committee informs the grantee of the discontinuation of the award.

The Scholarship Committee ensures that an open line of communication is maintained with recipients. Mid-term grade reports may be submitted by students, in addition to end of semester grade reports. Once per year the scholarship recipient must submit a comprehensive narrative report to the Scholarship Committee on their scholarship, within one month of the completed academic year. The report should cover what they have learnt, challenges and how the training that they are receiving will contribute to the development of St. Kitts & Nevis. This report is reviewed by the Scholarship Committee approved or rejected for due to incompleteness, as appropriate. Non-compliance with this requirement shall be cause for termination of the scholarship.

Upon completion of the study program, the recipient must submit a comprehensive final report. He/she should notify the Scholarship Committee of place of employment and after the recipient has successfully served all conditions in the bond agreement, a letter is issued indicating the closure of the scholarship.

1. Financial Strategy

Academic scholarship programs are usually financed by endowments, which are funded by philanthropic resources through charitable organizations, levies, taxes, or return on investments as a percentage of profits, consistent with the Social Corporate Responsibility of private companies. As a public sector scholarship program, this scholarship program to be developed by the project may not qualify for philanthropic resources or return on investments, and as such, may be restricted to taxes and/or levies as the only two viable sources.

In this regard, the following strategies are recommended to be explored and fully developed during project implementation, all of which will require the full support of the Government of St. Kitts & Nevis..

1. Taxes – this refers to the application of a small percentage tax increase on alcohol, tobacco or gambling (or combination of all three), to be assigned to a special endowment fund to be managed for scholarship purposes, by a Statutory Board consisting of public sector and private sector members, appointed by the government.
2. Levies – this refers to a small levy to be applied to all international passengers departing the international airport as a Sustainable Development Tax, to be assigned to a special endowment fund to be managed for scholarship purposes, by a Statutory Board consisting of public sector and private sector members, appointed by the government.
3. Non-Profit Organization – This refers to the formation of a non-profit organization for the specific purpose of fundraising and management of the scholarship program, which is then able to attract philanthropic resources, foundation grants, and Social Corporate Responsibility grants. Additionally, the government of St. Kitts & Nevis, can still apply the taxes and levy referred to above, in which a portion of the amounts collected is contributed to the NGO scholarship fund, and the remaining amounts are kept to fund the government’s social programs. The NGO would be governed by a mixed Board of Directors of both government representatives and private citizens.

It is recommended that the project funds a Feasibility Study of the three options described above, and pursue the most viable option to its creation and implementation, before the project implementation cycle concludes.

**Appendix 18 – Public Awareness & Education Strategy**

**PUBLIC EDUCATION AND AWARENESS STRATEGY**

***Introduction***

This Public Education Awareness Campaign Strategy of the project “Improving Environmental Management through Sustainable Land Management in St. Kitts and Nevis” is designed to ‘*communicate’* the objectives and actions of the project, in order to increase awareness among specific target groups, national and local authorities and CBOs, taking into account that each target group has an invaluable potential to contribute to Sustainable Land Management, Biodiversity Conservation and Climate Change Mitigation and Adaptation. The project also specifically identifies the need to ensure that locals and visitors are aware of practices for the sustainable use of nature and protection of biodiversity, especially in and around forests, mangroves, reefs, and sea grass beds, and with regard to threatened species of flora and fauna.

***Objectives***

The overall objectives of this Public Education Awareness Campaign Strategy are:

1. To increase the public’s knowledge and appreciation of SLM, BD and CC in St. Kitts and Nevis
2. To continuously improve the public’s perception and attitude towards SLM, BD and CC in St. Kitts and Nevis
3. To develop and provide key information on project outputs as part of a broader systematization of experiences and lessons learned under the project’s Knowledge Management Strategy.

***Guiding Principles of the Public Awareness and Education Strategy***

This Public Awareness and Education Strategy:

* Encourages collaborations within and outside the project immediate constituents
* Increases the possibility of potential co-financing sources for project implementation
* Builds communication and other transferable skills to project staff and beneficiaries
* Provides new perspectives and help to maximize the influence of the project in its quest to address SLM, BD and CC
* Raises the profile of the project as an advocate for sustainable environmental management and sustainable land management
* Inspire young people and helps to create new generation of champions for SLM, BD conservation, and CC advocacy

***Target Audiences of the Public Awareness and Education Strategy***

The initial capacity assessment identified the key stakeholders of the project, and ranked their level of influence on project implementation. These stakeholders, in addition to the GEF, UN Environment, groups of project beneficiaries, and target communities are synonymous to the project’s ‘constituents’, and are thus the targeted audience of the project’s *Public Awareness and Education Strategy.* Target audiences are distributed as primary and secondary audience, and as internal and external audience; this is a crucial differentiation, since messages to be communicated shall be specified according to this distribution. The table below attempts to illustrate the distribution of the project’s targeted audiences.

**Internal & External Audiences of the Project**

|  |  |  |
| --- | --- | --- |
|  | Internal | External |
| Primary | - The Project Steering Committee  - The Technical Advisory Committee  - UNEP  - IUCN-ORMACC  - GEF | - Government Ministries and Departments  - Scholarship Grantees  - Agriculture sector  - Forest Sector |
| Secondary | - Project Staff  - Project Consultants | - Local Communities  - Local NGOs  - National and Regional partner institutions  - Politicians  - Private Sector |

***Focus of Key Messages***

Messages to be communicated as part of the *Public Awareness and Education Strategy* must be sensitive to the roles, needs, and abilities of the targeted audience, and should be written artfully to ensure that the target audience can relate to them and can remember them easily. It should be borne in mind, however, that in some cases messages may be generic in nature and thus applicable to both primary and secondary audiences.

**Focus of Key Messages for Internal Audiences**

|  |  |  |
| --- | --- | --- |
|  | Internal Audience | Focus of Key Messages |
| Primary | - The Project Steering Committee  - The Technical Advisory Committee  - UNEnvironment  - IUCN-ORMACC  - GEF | * Project governance * Project performance * Project fiduciary management |
| Secondary | - Project Staff  - Project Consultants | * Project global objective * Inter-office deadlines * Annual and mid-term targets reminders * Stakeholder engagement strategies * Technical deliverables * Project Quality Control * Financial and Fiduciary Control * Project reporting * Stakeholder feedback mechanisms |

**Focus of Key Messages for External Audiences**

|  |  |  |
| --- | --- | --- |
|  | External Audience | Focus of Key Messages |
| Primary | - Government Ministries and Departments  - Scholarship Grantees  - Agriculture sector  - Forest Sector | * Gaps in policy to address SLM, BD and CC * Opportunities for strengthening institutional framework in the agriculture and forest sectors to better address SLM, BD and CC * Climate-Smart agriculture * Sustainable agricultural practices * Opportunities and benefits of Agroforestry * Sustainable Land Management practices * CCM practices * CC adaptation practices * Practices for the sustainable use of nature and protection of biodiversity, especially in and around forests, mangroves, reefs, and sea grass beds, and with regard to threatened species of flora and fauna. |
| Secondary | - Local Communities  - Local NGOs  - National and Regional partner institutions  - Politicians  - Private Sector  -Tourism | * Examples of sustainable use of nature * Protection of biodiversity in general * Specific protection of forests, mangroves, reefs and seagrass beds * Protection of native species of flora and fauna * Avoiding the introduction of exotic species * Advocacy for policies to protect the environment and biodiversity * Impacts of climate change * Benefits of SLM * Advocacy for CCM policies and actions |

***Channels for Communicating Public Awareness Messages***

The communications vehicles or tools refer to the method to be used to communicate messages, either verbal, written, audio, visual, etc. Experience has shown that excellent messages can be very ineffective if the appropriate vehicles or channels are not used. The vehicle to be used depends on the message content, available resources (human, equipment, budget, etc.), and more importantly, how do the audiences like to receive information; i.e., what news-paper do they read, what radio do they listen to, where do they gather, are they internet savvy, do they have access to internet any at all, do they prefer e-mail messages, do they prefer face-to-face meetings, etc. Quite simply, the project’s communication tools (messages, press releases, reports, brochures, etc.) must be seen and heard to have any value at all. In addition, they must be seen and heard *by the right people* to have any impact. Some of the project’s audiences may not have access to internet or may only read the newspaper occasionally (in rural communities). Brochures and posters may not be enough, or it may be just logistically complicated to get them to the target audience.

The following sections highlight the different options of channels available for communicating to the project’s audiences, as shown in the table below.

**Internal Communication Channels**

|  |  |  |
| --- | --- | --- |
| **Internal Audience** | **Focus of Key Messages** | **Communications Channel** |
| - The Project Steering Committee  - The Technical Advisory Committee  - UNEP  - IUCN-ORMACC  - GEF  - Project Staff  - Project Consultants | Project governance  Project performance  Project fiduciary management  Project global objective  Inter-office deadlines  Annual and mid-term targets reminders  Stakeholder engagement strategies  Technical deliverables  Project Quality Control  Financial and Fiduciary Control  Project reporting  Stakeholder feedback mechanisms | * Face-to-Face Meetings * E-mail * Inter-Office Memos * Telephone * Newsletters * Minutes of Meetings * Intranet * Retreats * Internal Audits * Annual Reports |

**External Communication Channels**

|  |  |  |
| --- | --- | --- |
| **External Audience** | **Focus of Key Messages** | **Communications Channel** |
| - Government Ministries and Departments  - Scholarship Grantees  - Agriculture sector  - Forest Sector  - Local Communities  - Local NGOs  - National and Regional partner institutions  - Politicians  - Private Sector | * Gaps in policy to address SLM, BD and CC * Opportunities for strengthening institutional framework in the agriculture and forest sectors to better address SLM, BD and CC * Climate-Smart agriculture * Sustainable agricultural practices * Opportunities and benefits of Agroforestry * Sustainable Land Management practices * CCM practices * CC adaptation practices * Practices for the sustainable use of nature and protection of biodiversity, especially in and around forests, mangroves, reefs, and sea grass beds, and with regard to threatened species of flora and fauna. * Examples of sustainable use of nature * Protection of biodiversity in general * Specific protection of forests, mangroves, reefs and seagrass beds * Protection of native species of flora and fauna * Avoiding the introduction of exotic species * Advocacy for policies to protect the environment and biodiversity * Impacts of climate change * Benefits of SLM * Advocacy for CCM policies and actions | * Face-to-Face Meetings * Town Hall Meetings * E-mail * Website * Telephone * Newsletters * Field Visits * Press Conferences * Press Releases * Publications * Annual Reports * Print Media * Radio * Television * Brochures * Case Studies * Questionnaires and Surveys * Call-in Shows * Live Interviews * Workshops * Special Events/Open Days * Informative video DVD * Articles in Magazines * Posters and T-shirts |

***Strategic Objectives***

The Strategic Objectives embrace the guiding principles described above. The actions propose practical measures for operationalizing this strategy at an institutional and project level, guided by available human resources, budget and in consideration of the project’s overall timeline.

**Strategic Objective 1:** To raise awareness of the local people living near the project field sites, particularly farmers on the issue of land degradation and Sustainable Land Management in St. Kitts & Nevis

**Rationale:**

Sustainable Land Management is a knowledge-based procedure that aims at integrating the management of land, water, biodiversity, and other environmental resources to meet human needs while sustaining ecosystem services and livelihoods. These principles and concepts must be integrated into development planning and productive practices across St. Kitts & Nevis, to ensure environmental sustainability and long-term economic viability of the country’s productive sectors, and in particular, the agriculture sector.

***Strategic Actions***:

1. Promote the techniques and approaches used in Sustainable Land Management practices
2. Educate on and demonstrate the economic and social benefits of Sustainable Land Management practices
3. Demonstrate the opportunities for Sustainable Land Management in St. Kitts & Nevis
4. Demonstrate the interactions between SLM concepts and sustainable use of water resources for agricultural production

**Strategic Objective 2:** To equip present and future generations in St. Kitts & Nevis with the information and knowledge needed to be effective advocates for environmental management and the sustainable use of biodiversity.

**Rationale:**

The significant area of abandoned sugarcane farms in the lower mountain slopes of both islands is now dominated by secondary growth, including large areas of invasive guinea grass, which has led to increased frequency of wildfires and the consequent release of soil carbon stocks, provision of habitat for invasive species and pests, such as yellow mite, white flies, and the African Green or Vervet monkey (*Chlorocebus sabaeus*). Human settlements in vulnerable and ecological sensitive areas have resulted in deforestation and soil erosion, as well as tourism development in ecologically sensitive areas that also poses a threat to biodiversity.

***Strategic Actions***:

1. Promote and advocate for the protection of forests, mangroves, reefs and seagrass beds by demonstrating their ecological, social and economic value
2. Promote and advocate for the protection of native species of flora and fauna
3. Propose policies against the introduction of exotic species by demonstrating the ecological and economic impacts associated with such introduction
4. Implement advocacy for policies to protect the environment, biodiversity, and critical ecosystems

**Strategic Objective 3:** To educate stakeholders in the agriculture sector on and promote the principles of Climate-Smart Agriculture as a practical measure towards Climate Change Mitigation.

**Rationale:**

Agriculture is the main source of food, and in some cases main source of employment and income for many people living in developing countries, and in particular in rural communities. Climate Change will alter how much rain falls, where and when, and can increase the frequency and intensity of extreme weather events such as hurricanes, floods, heat waves, snowstorms and droughts, all of which will have profound impacts on agriculture in developing countries and Small Island Developing States, including St. Kitts & Nevis.

***Strategic Actions***:

1. Develop and disseminate informative materials which promotes Climate Change Mitigation as a potential benefit to rural agricultural production
2. Develop and disseminate informative materials on how Climate-Smart Agriculture can help to strengthen livelihoods of farmers within the St. Kitts & Nevis context
3. Develop and disseminate materials to demonstrate how Climate-Smart Agriculture may be applied to the primary crops and livestock produced in St. Kitts & Nevis: Sweet Potatoes, Pumpkin, Tomatoes, Sweet Pepper, Carrots, Sheep, and Goats

**Appendix 19 – Knowledge Management Strategy**

**Introduction to Knowledge Management (KM)**

In an effort to understand KM, it is convenient to first define ‘knowledge’. A very comprehensive definition is “knowledge is a fluid mix of framed experience, values, contextual information, and expert insight that provides a framework for evaluating and incorporating new experiences and information. It originates and is applied in the minds of knowers. In organizations, it often becomes embedded not only in documents or repositories but also in organizational routines, processes, practices, and norms."[[14]](#footnote-14) There are a myriad of definitions for Knowledge Management (KM), but most of them seem to converge on the understanding that it involves the systematic management of an organization's knowledge assets for the purpose of creating value and meeting tactical & strategic requirements; it consists of the initiatives, processes, strategies, and systems that sustain and enhance the storage, assessment, sharing, refinement, and creation of knowledge, while enabling the adoption of insights and experiences. Knowledge management (KM) therefore implies a strong tie to organizational goals and strategy, and it involves the management of knowledge that is useful for some purpose and which creates value for the organization. Additionally, KM has evolved into a more rigorous discipline that is subject to the same scrutiny as other performance processes within an organization and is expected to show a return on investment.

KM can be described according to a four-step process: **gathering**; **organizing**; **refining** and **disseminating**, in which gathering is the bringing in of information and data into the system while organizing is the process of associating items to subjects, giving them context, making them easier to find. Refining is the process of adding value by discovering relationships, abstracting, synthesis, and sharing while disseminating is getting knowledge to the people who can use it[[15]](#footnote-15). However, it is important to note that organizations may design KM strategies and plans with as many steps as they believe are applicable to their own context and circumstances. Limiting the process to four steps helps to simplify the approach and facilitates understanding by all those who must be involve for KM to work, be truly useful, and ultimately be successful.

Like all performance and value-added processes, the very dynamic nature of KM requires key factors that are critical for its success, some of which are under the organization’s control and others that are not. Typically, the following five factors are critical for successful KM[[16]](#footnote-16):

1. Leadership – KM is a relatively new discipline, and requires model behavior, motivation and drive by those championing the KM cause.
2. Culture - It is the set of underlying beliefs that, while rarely exactly articulated, are always there to influence the perception of actions and communications of all employees. People want to share their knowledge and they want others to know they are knowledgeable. Remove the existing barriers to knowledge sharing, and give people the tools and environment they need to effect a KM cultural change.
3. Structure, roles, and responsibilities - Consider KM Steering Committee, a central KM Support Group, and stewards/owners throughout the organization who are responsible for KM. Promote a combination of a centralized and decentralized approach.
4. **Information technology infrastructure** – The technology employed in KM must respond to the needs of the users of the information; the electronic platform must be easily accessible by all users; the technology must be simple but effective; and key persons implementing the KM must be engaged in teaching, guiding, and coaching users how to use the system to interact, communicate, and share information and knowledge
5. Measurement – The effectiveness of KM strategies must be measured over time in order to determine the need to change and adjustment if performance and expected outcomes are not as anticipated.

To complement the success factors described above, there also factors considered to be resultant failure factors, which have been defined to include: lack of widespread contribution; lack of relevance, quality, and usability; overemphasis on formal learning, systematization, and determinant needs; improper implementation of technology; improper budgeting and excessive costs; lack of responsibility and ownership; and loss of knowledge from staff defection and retirement[[17]](#footnote-17).

**Purpose of this Knowledge Management Strategy**

The purpose of this KM Strategy for the project “Improving Environmental Management through Sustainable Land Management in St. Kitts and Nevis” is to create a SLM, BD and CC information and knowledge management framework, within the context of the proposed outputs and outcomes of the project in St. Kitts & Nevis. It is envisioned that the successful implementation of this framework within the life span of the project will result in a solid foundation for the extended dissemination and exchange of SLM, BD and CC knowledge in St. Kitts & Nevis, contributing directly to SLM, BD conservation and CC mitigation in the country.

**Figure 1: KM Systematization Process**

**Knowledge Management within the Context of the Project**

This KM approach is consistent with an approach which seeks to assure richness and quality of content in the project’s systematization process, and to create opportunities for capacity building, liaisons, harmonization and improved communications within the project.

While guided by the success and failure factors described above, this KM approach must be refined to initially meet the initial needs of the project as a temporary project/organizational structure, but with KM investments, structure, processes and systems, which will continue to be functional beyond the life of the project, with clear capacity building and institutionalization across St. Kitts & Nevis. A series of Strategic Objectives and Actions have been defined below, in accordance with overarching KM principles. A simple rationale for reach strategic objective is also provided to establish a relevant context for the objective and corresponding actions.

**Guiding Principles**

1. Knowledge Management is not information management and is broader than communications.
2. Knowledge Management creates, organizes, refines, and disseminates knowledge using a multitude of systems and mechanisms while continuously building capacity.
3. SLM, BD and CC Knowledge Management tools and systems are only useful if they are adopted and used by targeted groups and decision makers.
4. SLM, BD and CC Knowledge Management tools and systems must be seen to deliver tangible benefits to the project’s targeted beneficiaries which result in positive change.
5. SLM, BD and CC Knowledge Management requires institutionalization at the local and national levels.

**Strategic Objectives**

The Strategic Objectives embrace the conceptual model and guiding principles described above. The actions propose practical measures for operationalizing this strategy at an institutional and project level, creating the foundation for a strong KM baseline in St. Kitts & Nevis, guided by principles of transparency, collaboration, relevance and cost-effectiveness. The specific actions defined for each objective were defined, cognizant of the overall objective and scope of the Project and the available timeline for project implementation.

**Strategic Objective 1: Standardization of Knowledge Management Tools.**

**Rationale:**

In an effort to maximize the use of KM efforts sponsored by the project, some attention has to be paid to the means by which data and information generated by the project is recorded, saved, processed, managed and shared – the Information Management Process, to allow for effective comparison of project results, with the confidence of knowing that data generated at all sources followed some level of common quality and standard. This adds validity to the results and experiences being compared and maximizes their future potential use in replicating/expanding project successes or as a useful baseline in the development of new project interventions in the future.

***Strategic Actions***:

* + 1. Develop standardized data collection and reporting formats for use by all project documents, including for data collection, analysis, systematization purposes, and dissemination.
    2. Develop standardized definitions of common terminologies to be used with respect to SLM, BD and CC
    3. Map and validate all project information types, sources, users, and uses relevant for KM in topics relevant to the project.

**Strategic Objective 2**: Enhance Knowledge Management capacity by sharing data, information, and knowledge gathered from all project investments.

**Rationale:**

This strategy seeks to promote capacity building activities and develop training material to enable St. Kitts & Nevis to produce, analyze and share data, information and knowledge, for example, training in Guidelines for KM and Communication of key project results, training in harmonized M & E approaches, etc. Collective capacity building through information and knowledge generation networks should be fostered across all components of the project to include, but not limited to data collection, analysis, and dissemination on biodiversity assessments and management, mangrove restoration challenges and successes, crop climate and market analyses results, Indicators Species management, reforestation, and Assisted Natural Regeneration.

***Strategic Actions***:

* + 1. Develop tools such as KM Guidelines and Communication Guidelines and train key personnel in their use
    2. Develop KM activities to support awareness raising
    3. Develop a KM Engagement Plan with knowledge users/partners and providers to complement key areas of project, audiences and messages defined in the projects Public Awareness Strategy.
    4. Determine the existing KM Human and Technology Baseline currently in use in the country and required upgrades to better disseminate results and lessons learned.
    5. Systematization of Experiences & Lessons Learned as a result of project interventions according standardized formats and templates to be developed under Strategic Objective 1.
    6. Implement national and regional institutional partnerships to promote BD Conservation, SLM and CC Mitigation and Adaptation using tools such as technical exchange programs, internships, and collaborative research agreements and Memoranda of Understanding

**Strategic Objective 3**: Support Institutional Arrangements for Knowledge Management.

**Rationale:**

For a SLM, BD and CC knowledge management framework to succeed and serve as a true baseline for expansion and replication across the country, a national institutional arrangement to manage the diverse sources of SLM, BD and CC knowledge and information will be essential. A central coordination function at the national level is required to ensure that stakeholders continue generating SLM, BD and CC knowledge, the standardization and national and local relevance are vetted, and that this knowledge is accessible to all users.

***Strategic Actions:***

* + 1. Establish a National KM Node
    2. Establish a National KM Partnership Network across key institutions of the country
    3. Implement a National KM Workshop to present the node and network and to demonstrate its functionality and usefulness beyond the life of the proposed project.

**Appendix 20 – UNEP Capacity Scorecard**

**Capacity Development Scorecard for Project:**

***“Improving Environmental Management through Sustainable Land Management in St. Kitts and Nevis”***

**ENVIRONMENTAL MANAGEMENT CAPACITY BASELINE**

| **Capacity Result / Indicator** | **Staged Indicators** | **Rating** | **Score** | **Comments** | **Next Steps** | |
| --- | --- | --- | --- | --- | --- | --- |
| **CR1: Capacities for engagement** | | | | | | |
| **Indicator 1** – Degree of legitimacy / mandate of lead environmental organizations | Organizational responsibilities for environmental management are not clearly defined | 0 | 2 | The score is based on the fact that some stakeholders may not be aware of the remit of responsibility for each organization, and there may be interpretations of overlapping mandates. | The project will implement actions to strengthen public awareness of the legislative parameters and provisions under which each organization functions, and will promote multi-agency coordinating structures, such as the Project Steering Committee and the Technical Advisory Committee, as functional examples to be sustained and replicated beyond the project life. | |
| Organizational responsibilities for environmental management are identified | 1 |
| Authority and legitimacy of all lead organizations responsible for environmental management are partially recognized by stakeholders | 2 |
| Authority and legitimacy of all lead organizations responsible for environmental management are recognized by stakeholders | 3 |
| **Indictor 2** – Existence of operational co-management mechanisms | No co-management mechanisms are in place | 0 | 1 | There are some co-management mechanisms in place but they are not formal. The arrangement may be based on legislative remit such as outlined under the Finance Administration Act or the Procurement and Contracts Administration Act. Therefore, if stakeholders are unaware of the provisions therein they may be resistant. | The project will promote the formalization of the co-management arrangements beyond the legislative provisions through MOUs, using the platform provided by the Project Steering Committee. | |
| Some co-management mechanisms are in place and operational | 1 |
| Some co-management mechanisms are formally established through agreements, MOUs, etc. | 2 |
| Comprehensive co-management mechanisms are formally established and are operational / functional | 3 |
| **Indicator 3** – Existence of cooperation with stakeholder groups | Identification of stakeholders and their participation/involvement in decision-making is poor | 0 | 2 | When initiatives are being developed or ongoing a process or mechanism is established to involve the key stakeholders in the consultative process e.g. Project formulation workshops and PSCs. | The project will have formal governance and consultation structures to ensure that this need is addressed, by engaging with local and national stakeholders including public and private sector organizations, CBOs and NGOs for information dissemination, policy dialogue, and decision-making; i.e., the Project Steering Committee and the Technical Advisory Committee. | |
| Stakeholders are identified but their participation in decision-making is limited | 1 |
| Stakeholders are identified and regular consultations mechanisms are established | 2 |
| Stakeholders are identified and they actively contribute to established participative decision-making processes | 3 |
| **CR 2: Capacities to generate, access and use information and knowledge** | | | | | | |
| **Indicator 4** – Degree of environmental awareness of stakeholders | Stakeholders are not aware about global environmental issues and their related possible solutions (MEAs) | 0 | 2 | There are no reliable measure of the effectiveness of past public awareness campaigns, and thus a clear indication of the current level of environmental awareness by stakeholders. | The project has a specific Public Education and Awareness Strategy which focuses on SLM, BD conservation and CSA, which will be selectively implemented to ensure maximum effectiveness of all environmental awareness efforts. | |
| Stakeholders are aware about global environmental issues but not about the possible solutions (MEAs) | 1 |
| Stakeholders are aware about global environmental issues and the possible solutions but do not know how to participate | 2 |
| Stakeholders are aware about global environmental issues and are actively participating in the implementation of related solutions | 3 |
| **Indicator 5** – Access and sharing of environmental information by stakeholders | The environmental information needs are not identified and the information management infrastructure is inadequate | 0 | 2 | Some efforts are being made by the Department of Environment to create a repository of data and information, but there is no system in place for structure Knowledge Management. | The project has a specific Knowledge Management Strategy which focuses on SLM, BD conservation and CSA, which will be selectively implemented to ensure maximum effectiveness in information access, sharing and the systematization of project results, experiences and lessons learned. | |
| The environmental information needs are identified but the information management infrastructure is inadequate | 1 |
| The environmental information is partially available and shared among stakeholders but is not covering all focal areas and/or the information management infrastructure to manage and give information access to the public is limited | 2 |
| Comprehensive environmental information is available and shared through an adequate information management infrastructure | 3 |
| **Indicator 6** – Existence of environmental education programmes | No environmental education programmes are in place | 0 | 1 | Some work is being done by the Department of Environment and other agencies but this needs to be further developed | The project will support the development of education and awareness programs in Climate Smart Agriculture and sustainable development to be implemented in secondary scholls in St. Kitts & Nevis. | |
| Environmental education programmes are partially developed and partially delivered | 1 |
| Environmental education programmes are fully developed but partially delivered | 2 |
| Comprehensive environmental education programmes exist and are being delivered | 3 |
| **Indicator 7** – Extent of the linkage between environmental research / science and policy development | No linkage exist between environmental policy development and science/research strategies and programmes | 0 | 1 | There are no research strategies and programmes linked to the policy formulation process for environmental management. | The project will support the development of biodiversity baseline assessments to inform policy decision on three key indicators species and the sustainable use of biodiversity in at least 2 Key Biodiversity Areas in St. Kitts & Nevis. | |
| Research needs for environmental policy development are identified but are not translated into relevant research strategies and programmes | 1 |
| Relevant research strategies and programmes for environmental policy development exist but the research information is not responding fully to the policy research needs | 2 |
| Relevant research results are available for environmental policy development | 3 |
| **Indicator 8** – Extent of inclusion / use of traditional knowledge in environmental decision-making | Traditional knowledge is ignored and not taken into account into relevant participative decision-making processes | 0 | 1 | There are no systems in place to document or safeguard traditional knowledge. | The project will make efforts through its Knowledge Management Strategy to systematize traditional knowledge relevant for SLM. BD conservation and CSA. | |
| Traditional knowledge is identified and recognized as important but is not collected and used in relevant participative decision-making processes | 1 |
| Traditional knowledge is collected but is not used systematically into relevant participative decision-making processes | 2 |
| Traditional knowledge is collected, used and shared for effective participative decision-making processes | 3 |
| **CR 3: Capacities for strategy, policy and legislation development** | | | | | | |
| **Indicator 9** – Extent of the environmental planning and strategy development process | The environmental planning and strategy development process is not coordinated and does not produce adequate environmental plans and strategies | 0 | 2 | There is need for increased effort by all stakeholders to pursue funding from all sources not just traditional one in order to implement activities under environmental plans and strategies. | The National Physical Development Plan (NPDP) to be developed under this project will help to streamline and prioritize land use planning, and by extension the identification of areas prioritized for investment and development, cognizant of all environmental considerations that are applicable to such land use. | |
| The environmental planning and strategy development process does produce adequate environmental plans and strategies but there are not implemented/used | 1 |
| Adequate environmental plans and strategies are produced but there are only partially implemented because of funding constraints and/or other problems | 2 |
| The environmental planning and strategy development process is well coordinated by the lead environmental organizations and produces the required environmental plans and strategies; which are being implemented | 3 |
| **Indicator 10** – Existence of an adequate environmental policy and regulatory framework | The environmental policy and regulatory frameworks are insufficient; they do not provide an enabling environment | 0 | 2 | There are issues with enforcement as a result of manpower or willingness by the personnel who have responsibility for executing the function as there may be concern regarding public outcry. | The institutional and regulatory framework to be developed by the project for the implementation of the NPDP will help to empower and streamline enforcement mandates and responsibilities. The education and public awareness programme will also take on board existing relevant laws and regulations, to build more sense of willingness among responsible agencies. | |
| Some relevant environmental policies and laws exist but few are implemented and enforced | 1 |
| Adequate environmental policy and legislation frameworks exist but there are problems in implementing and enforcing them | 2 |
| Adequate policy and legislation frameworks are implemented and provide an adequate enabling environment; a compliance and enforcement mechanism is established and functions | 3 |
| **Indicator 11** – Adequacy of the environmental information available for decision-making | The availability of environmental information for decision-making is lacking | 0 | 1 | Some information is provided but the collection and update has not kept pace with the growing needs of national, regional and international stakeholders. | The GIS and information management capabilities to be supported by the project will be a robust step in the direction to establish a systematic data collection and policy support system, which will be a model for replication and upscaling by other sectors and institutions through-out the country. | |
| Some environmental information exists but it is not sufficient to support environmental decision-making processes | 1 |
| Relevant environmental information is made available to environmental decision-makers but the process to update this information is not functioning properly | 2 |
| Political and administrative decision-makers obtain and use updated environmental information to make environmental decisions | 3 |
| **CR 4: Capacities for management and implementation** | | | | | | |
| **Indicator 12** – Existence and mobilization of resources | The environmental organizations don’t have adequate resources for their programmes and projects and the requirements have not been assessed | 0 | 2 | Resource needs are known for the most part, but resource mobilization is challenging. | | The generation of better baselines and data will strengthen the country’s ability to better present its case for priority funding. |
| The resource requirements are known but are not being addressed | 1 |
| The funding sources for these resource requirements are partially identified and the resource requirements are partially addressed | 2 |
| Adequate resources are mobilized and available for the functioning of the lead environmental organizations | 3 |
| **Indicator 13** – Availability of required technical skills and technology transfer | The necessary required skills and technology are not available and the needs are not identified | 0 | 0 | Some technical skills are present and technology transfer has taken place but more is required. A preliminary assessment of skills required has been undertaken for forward planning in SLM, BD conservation, CSA and environmental management. | | The project is supporting 6 post-graduate scholarships in skills relevant for GIS, land use planning, SLM, Climate Change, and Sustainable Agriculture. |
| The required skills and technologies needs are identified as well as their sources | 1 |
| The required skills and technologies are obtained but their access depend on foreign sources | 2 |
| The required skills and technologies are available and there is a national-based mechanism for updating the required skills and for upgrading the technologies | 3 |
|  | | | | | | |
| **Maximum total** | | **39** | **19** | **Obtained 48.72%** | | |

#### Other Annex: Terrestrial Key Biodiversity Areas of St. Kitts and Nevis

|  |
| --- |
| **International Name: St. Kitts Central Forest Reserve**  Area: 5,960 ha  KBA Criteria[[18]](#footnote-18): The site has been identified as an Important Bird and Biodiversity Area based on the presence of: Significant populations of endemic species known only to be found in a limited area.  Site Description[[19]](#footnote-19): The St. Kitts Central Forest Reserve is comprised of all areas on the island of St. Kitts over 300 meters elevation. The dominant feature of the reserve is Mt. Liamuiga (1,156 m), the highest point on St. Kitts. It is part of the mountain range which runs north to south and forms the northern part of the island. Human settlement is limited to the lower elevations, where sugarcane fields were farmed and villages dot the coastal area. Canyons, or ghauts, radiate from the peak.  Key Biodiversity: Restricted-range species found in the reserve include the Bridled Quail-dove *Geotrygon mustacea*, Lesser Antillean Flycatcher *Myiarchus oberi berlepshii*,  Purple-throated Carib *Eulampis jugularis*, Green-throated Carib *Eulampis holosericeus*,Antillean Crested Hummingbird *Orthorhyncus cristatus,* Brown Trembler  *Cinclocerthia ruficauda pavida*, Pearly-eyed Thrasher *Margarops fuscatus*, Scaly-breasted Thrasher *Margops fuscus*, Lesser Antillean Bullfinch *Loxigilla noctis*, and  Antillean Euphonia *Euphonia musica*. Specific locations and population estimates were not found in the literature. Steadman et al. report that all except the Green-throated are common in undisturbed moist forests on St. Kitts.Six species of neotropical migrants have been reported from this habitat type on St. Kitts  Non-bird biodiversity: No endemic or threatened botanical species are reported for St. Kitts. Restricted-range herpetofauna and bats are not known but likely exist within the proposed IBA.  Populations of IBA Trigger Species:  *Species:* Bridled Quail *Geotrygon mystacea*; *IUCN Red-list Category:* LC; *Season:* resident; *Population estimate:* unknown  *Species:* Green-throated Carib *Eulampis holosericeus*; *IUCN Red-list Category:* LC; *Season:* resident; *Population estimate:* unknown  *Species:* Purple-throated Carib *Eulampis jugularis*; *IUCN Red-list Category:* LC; *Season:* resident; *Population estimate:* unknown  *Species:* Antillean Crested Hummingbird *Orthorhunchus cristatus*; *IUCN Red-list Category:* LC; *Season:* resident; *Population estimate:* unknown  *Species:* Lesser Antillean Flycatcher *Myrarchus oberi*; *IUCN Red-list Category:* LC; *Season:* resident; *Population estimate:* unknown  *Species:* Scaly-breasted Thrasher *Allenia fusca*; *IUCN Red-list Category:* LC; *Season:* resident; *Population estimate:* unknown  *Species:* Pearly-eyed Thrasher *Margarops fuscatus*; *IUCN Red-list Category:* LC; *Season:* resident; *Population estimate:* unknown  *Species:* Brown Trembler *Cinclocerthia ruficauda*; *IUCN Red-list Category:* LC; *Season:* resident; *Population estimate:* unknown  *Species:* *Euphonia musica*; *IUCN Red-list Category:* NR; *Season:* resident; *Population estimate:* unknown  *Species:* *Loxigilla noctis*; *IUCN Red-list Category:* NR; *Season:* resident; *Population estimate:* unknown |
| **International Name: Cayon to Key**  Area: 6,000 ha  KBA Criteria[[20]](#footnote-20): The site has been identified as a Key Biodiversity Area based on the presence of: Significant populations of globally threatened species. Information on Globally Threatened Species found in the KBA[[21]](#footnote-21):  *Scientific Name:* *Dermochys coriacea*   * *Common Name:* Leatherback Sea Turtle * *Red-list Category:* Vulnerable * *Geographic Range:* Leatherbacks are distributed circumglobally, with nesting sites on tropical sandy beaches and foraging ranges that extend into temperate and sub-polar latitudes. * *Current Population Trend:* Decreasing * *Habitat and Ecology:* *D. coriacea* is an oceanic, deep-diving marine turtle inhabiting tropical, subtropical, and subpolar seas. Leatherbacks make extensive migrations between different feeding areas at different seasons, and to and from nesting areas. Leatherbacks feed predominantly on jellyfishes, salps and siphonophores. Females usually produce several (3-10) clutches of 60-90 eggs in a reproductive season, and typically have a re-migration interval of multiple years (2+) between subsequent |
| reproductive seasons.   Major threats: Threats to Leatherbacks vary in time and space, and in relative impact to populations. Threat categories affecting marine turtles, including Leatherbacks, were described by Wallace *et al*. (2011) as:   1. Fisheries bycatch: incidental capture of marine turtles in fishing gear targeting other species; 2. Take: direct utilization of turtles or eggs for human use (i.e. consumption, commercial products); 3. Coastal Development affecting critical turtle habitat: human-induced alteration of coastal environments due to construction, dredging, beach modification,   etc.;   1. Pollution and Pathogens: marine pollution and debris that affect marine turtles (i.e. through ingestion or entanglement, disorientation caused by artificial lights), as well as impacts of pervasive pathogens (e.g. fibropapilloma virus) on turtle health; 2. Climate change: current and future impacts from climate change on marine turtles and their habitats (e.g. increasing sand temperatures on nesting beaches affecting hatchling sex ratios, sea level rise, storm frequency and intensity affecting nesting habitats, etc.). |
| **International Name: Ponds of the Southeast Peninsula**  Area: 315 ha  KBA Criteria[[22]](#footnote-22): The site has been identified as an Important Bird and Biodiversity Area based on the presence of: Significant populations of species known only to be found in a particular biome and/or significant regional/sub-regional populations of trigger species.  Site description:The southeast peninsula is composed of low hills, eight salt ponds, coastal cliffs, and beaches. It is approximately 15 kilometers long and a road runs its length. The peninsula widens towards the southeastern tip to approximately 4 kilometers wide, although the narrowest northern section is less than one kilometer wide. Tourism is concentrated in the northern section of the peninsula, which is dominated by resorts, a golf course, and restaurants. Similar developments are expected to expand southward. Ponds of importance to birds on the peninsula include Greatheeds Pond and beach, Half Moon, Friar's Bay, Great Salt, Major's Bay, Mosquito Bay, Little Salt, and Frigate Bay Ponds. The boundaries would be limited by an area thirty meters from the high water line of each pond.  Key biodiversity: Least Terns nest at three sites on the Southeast Peninsula. A survey in 2004 revealed that Mosquito Bay Pond has 20 Least Tern pairs, Great Salt Pond has 27 pairs, and Greatheeds Beach (which is just north of the peninsula) has 18 pairs. Although St. Kitts' population of 65 pairs meets the Important Bird Area requirements, there is no one site where concentrations are sufficient to classify as an IBA. Because Least Tern colonies have previously been recorded at other nearby sites, indicating possible movement between breeding sites, the entire Southeast Peninsula is proposed as an IBA. Further study is needed to determine the importance of these sites to migrant waterbirds  Non-bird biodiversity: Not applicable.  Populations of IBA Trigger Species[[23]](#footnote-23):  *Species: Pelecanus occidentalis*; *IUCN Red-list Category:* NR; *Season:* breeding; *Population estimate:* 56 nests  *Species:* Least Tern *Sternula antillarum*; *IUCN Red-list Category:* LC; *Season:* breeding; *Population estimate:* 65 breeding pairs |

1. St. Kitts & Nevis Information Service (2018). [↑](#footnote-ref-1)
2. Planning for the Integration of Climate Resilience in the Water Sector in the Caribbean, Task 1 – St. Kitts & Nevis Climate Risk & Vulnerability Assessment Report (2018) [↑](#footnote-ref-2)
3. Director’s Report – Annual Review and Planning Meeting of the Department of Agriculture, February 27, 2018 [↑](#footnote-ref-3)
4. Travel & Tourism Economic Impact 2018 – St. Kitts & Nevis, World Travel & Tourism Council [↑](#footnote-ref-4)
5. Bonnie L Rusk. Conserving Biodiversity and reducing habitat degradation in Protected Areas and their Areas of Influence. Draft Technical Report for the Department of Physical Planning and Environment. 2014. [↑](#footnote-ref-5)
6. As suggested by STAP comments, several papers were consulted for the development of Output 1.1.3, including Tuholske, C. et al. (2017). "Thirty years of land use/cover change in the Caribbean: Assessing the relationship between urbanization and mangrove loss in Roatan, Honduras". Applied Geography 88 (2017) 84-93 [↑](#footnote-ref-6)
7. Refer to UNEP Environment, Social and Economic Sustainability (ESES): Implementation Guidance Note to assign values to the Impact of Risk and the Probability of Risk to determine the overall significance of Risk (Low, Moderate or High). [↑](#footnote-ref-7)
8. **Low risk**: Negative impacts negligible: no further study or impact management required.

   **Moderate risk**: Potential negative impacts, but less significant; few if any impacts irreversible; impact amenable to management using standard mitigation measures; limited environmental or social analysis may be required to develop a ESEMP. Straightforward application of good practice may be sufficient without additional study.

   **High risk**: Potential for significant negative impacts, possibly irreversible, ESEA including a full impact assessment may be required, followed by an effective safeguard management plan. [↑](#footnote-ref-8)
9. Prohibited grounds of discrimination include race, ethnicity, gender, age, language, disability, sexual orientation, religion, political or other opinion, national or social or geographical origin, property, birth or other status including as an indigenous person or as a member of a minority. References to “women and men” or similar is understood to include women and men, boys and girls, and other groups discriminated against based on their gender identities, such as transgender people and transsexuals. [↑](#footnote-ref-9)
10. “Integrated Pest Management (IPM) means the careful consideration of all available pest control techniques and subsequent integration of appropriate measures that discourage the development of pest populations and keep pesticides and other interventions to levels that are economically justified and reduce or minimize risks to human health and the environment. IPM emphasizes the growth of a healthy crop with the least possible disruption to agro-ecosystems and encourages natural pest control mechanisms http://www.fao.org/agriculture/crops/thematic-sitemap/theme/pests/ipm/en/ [↑](#footnote-ref-10)
11. "IVM is a rational decision-making process for the optimal use of resources for vector control. The approach seeks to improve the efficacy, cost-effectiveness, ecological soundness and sustainability of disease-vector control. The ultimate goal is to prevent the transmission of vector-borne diseases such as malaria, dengue, Japanese encephalitis, leishmaniasis, schistosomiasis and Chagas disease." (http://www.who.int/neglected\_diseases/vector\_ecology/ivm\_concept/en/) [↑](#footnote-ref-11)
12. Find more information from http://www.fao.org/fileadmin/templates/agphome/documents/Pests\_Pesticides/Code/CODE\_2014Sep\_ENG.pdf [↑](#footnote-ref-12)
13. Refer to the Toolkit for the application of the UNEP Indigenous Peoples Policy Guidance for further information. [↑](#footnote-ref-13)
14. Davenport, T.H. and Prusak, L. (2000). *Working Knowledge: How Organizations Manage What They Know*, Harvard Business School Press, Boston, MA. Accessed on 20th May 2018. [↑](#footnote-ref-14)
15. Angus, J. and J. Patel. (1998). Knowledge management cosmology. *Information Week*. Available at [http://www.informationweek.com/673/73olkn2.htm Accessed 28th May, 201](http://www.informationweek.com/673/73olkn2.htm%20%20%20Accessed%2028th%20May,%20201)8. [↑](#footnote-ref-15)
16. Hasanali. F. (2002). Critical Success Factors for Knowledge Management, Available at <http://www.providersedge.com/docs/km_articles/critical_success_factors_of_km.pdf> Accessed 28th May 2018. [↑](#footnote-ref-16)
17. Frost, A. (2014). A Synthesis of Knowledge Management Failure Factors. Available at [www.knowledge-management-tools.net](http://www.knowledge-management-tools.net) Accessed 1st May 28th , 2018. [↑](#footnote-ref-17)
18. [https://www.ibatalliance.org/ibat-conservation/kbafactsheet/m19914](https://www.ibat-alliance.org/ibat-conservation/kbafactsheet/m19914)  [↑](#footnote-ref-18)
19. <http://datazone.birdlife.org/site/factsheet/19914> [↑](#footnote-ref-19)
20. <https://www.ibat-alliance.org/ibat-conservation/kbafactsheet/m28537> [↑](#footnote-ref-20)
21. Wallace, B.P., Tiwari, M. & Girondot, M. 2013. *Dermochelys coriacea*. The IUCN Red List of Threatened Species 2013: e.T6494A43526147. [http://dx.doi.org/10.2305/IUCN.UK.20132.RLTS.T6494A43526147.en.](http://dx.doi.org/10.2305/IUCN.UK.2013-2.RLTS.T6494A43526147.en) Downloaded on **18 February 2017**. [↑](#footnote-ref-21)
22. <https://www.ibat-alliance.org/ibat-conservation/kbafactsheet/m19915> [↑](#footnote-ref-22)
23. BirdLife International (2017) Important Bird Areas factsheet: Ponds of the Southeast Peninsula. Downloaded from [http://www.birdlife.org](http://www.birdlife.org/) on 18/02/2017. [↑](#footnote-ref-23)