# GEF-6 REQUEST FOR ONE-STEP MEDIUM-SIZED PROJECT APPROVAL

**TYPE OF TRUST FUND: GEFTF**

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## PART I: PROJECT IDENTIFICATION

| | | | |
|---|---|---|---|
| Project Title: | Setting the foundations for zero net loss of the mangroves that underpin human wellbeing in the North Brazil Shelf LME. | | |
| Country(ies): | Suriname and Guyana (includes coordination between Brazil (Amapá) and French Guiana). | GEF Project ID:[1] | 9949 |
| GEF Agency(ies): | CI | GEF Agency Project ID: | |
| Other Executing Partner(s): | International Union for the Conservation of Nature (IUCN). | Submission Date: | 10/19/2017 |
| GEF Focal Area(s): | IW | Project Duration (Months) | 12 |
| Integrated Approach Pilot | IAP-Cities ☐ IAP-Commodities ☐ IAP-Food Security ☐ | | |
| Name of Parent Program: | [if applicable] | Agency Fee ($) | 53,298 |

### A. FOCAL AREA STRATEGY FRAMEWORK AND PROGRAM[2]:

| Focal Area Objectives/programs | Focal Area Outcomes | Trust Fund | (in $) | |
|---|---|---|---|---|
| | | | GEF Project Financing | Co-financing |
| IW-3 Program 6 | **Outcome 6.1:** Coasts in globally most significant areas protected from further loss and degradation of coastal habitats while protecting and enhancing livelihoods. | GEFTF | 592,202 | 838,259 |
| (select) (select) (select) | | (select) | | |
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| (select) (select) (select) | | (select) | | |
| | **Total project costs** | | 592,202 | 838,259 |

### B. PROJECT FRAMEWORK

**Project Objective:** To create the multi-disciplinary information base, regional coordination mechanism and multi-sectoral consensus required to implement elements of the CLME+ Strategic Action Plan pertaining to the mangroves that most directly underpin human wellbeing in the North Brazil Shelf LME.

| Project Components/ Programs | Financing Type[3] | Project Outcomes | Project Outputs | Trust Fund | (in $) | |
|---|---|---|---|---|---|---|
| | | | | | GEF Project Financing | Confirmed Co-financing |
| **Component 1:** Multi-sectoral consensus and knowledge foundation established for the development of an Integrated Coastal Management (ICZM) Plan for Mangroves. | TA | **Outcome 1.1:** The biophysical, social and economic information most relevant to the conservation and sustainable use of mangroves in | **Output 1.1.1** By Dec. 2018 updated **national mangrove cover maps** showing extent of loss since 1980 baseline.<br><br>*Indicator 1.1.1.: 2* | GEFTF | 538,366 | 778,259 |

[1] Project ID number will be assigned by GEFSEC and to be entered by Agency in subsequent document submissions.
[2] When completing Table A, refer to the excerpts on GEF 6 Results Frameworks for GETF, LDCF and SCCF and CBIT programming directions.
[3] Financing type can be either investment or technical assistance.

| | | | | | | |
|---|---|---|---|---|---|---|
| | | **Guyana** and **Suriname** is obtained from synthesizing results of existing work and undertaking new research where gaps exist as the technical foundation for building an NBS Integrated Coastal Management Plan for mangroves.<br><br>***Indicators 1.1.:***<br><br>*# Knowledge gap analysis for decision making (priority and thematic) (completed).*<br><br>*# studies, (synthesis of existing work and new research) planned, initiated and published to address critical knowledge gaps.* | *updated national mangrove maps/ country (Guyana and Suriname).*<br><br>**Output 1.1.2**<br>By Dec. 2018 **ecosystem valuation** of main ecosystem services provided by mangroves in each country where this is lacking.<br><br>*Indicator 1.1.2.: 3 ecosystem valuation assessments completed (local, national and global level) for both Guyana and Suriname.*<br><br>**Output 1.1.3**<br>By Dec 2018 biophysical characterization and **threat assessments** for mangroves for each country where this is lacking.<br><br>*Indicator 1.1.3.: At least one biophysical characterization study improved; one threat assessment completed for both Guyana and Suriname ; one IUCN ecosystem red listing process for the NBS region completed.*<br><br>**Output 1.1.4**<br>By Dec 2018 **policy analyses** for each country that identify spatial management, use regulations and tenure arrangements relating to mangroves. | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | | *Indicator 1.1.4.: One policy assessment completed for both Guyana and Suriname.*<br><br>**Output 1.1.5**<br>By Dec 2018 mapping and other **relevant outputs** from the project **shared** with the larger regional process of the CLME+ project.<br><br>*Indicator 1.1.5.: At least one technical space identified and/or generated by project as a clearing house for information relevant to regional NBS ICZM planning and in support of the CLME+ process.* | | | |
| | | **Outcome 1.2**<br>Broad-based multi-sectoral consensus is reached regarding how to manage Guyana, Suriname and Brazil's mangrove in a coordinated fashion and with the goal of achieving progress on six Aichi Targets, UN Sustainable Development Goals (SDGs) and a zero net loss rate by 2030 and contributing to the achievement of the relevant SDGs and Aichi Targets.<br><br>***Indicator 1.2.:***<br>*# Consensus agreement achieved committing to multi-sectoral coordination for future NBS mangrove conservation.* | **Output 1.2.1**<br>By **Apr. 2018 NBS regional mangrove coordination body** (as considered in the CLME+ SAP) is **created and operational**.<br><br>*Indicator 1.2.1.: One established NBS coordination group or forum.*<br><br>**Output 1.2.2**<br>By **May. 2018** French Giana and Brazil become participating members in the NBS regional mangrove coordination body.<br><br>*Indicator 1.2.2.: French Giana and Brazil are represented along with Guyana and Suriname in the* | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | | *NBS coordination body.*<br><br>**Output 1.2.3**<br>By **May. 2018,** the **NBS regional mangrove coordination body agrees on internal operational arrangements, a work plan and a timeline** to produce the information base required for generating a framework for how to generate a three-country ICM plan for mangroves and share the mapping and other relevant outputs with complementary programs such as the CLME+ regional process.<br><br>*Indicator 1.2.3.: Operational guidelines, work plan and timeline produced and ratified by participating countries.*<br><br>**Output 1.2.4**<br>By **Dec 2018**, a framework charting the scope, content, process and institutional arrangements required for creating a transboundary Integrated Coastal Management (ICM) plan by 2021 developed and approved by the 3 countries (ministerial level).<br><br>*Indicator 1.2.4: At least three NBS counties support a regional coordination mechanism and* | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | | *road map that will enable further integrated coastal zone management beyond the one year project* | | | |
| | (select) | | | (select) | | |
| | (select) | | | (select) | | |
| | (select) | | | (select) | | |
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| | (select) | | | (select) | | |
| | (select) | | | (select) | | |
| | | | Subtotal | | 538,366 | 778,259 |
| | | | Project Management Cost (PMC)[4] | GEFTF | 53,836 | 60,000 |
| | | | **Total GEF Project Financing** | | 592,202 | 838,259 |

For multi-trust fund projects, provide the total amount of PMC in Table B, and indicate the split of PMC among the different trust funds here: ( )

## C. SOURCES OF CO-FINANCING FOR THE PROJECT BY NAME AND BY TYPE

Please include confirmed co-financing letters for the project with this form.

| Sources of Co-financing | Name of Co-financier | Type of Co-financing | Amount ($) |
|---|---|---|---|
| CSO | IUCN | In-kind | 60,000 |
| GEF Agency | Conservation International | Grant | 80,000 |
| CSO | WWF-Guianas | In-kind | 89,750 |
| Others | UNDP | In-kind | 249,155 |
| Recipient Government | Foundation for Forest Management and Production Control | In-kind | 152,000 |
| Recipient Government | National Agricultural Research & Extension Institute (NAREI Guyana) | In-kind | 39,000 |
| Recipient Government | Guyana Forestry Commission (GFC Guyana) | In-kind | 41,000 |
| Recipient Government | Government of Brazil | In-kind | 127,354 |
| **Total Co-financing** | | | 838,259 |

## D. TRUST FUND RESOURCES REQUESTED BY AGENCY(IES), COUNTRY(IES), FOCAL AREA AND PROGRAMMING OF FUNDS

| GEF Agency | Trust Fund | Country/ Regional/Global | Focal Area | Programming of Funds | (in $) | | |
|---|---|---|---|---|---|---|---|
| | | | | | GEF Project Financing (a) | Agency Fee a) (b) | Total (c)=a+b |
| CI | GEFTF | Regional: Suriname, Guyana | IW | (select as applicable) | 592,202 | 53,298 | 645,500 |
| (select) | (select) | | (select) | (select as applicable) | | | 0 |

[4] For GEF Project Financing up to $2 million, PMC could be up to10% of the subtotal; above $2 million, PMC could be up to 5% of the subtotal. PMC should be charged proportionately to focal areas based on focal area project financing amount in Table D below.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| (select) | (select) | | (select) | (select as applicable) | | | 0 |
| (select) | (select) | | (select) | (select as applicable) | | | 0 |
| (select) | (select) | | (select) | (select as applicable) | | | 0 |
| (select) | (select) | | (select) | (select as applicable) | | | 0 |
| (select) | (select) | | (select) | (select as applicable) | | | 0 |
| (select) | (select) | | (select) | (select as applicable) | | | 0 |
| (select) | (select) | | (select) | (select as applicable) | | | 0 |
| (select) | (select) | | (select) | (select as applicable) | | | 0 |
| **Total Grant Resources** | | | | | 592,202 | 53,298 | 645,500 |

a) Refer to the Fee Policy for GEF Partner Agencies.

## E. PROJECT'S TARGET CONTRIBUTIONS TO GLOBAL ENVIRONMENTAL BENEFITS[5]

Provide the expected project targets as appropriate.

| Corporate Results | Replenishment Targets | Project Targets |
|---|---|---|
| 1. Maintain globally significant biodiversity and the ecosystem goods and services that it provides to society | Improved management of landscapes and seascapes covering 300 million hectares | *hectares* |
| 2. Sustainable land management in production systems (agriculture, rangelands, and forest landscapes) | 120 million hectares under sustainable land management | *hectares* |
| 3. Promotion of collective management of transboundary water systems and implementation of the full range of policy, legal, and institutional reforms and investments contributing to sustainable use and maintenance of ecosystem services | Water-food-ecosystems security and conjunctive management of surface and groundwater in at least 10 freshwater basins; | *2 basins (Southern extent of Orinoquia (Orinocco Basin) – Amazon Basin.)* |
| | 20% of globally over-exploited fisheries (by volume) moved to more sustainable levels | |
| 4. Support to transformational shifts towards a low-emission and resilient development path | 750 million tons of $CO_{2e}$ mitigated (include both direct and indirect) | *metric tons* |
| 5. Increase in phase-out, disposal and reduction of releases of POPs, ODS, mercury and other chemicals of global concern | Disposal of 80,000 tons of POPs (PCB, obsolete pesticides) | *metric tons* |
| | Reduction of 1000 tons of Mercury | *metric tons* |
| | Phase-out of 303.44 tons of ODP (HCFC) | *ODP tons* |
| 6. Enhance capacity of countries to implement MEAs (multilateral environmental agreements) and mainstream into national and sub-national policy, planning financial and legal frameworks | Development and sectoral planning frameworks integrate measurable targets drawn from the MEAs in at least 10 countries | *Number of Countries:* |
| | Functional environmental information systems are established to support decision-making in at least 10 countries | *Number of Countries:* |

## F. DOES THE PROJECT INCLUDE A "NON-GRANT" INSTRUMENT? (Select)

(If non-grant instruments are used, provide an indicative calendar of expected reflows to your Agency and to the GEF/LDCF/SCCF/CBIT Trust Fund) in Annex B.

N/A

## G. PROJECT PREPARATION GRANT (PPG)[6]

[5] Provide those indicator values in this table to the extent applicable to your proposed project. Progress in programming against these targets for the projects per the *Corporate Results Framework* in the *GEF-6 Programming Directions*, will be aggregated and reported during mid-term and at the conclusion of the replenishment period. There is no need to complete this table for climate adaptation projects financed solely through LDCF, SCCF and/or CBIT.

[6] PPG of up to $50,000 is reimbursable to the country upon approval of the MSP.

Is Project Preparation Grant requested? YesX No ☐ If no, skip item G.

**PPG AMOUNT REQUESTED BY AGENCY(IES), TRUST FUND, COUNTRY(IES) AND THE PROGRAMMING OF FUNDS***

| GEF Agency | Trust Fund | Country/ Regional/Global | Focal Area | Programming of Funds | (in $) | | |
|---|---|---|---|---|---|---|---|
| | | | | | PPG (a) | Agency Fee[7] (b) | Total c = a + b |
| CI | GEFTF | Regional: Suriname, Guyana | IW | (select as applicable) | 50,000 | 4,500 | 54,500 |
| (select) | (select) | | (select) | (select as applicable) | | | 0 |
| **Total PPG Amount** | | | | | **50,000** | **4,500** | **54,500** |

## PART II: PROJECT JUSTIFICATION

1. *Project Description.* Briefly describe: a) the global environmental and/or adaptation problems, root causes and barriers that need to be addressed; b) the baseline scenario or any associated baseline projects, c) the proposed alternative scenario, GEF focal area[8] strategies, with a brief description of expected outcomes and components of the project, d) incremental/ additional cost reasoning and expected contributions from the baseline, the GEFTF, LDCF/SCCF, CBIT and co-financing; e) global environmental benefits (GEFTF), and adaptation benefits (LDCF/SCCF); and 6) innovation, sustainability and potential for scaling up.

1. The one-year project aims to generate necessary baseline knowledge and technical assessments as inputs towards a collaborative vision and coordinated well informed management of North Brazil Shelf (NBS) mangrove systems, with emphasis upon the information needs of countries Guyana and Suriname.
2. The project will also support development of a transboundary coordination mechanism(s) between the countries of Guyana, Suriname, French Guiana and Brazil (Amapá) towards the improved integrated coastal management of the extensive, ecologically connected yet vulnerable mangrove habitat of the North Brazil Shelf (NBS) region.

### Scope and Area of Interest:

3. The North Brazil Shelf Large Marine Ecosystem (NBS-LME or NBS) situated along the north-eastern coast of South America spans ~1.1 million km2 over six countries, being bordered by the Caribbean Sea in Central America and extending south to the Atlantic Parnaiba River delta along the margin of Maranhão and Piauí States in Brazil (Ekau & Knoppers, 2003).
4. The focal geography relevant to the project within the wider NBS region extends from Guyana to North Brazil (Amapá State) (Figure 1). Of the four countries, Guyana and Suriname were prioritized as having the greatest immediate need to assess and synthesize key knowledge and policy gaps in order to best advance a regional agenda for mangrove conservation (please refer to Section 1d).
5. Although on-site mangrove research is focused upon the coastal fringe the project considers the important conditioning influence of connected systems. These include important source-to-sea connectivity between the upstream Brazil and Guiana basin watershed and downstream filtering by mangroves. Mangrove productivity is also relevant to the wider NBS continental platform adjacent to inshore waters (e.g. acting as nurseries to offshore fisheries that extend across the 350km continental shelf and contribution to the nutrient loading at productive oceanic fronts etc.).

[7] PPG fee percentage follows the percentage of the Agency fee over the GEF Project Financing amount requested.

[8] For biodiversity projects, in addition to explaining the project's consistency with the biodiversity focal area strategy, objectives and programs, please also describe which Aichi Target(s) the project will directly contribute to achieving.

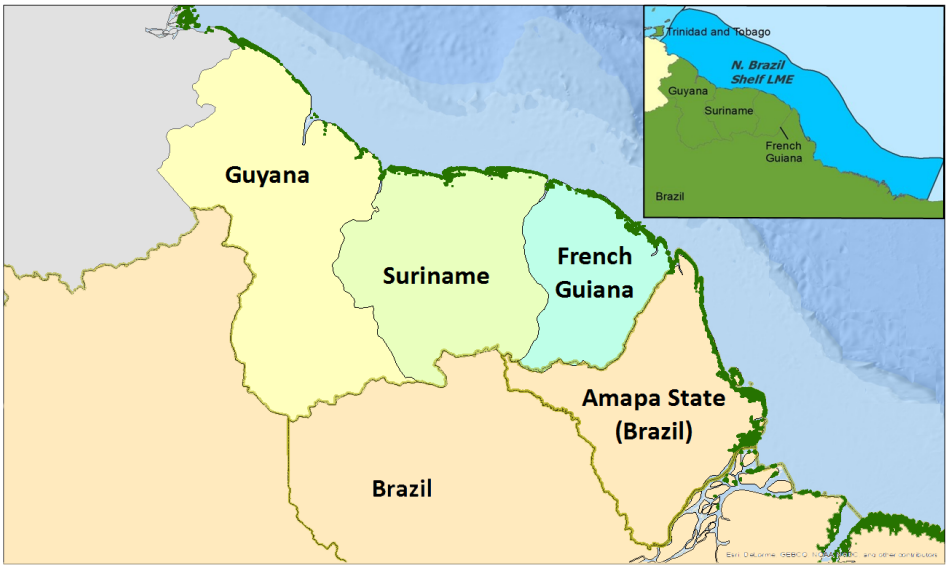


Figure 1. Area of interest for the proposed project within the wider North Brazil Shelf LME (inset after the CLME+ project). Estimated mangrove distribution is indicated in dark green (after Giri et al. 2011).

## a) The global environmental problems, root causes and barriers that need to be addressed. Environmental and socio-cultural features:

6. Mangrove coverage is broadly estimated to be in the order of 250,000 - 300,000 ha across the four project countries (Guyana, Suriname, French Guiana and Amapá State, Brazil) in the NBS-LME region. The NBS-LME has one of the most contiguous and dynamic mangrove forests in the world. Covering 80-90% of this coastline, these mangroves stabilize ~1600 km of silt enriched sediments against erosion, mediate in-shore flooding, sustain fisheries and ensure coastal water quality.
7. Estimations of mangrove extent vary significantly between global and national studies (e.g. Giri et al. 2011) given alternative methods used during national species inventories and different reference years (please refer to Section 1b for a discussion on estimates for national mangrove extent). Working area estimates for the purpose of this project are taken from recent literature as 20,000 ha in Guyana, 50,000 ha in Suriname, 45,000 ha in French Guiana and 178,000 ha in Brazil (Amapá state).
8. Composition of mangrove coastal habitat varies across the NBS region between the Genus of *Acrostichum*, *Conocarpus* (excluding Suriname), *Rhizophora* and *Laguncularia* (with four species in Guyana and Suriname and six species registered in French Guiana (Spalding et al. 2010)).
9. Attaining heights of 20-40 m NBS mangroves are considered among the most extensive, dynamic and structurally complex coastal habitats in South America. The seafront edge is typically dominated by monospecific stands of black mangrove (or parwa *Avicennia germinans*) often backed by red mangrove (*Rhizophora mangle* and *R.racemosa*), more common along the banks of river estuaries, and to a lesser extent the white mangrove (*Laguncularia racemosa*). Salt marsh forests form behind the protective mangrove band composed of *Symphonia globulifera*, *Virola surinamensis*, *Ficus* sp., *Euterpe oleracea* often being intermixed with old mature stands of *A. germinans*. Button mangrove *Conocarpus erectus* is common in areas where *Avicennia* and *Laguncularia* species dominate (Pastakia 1991).
10. The benthic fauna is considered very rich and potentially with high endemism, but is to date poorly understood. More than 500 fish species have been recorded for the NBS-LME. NBS mangrove also harbor red listed migratory and resident species such as the scarlet ibis (*Eudocimus rube*), purple gallinule

(*Porphyrio martinicus*), crab eating racoon (*Procyon cancrivorus*), the spectacled caiman (*Caiman* crocodilus) and wood stork (*Mycteria americana*). Suriname coast is wintering ground for migratory shorebirds from North America and is of special importance and feeding ground for more than 118 species of coastal birds of which more than 70 species are defined as waterfowl according to the criteria of the Ramsar Convention.

11. The NBS-LME is a region greatly influenced by riverine outflow from the Amazon and Guiana shield basin which interacts with the westward flow of the North Brazil Current (an extension of the South Equatorial and Guyana Current). Seasonal and inter-annual patterns in sedimentation and erosion are key processes that determine the shifting areas conducive to mangrove settlement and growth. Time-series studies over 64 years in French Guiana suggest that westward recycling and transport of mud banks between Amazon and Orinoco outflows occurs over inter-decadal periods of 10-40 years. Up to 15+ mud banks, spaced at intervals of 15 - 25 km, are known to 'shift' along the Guianas coast at rates of 1 to 5 km.yr-1 (Gardel and Gratiot, 2004, 2005) (Figure 2).
12. The mangroves colonizing the NBS shoreline are commonly termed 'fringe mangroves' found along the coastal belt depending on the species and in a seafront position, but also along lower river courses. They range from pioneer mangroves that start colonizing the mud banks to cemetery stands comprising dead and dying mangroves. The mangrove fringe is variably wide, depending on the waxing and waning of mud bank activity, but commonly attains several km on the mangrove-rich Guianas coast. This makes them effective dissipaters of wave energy, important for reducing inshore flooding, but also for reducing the degree of natural erosion and retreat of consolidated substrate during 'inter-bank phases' that displace sediments alongshore to the west (Anthony 2015).

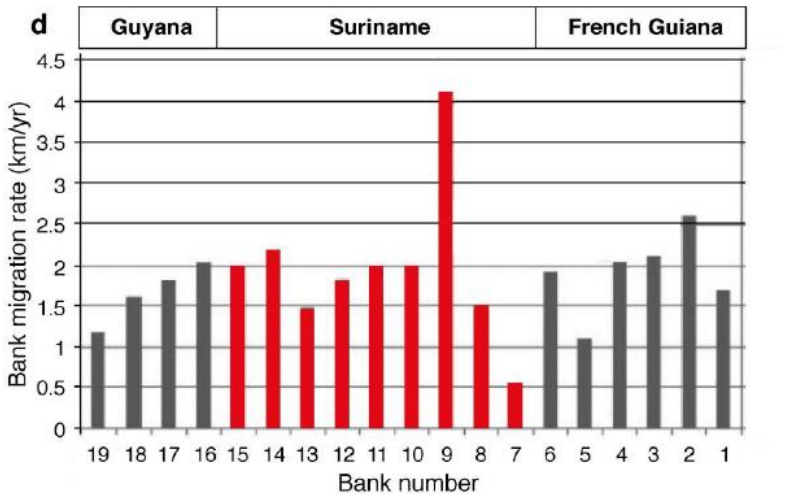


Figure 2. Averaged rates of migration of enumerated mudbanks from French Guiana to Guyana from 2006 – 2010 (adapted from Gensac 2012; Anthony 2015).

13. The mud banks are separated by 'inter-bank' zones, which also change in position as the banks migrate. In this unique system, mangroves play an important role by stabilizing the inner part of each mud bank and ensuring plant 'continuity' with the older muddy shoreline, from which subsequent mangrove regeneration is best assured by propagule dispersal. This role of mangroves means, in essence, that the inner part of mud banks becomes welded to the coast, thus creating new land (Anthony 2015). Hence during inter-bank

erosion, mangroves protect the coast from high energy events (e.g. storm surge, cyclones and tsunami), while during a bank accretion phase, mangroves support the creation of new land (Walcker 2015). Guiana mud banks are also characterized by intense biogeochemical recycling exchanging material with open ocean far exceeding that of other stable soft sediment systems such as salt marshes (Aller et al. 2004). These features are important considerations for any sediment reclamation initiative or mangrove rehabilitation program.

14. The outflow from the Amazon is amongst the highest in the world, averaging ~180,000 m-3s-1 and with sediment discharge rates ranging from 754-1000 x 106 t.a-1 (Martinez et al., 2009; Wittmann et al., 2011). Its contribution to nutrient enrichment is supplemented by the Orinoco, Tocantins, Maroni, Corentyne and Essequibo rivers. Discharged water once offshore interacts with macro-tides and upwelling, forming an interface between the exceptionally high rates of river outflow and strong oceanographic fronts at the margin of the North Brazil Current. Productivity is stratified around such nearshore outflow features and is exceptionally high (>300 gCm-2yr-1 [Heileman, 2009]). These features sustain biodiversity and linked on-shore/ off-shore fisheries across the regional NBS-LME mangrove-scape.
15. Ground-fish and tuna marine fisheries constitute an important economic sector in the NBS region providing foreign exchange earnings, employment and animal protein (FAO 2005). Mangroves play a role in the offshore provision of nutrients to ocean production underpinning these fisheries as well as important nursery habitat for early life stages. In particular, the Penaeidae family of shrimp, (the most valuable targeted fishery in Guyana) inhabits mangrove forests. Given ongoing risk of net loss of mangrove habitat and unsustainable levels of extraction they may now qualify under IUCN red listing threatened criteria.
16. A significant proportion of the region's population depends upon fishing for its survival and lack the means to substitute other forms of animal protein (UNEP 2004). In Guyana for example, the economic contribution of fisheries has grown dramatically in recent years employing over 10,000 people (FAO 2005) and is understood to be currently overcapitalized. Fisheries governance in the NBS region is complicated by multi-species gears and multi-national fleets. Limited sector organization and data poor stock assessments have to date complicated progress establishing harvest control rules (Booth et al. 2001).
17. Offshore dumping of fisheries by-catch has also been associated by Surinamese fishers with 'dead waters' in shallow coastal waters. Localized oxygen depletion is believed to be the cause of the observed large die-off of shore fish when associated with re-suspension of already anoxic coastal outflows. Shrimp by-catch is a well-known issue having ratios of 5-15:1 and resulting in the culling of young individuals of other species with implied dramatic reduction in their populations (of great concern for long lived keystone species such as sharks).
18. Within local communities, mangroves are typically used as construction material for tools and fences, the production of charcoal, as well as tannins (from bark) for leather production. Other uses dependent upon the mangrove habitat include commercial bird catching and honey production (an activity fairly unique to the region).

**Global Environmental Problem**

19. Recent evaluations indicate a recent history of mangrove loss and a number of significant threats to the health and longevity of NBS mangroves with implications for human health and well-being. These include climate change, land clearance for urbanization, agriculture and livestock grazing, inappropriate fishing practice, upstream changes in land-use affecting hydrology, impacts from installation of concrete coastal defenses and local industry.
20. The NBS-LME countries of Guyana and Suriname have relatively low populations yet without integrated planning and policy to mediate and mitigate opportunities and pitfalls posed by development and industry (e.g. shrimp and other aquaculture, dams, oil infrastructure, and urban development etc. ) the continued loss of mangrove becomes an eventuality that is very likely to weaken natural defenses, undermine climate

resilience for coastal communities and impact human welfare and well-being for a coastal populace in a known high risk flooding region.

21. The relative magnitude and urgency of these threats were discussed and reviewed in a multi-stakeholder workshop as inputs to the project (held in Suriname June 2017) and are described briefly here (provided in Table 1). In Guyana the greatest current threat mentioned was clearance for cattle grazing given that a large proportion of the coast was drained and converted for agriculture following colonization (with much of the original ecosystem having been modified for centuries) and coastal urbanization in the case of Suriname.

**Root causes:**

22. Climate change: Suriname & Guyana rank second and fifth globally in terms of population living in low-elevation coastal zones (LECZ) at risk from sea level rise (SLR) (McGranahan, 2007). Current projections for sea level rise suggest severe risk to coastal ecosystems, in particular, the mangrove forests and large expanses of arable land. In Suriname for example 30% of the country is within 2m above sea level. Experts calculate that under a scenario of 30 cm SLR in 30 years (including 10% increased rainfall) that approximately 4,000 km2 of land surface in Suriname including the capital Paramaribo is at risk. As a result ±70.000 people (11% of the country's population) will have to move placing capital in the order of ~240 million US$ (11% of the annual Gross Domestic Product) at risk (after Drunen, et al. 2006).

23. Concrete or "grey" architecture dykes for Guyana while an understandable preventive measure for flooding, has unfortunately already led to the extensive removal of an estimated 20-30% of coastal mangroves since the 1980s. The placement of such structures has also led in many cases to the erosion of the fore bank and loss of remaining mangroves. As with Suriname, over 75% of economic activities in Guyana are undertaken in the high risk coastal flood risk region.

24. The NBS region also shows a gradual warming trend of 0.9 Deg. C over the past 30 years ranking it amongst the mid-fast warming LMEs globally. Regional Climate Models indicate an increase of 4.8 Deg. C by 2080 under higher emissions scenarios with a 34% reduction in mean annual rainfall. Projected annual mean sea surface temperature (SST) increases of 1.0 to 3.1˚C are predicted by 2080 across low-high emission scenarios with as yet unqualified impacts. In the case of mangrove associated fisheries these tendencies may be responsible for the conspicuous observed decline in abundance of brown and pink shrimp (already subject to increasing trends in fishing mortality and overcapitalization (Ehrhardt 2001, Chin-Lin et al. 2001)).

25. Importantly, climate change effects on precipitation may also influence the 'source to stream' hydrology and the particular sediment regime in the region (see earlier in this section) that determines mangrove distributions along the coastal mud-banks. To date this has indirect but important implications for coastal mangrove health. The construction of dams for example was in part to establish agricultural plots, but also to help prevent downstream flooding.

26. **Coastal development:** Populations in the NBS-LME are largely concentrated in the coastal zone (>80%). Continuous mangrove degradation (10-20%) is reported over the last four decades near developed peri-urban areas. Evidence of erosion dates from 1914 in coastal districts such as Paramaribo and Wanica, home to ~50% of the entire population of Suriname (Nijbroek 2014) where >80% of the populace live in the coastal fringe. Agriculture, particularly rice plantations (in Guyana) and horticulture (in Suriname), areas used for cattle grazing and urban encroachment has reduced kilometer thick mangrove forests in places to <10m wide belts.

27. Much development was before people were aware of the implications. During the 1970's, the Venezuelan Corporation for Guyana Development, a state-owned company undertook hydraulic works to reclaim flooded grounds for agriculture, which may at the time have also been related to the exportation of minerals. Extensive artificial dykes for flood protection have also replaced the mangroves in many populated areas resulting in "polder" dried areas that have subsided to below sea level (particularly in

Guyana). These solutions are typically costly, and unlike mangrove green belt cannot naturally adapt to changing conditions, providing limited services beyond physical protection and require ongoing maintenance. Recent awareness work in Guyana has motivated subsequent efforts to recover lost mangroves which have so far met with mixed (0-60%) success (Anthony 2015).

28. The effects of mangrove clearance for agriculture have been extensive. Recent observations of inter-bank erosion in an area of shoreline previously occupied by rice fields in French Guiana following large scale mangrove and back-swamp clearance showed extremely high shoreline erosion rates of up to 180 m/ year in the absence of mangrove (typically 40 m/ year) and this is likely comparable across analogous sites across the region.

29. Mangrove removal was undertaken in a number of areas north of Paramaribo in the Suriname coast as part of urbanization programs which are currently ongoing along with new dyke infrastructure. Such artificial dykes have been shown to also induce fore-bank erosion. Hence at scale, this endangers existing natural mangrove defenses. In terms of cost- effectiveness, mangroves are costly to regenerate once lost and are far less likely to generate the same order of ecosystem benefits and most cost- effective climate proofing and defense solutions (Anthony 2015). There are also concerns for the East West road connection which has blocked fresh water flow to certain areas, resulting in die back of coastal mangroves.

**Table 1.** Relative importance of threats to Guyana and Suriname mangroves (expert and stakeholder based, June 2017 scoping workshop, Suriname)

| Category | **Stressor** | **Estimated threat level** | |
|---|---|---|---|
| | | Guyana | Suriname |
| Climate change. | Sea level rise. | MED | HIGH |
| | SST rise. | UNKNOWN | UNKNOWN |
| | Novel diseases/ vectors. | UNKNOWN | UNKNOWN |
| Agriculture. | Land clearance. | LOW | MED |
| Livestock. | Over-grazing. | V. HIGH | LOW |
| Aquaculture. | Fish ponds. | MED | NONE |
| | Shrimp ponds. | MED | NONE |
| | Marine mollusks. | HIGH | NONE |
| Wild capture | Destructive fishing/ practices. | LOW | MED |
| | Overfishing. | TBD | UNKNOWN |
| Coastal development. | Urbanization | MED | HIGH |
| | Concrete sea defenses. | MED | MED |
| Source to stream. | Upstream deforestation. | MED | MED |
| | Upstream pollution. | LOW | MED |
| | Dams | TBD | HIGH |
| Industry. | Leather and tannin production. | MED | NONE |
| | Mining and pesticide pollution. | NONE | HIGH |
| | Offshore oil exploration / extraction. | NONE (Future MED-HIGH) | |
| | Salt extraction. | NONE | NONE |
| | Timber. | LOW | LOW |
| | Tourism. | LOW | LOW |

30. Local industry: Direct use of mangroves is influenced by the distribution of the relatively low density coastal population. Common practice includes extraction of bark for tannin production (for which there are

substitutes) in response to demand for the leather industry during the mid to the late and placement of hives in mangroves to collect honey. The extraction of honey has an interesting implication for management and protection of mangrove in those areas linked to local enterprise.

31. Fisheries represent an important extractive activity with dependencies upon mangrove habitat. Mean trophic level of fisheries landings in the region have declined since the 1980's (Pauly & Watson 2005) which is indicative of fishing down the food web. Such trends in extraction of large carnivores and targeted functional parts of the wider ecosystem are pervasive in interconnected coastal and marine systems. Where improved harvest control and stock management is a challenge for the region, accompanying deterioration of mangrove nursery and productive habitat will likely have serious implications for any efforts towards potential fisheries recovery and stabilization at sustainable yields. There are some low impact direct losses through mangrove cutting to allow fishers access to the waterfront.
32. Upstream pollution is also a concern, particularly in Suriname given small scale gold mining where mercury is used and perhaps more importantly, the uncontrolled use of pesticides by farmers. Sand and shell are also extracted from beaches for construction.
33. Offshore oil prospection is underway across Guyana and Suriname. Although there are no immediate impacts and constructive dialogue, once this phase finalizes in 2019+ the advent of new oil income and infrastructure could represent game-changing revenue and open access to unvisited coastline in the region. Accelerated development in these sectors will undoubtedly bring new challenges. Precautionary measures and safeguard planning are prudent to ensure that such opportunities support and strengthen sustainable development in the region rather than compound existing problems. Hence future risk was qualified as medium to high.

**Barriers**.

34. **Barrier #1**: A lack of comparable mangrove extent and condition maps between countries limits the effectiveness of prioritized mangrove conservation planning, reducing the provision of robust data to inform national mangrove agendas, set realistic conservation targets and hence the adaptive management of mangrove conservation strategies through monitoring and evaluation is limited.
35. **Barrier #2:** Demand for development in mangrove areas and potential for concrete dyke solutions and external drivers (e.g. future oil developments) is outpacing capacity (funds, skill sets) to understand the key processes, inform, educate and develop policy and legal instruments that underpin well informed and sustainable resource management.
36. **Barrier #3:** Although progress is being made (e.g. $150 fines in Guyana and 3-month prison sentence for illegal cutting) limited national policies are in effect between the NBS countries of Guyana and Suriname that ensure rational use of mangrove natural resource through specific inclusions that recognize function and protect the provision of multiple mangrove ecosystem goods and services to local communities.
37. **Barrier #4:** Local communities do not necessarily fully understand, appreciate or visualize the benefits provided by mangrove ecosystem goods and services. An observed lack of social cohesion in some communities limits possibilities for grass roots management and incentives including useful traditional local knowledge and an understanding of local needs and interests for future management.
38. **Barrier #5:** Countries are at different points in their development of a centralized multi-sectoral information sharing, networking and knowledge management system concerning regional NBS mangroves conducive to a more effective technical dialogue, consensus for conservation solutions and shared community of practice for the region.
39. **Barrier #6:** Despite evidence of considerable ecological connectivity through transboundary processes there is no organized effort ratified by NBS countries to help strategize for mutual interests and synergies.

This complicates national planning for co-dependent resources such as fisheries and mangroves, and becomes a barrier to cross-learning and policy development for shared conservation goals as a region.

**b) The baseline scenario and any associated baseline project.**

**Baseline scenario:**

40. Mangroves in recent history have suffered from the popular misconception that such mosquito filled tidal swamps held little value for people. In particular the simple virtue that they occupy space thought well suited for coastal real estate, agriculture, aquaculture and livestock grazing has led to high deforestation rates following industry expansion in the 1960s.
41. Following the large-scale deforestation for aquaculture and fish ponds in Asia and Pacific South America in the 1960's – 1980's, estimated global losses have exceeded 20% since the 1980's (FAO 2005). Global campaigns led by UNESCO and later IUCN with new innovative research on climate economies has since drawn attention to the risk that such removal poses and cost to both natural environment and people.
42. Work over recent years between local NBS governments, research Civil Society Organizations (CSOs) and Non-Government Organizations (NGOs) has started to change this perspective and raise the level of understanding and public awareness, recognizing that mangrove welfare and that of coastal societies are intimately connected. New information is now available from global initiatives quantifying blue carbon (Blue Carbon Initiative, GEF-Blue Forests project etc.) and framing their significant climate mitigation potential. Their contributions to national production and food security and important coastal defense against flooding are convincing reasons for steps that reduce and where possible reverse deforestation.
43. This has led to increased interest and awareness in the global sustainable development community that coastal resilience increases significantly if we can proactively safeguard mangrove as part of our global and national natural capital. As a result, project partners IUCN and CI are with The Nature Conservancy (TNC) and World Wildlife Fund (WWF) co-founders of a new Global Mangrove Alliance looking to fast track remedial steps in mangrove conservation. In the NBS region a number of government initiatives with support of NGOs are actively seeking wider collaboration, exploring inclusions in national policy and means to improve compliance with international conventions and reduce the risk of coastal flooding to NBS coastal societies.
44. The role of the interconnected mangrove systems along the shifting mud banks of the low-lying countries of the NBS region is particularly important to the future of the region given that these countries are particularly susceptible to climate change-driven sea level rise. Despite clearance during historical land reclamation (particularly in Guyana) they still harbor extensions of well-developed mangrove forest and are at a relatively early stage of coastal development compared to other tropical regions.
45. There is continued interest to establish a first Marine Protected Area network for the project countries and improve effectiveness for existing reserves, within which an EU funded spatial mapping and planning initiative is currently underway led by WWF. There are mangrove areas with protected designations. For example, Guyana declared the Shell Beach Protected Area (156.7 km2 Mangrove forest within a wider 1203.1 km2 protected area formed of swamps and other coastal ecosystems) which to date remains fairly intact given that population density and hence impacts are relatively low. Since 2011 the area was classified as a Managed Resource Protected Area (IUCN Category VI).
46. The Golden Grove/Belfield Mangrove Reserve in Guyana covers approximately >100ha. This forest is recovering and has benefitted from replanting. There is a fairly high level of threat given that although protected under forestry law, the reserve has limited on-the-ground enforcement and is very close to populated areas.
47. A shared agenda for Integrated Coastal Zone Management (ICZM) as suggested by the Caribbean Large Marine Ecosystem Project (CLME+) Strategic Action Plan (SAP) would jointly work towards mangrove protection, sustainable use and management for a key and dynamic natural resource that effectively spans

1600km and the four national borders between the Amazon and Orinoco outflows. This would effectively help consolidate the status of existing reserves and help advance potential protected and managed area denominations into the future.

48. In order to be effective, the design of such an ICZM process should ideally draw upon the most robust information available in each country which is as yet at different levels of development. The research and monitoring undertaken to date are base-line investments to which the project will leverage actions in synthesis, assistance to fill critical knowledge gaps and development of subsequent applications (threat analysis, conservation priority setting etc.) based on the most robust and relevant information for a coordinated and transboundary ICZM development in the NBS region.

**Existing research, monitoring, policy and development initiatives that are relevant to such an ICZM scheme were reviewed in the pre-project phase to help establish a knowledge base-line, as follows:**

**Monitoring and evaluation of NBS-LME mangrove condition and extent.**

49. A repeatable methodology for comparable mapping of mangrove extent and condition across the NBS region (at least for relative change within countries if not between them) is a necessary cornerstone for systematic and integrated coastal zone management, including spatial planning, monitoring and evaluation. This is particularly relevant in an area where pilot studies estimate recent erosion in the order of 27 m/ year (e.g. Weg Nar Zee, Suriname).

50. Unfortunately, national and global (satellite based) estimates of mangroves vary considerably given different methods and sensors used, level of ground truthing, resolution of available imagery, discrimination of waterways and that they are often collated for different periods and timeframes. Mangrove cover is often also taken incorrectly as a proxy for mangrove condition. Condition is occasionally recorded in biodiversity inventories, but not consistently in each country.

51. Desktop reviews of mangrove estimates comparing such discrepancies between benchmark global satellite studies (e.g. Giri et al. 2011) and national studies as complied in the Mangrove World Atlas (Spalding et.al 2001) report a 36% mean difference in mangrove area per country (globally) between independent estimates (Valiela et al. 2001). Although orders of difference are often detectable, differences in data collection can confound comparison, being not necessarily sensitive enough to distinguish between changes due to management measures and on-the-ground initiatives when estimating loss and recovery between countries and over time.

52. In the case of Suriname, the most recent inventory is based around the ‘Teunnissen’ map from 1976 (40 years ago) carried out by the Forestry Service at that time (Dienst 's Lands Bosbeheer (LBB)). This map is commonly cited as the official government reference and is currently being digitalized into GIS format. Other estimates range from 51,200 ha (Hamilton et al. 2016) based on the global 2000-2001 Landsat based Giri et al. data set, and 98,121 ha in 1998 (FAO 2003). Satellite imagery analysis from the 1990s was also presented in French Guiana which included vegetation ground truthing. This included species and condition for Avicennia nitida ("Parwa" or black mangrove) although the areas covered by Rhizophora mangle ("Mangro" or red mangrove) were not included.

53. In the case of Guyana, the Guyana Forestry Commission for the Mangrove Restoration Project (GFC) as part of national research authority NAREI cite a figure of 22,632 ha from a more recent study (Persaud 2012). This is based on SPOT 5m 2008 imagery and IKONOS 1m - 4m resolution data from 2004 to 2009 (also using CBERS and Landsat data as support materials). The current coverage estimate is approximately half that of the 40,242 ha estimate obtained from global studies using satellite data (Hutchinson et al. 2013 based on Giri et al. 2011) and significantly lower than other independent estimates of 80,432 ha (Hans ter Steege 2001) and a 2015 estimate by the Guyana Forestry Commission (Pickering) of 99,516 ha.

54. There are no works or maps available that systematically estimate mangrove deforestation or recovery for either country although FAO compare national estimates in their global 1980-2005 mangrove review.

Some areas within countries have more detailed time-series data. Persaud (2012) for example shows results from a time series analysis, but only in "Region 5", Guyana for the period 1990 - 2010.

55. Informed management design also requires an understanding of the unique biophysical sedimentation and erosion dynamic acting across the NBS region. This is important when assessing the spatially shifting nature of mud banks and what that means for shoreline exposure, accretion and viable mangrove settlement habitat. In Suriname, local experts during the pre-project phase estimated that despite attention from a few interested environmental groups the level of understanding was low.

56. Most existing knowledge in mangrove systems is based upon a relatively comprehensive species inventory and descriptive work including mapping from several decades ago undertaken by Dutch ecologists from Universities of Utrecht and Wageningen. The data are scattered between various departments of the government, such as the Nature Conservation Division, Ministry of Physical Planning, Land and Forest Management, and with some local NGOs (e.g. WWF-Guianas). The last two decades of mangrove research has focused on stress factors, carbon stock, inventories and invasive species carried out by University of Suriname (AdKU), Centre for Agricultural Research (CELOS), and the National Herbarium of Suriname (BBS).

57. Research is also ongoing in field tests in an area with history of coastal flooding at Weg naar Zee in the district of Coronie for experimental sediment trapping units (CI-Suriname, AdKU, Prof. S. Naipal) that look to facilitate deposition of sediment over large areas by using bamboo stands that imitate the wave dissipation and sedimentation function afforded by lost mangrove stands. Hence the approach has potential for recreating settlement habitat suitable for mangrove recovery (and feed-forward bank accretion in affected areas. This "Building with Nature" initiative also involves Wetlands International and is linked to work evaluating green-grey coastal protection options National Coordination Center for Disaster Management.

58. There is also a body of work with a recent history of mangrove forum events and publications between national and international researchers examining the multifaceted mangrove dynamic in the region, including recent works emphasizing the importance of interbank erosion and accretion for coastal planning in the NBS region (please see Section 1a.). Important reviews of existing research and of work with implications for recovering coastal defenses have been supported and developed by NGOs in the region such as WWF-Guianas, CI–Suriname, CI-Guyana and Wetlands International, and include recommendations for management.

59. In Guyana, NAREI (Government of Guyana) most research is coordinated with the Guyana Mangrove Restoration Program (GMRP) which provides support and technical assistance to mangrove research projects. The current research capacity and available funds is reported by local experts to be limited. The University of Guyana has the only technical capacity nationally to undertake research and also have led base-line biodiversity inventories and routine water quality monitoring (salinity, pH, Temperature).

**Valuation of ecosystem goods and services provided by mangroves.**

60. A number of publications are available quantifying some of the ecosystem goods and services afforded by mangroves across the two countries of Guyana and Suriname, although as with most regions there are conspicuous knowledge gaps. These efforts are not as yet summarized or framed in a systematic assessment of mangrove natural capital and such would benefit from a process that helps quantify and ratify contributions towards national environmental accounts.

61. A review of existing work and on-site interviews with local experts in 2016 before the pre-project phase suggests that:

    - In terms of local production, Information on fisheries stocks associated with Suriname and Guyana mangrove systems is still very limited, although there are typical signs of over-dimensioned effort and overfishing when conversing with local fishers. (e.g. reduced size of

individuals, drop in CPUE in recent years/ more time needed to set nets with less results). There are also important unqualified links between mangrove nursery habitat, and lifecycle stages for nearshore and offshore fisheries.

- In Guyana there are studies available on the biodiversity of specific areas prioritized for protected area status (e.g. the Golden Grove-Belfield Mangrove Forest biodiversity assessment (Roopsind 2012)). In Suriname the species inventory data is considered fairly comprehensive, although it is scattered across various government departments (e.g. Nature Conservation Division, Ministry of Physical Planning, Land and Forest Management) and between CSOs and NGOs such as WWF and CI.
- Nature based tourism being linked to an appreciation of mangrove scenic value is as yet a low-profile activity (around 40 visitors/month in in Guyana 2016 (Ref: GMRP)) with potential for development. Mangrove Heritage Trail Tours for the Golden Grove-Belfield forest in Guyana for example are facilitated by the NAREI GMRP and managed by qualified tour guides. These visits typically involve a short power point presentation on the mangrove project, bird watching, observing of rufous crabs and a cultural presentation by village members. Similar ventures are underway with German Federal Enterprise for International Cooperation (GIZ) and Caribbean Aqua-Terrestrial Solutions Program (CATS) support (e.g. Mahaica River Tours for birding and mangrove visits).

62. There are recent carbon assessments undertaken for Suriname[9] and Guyana[10] . Being orientated towards inputs for the Reducing Emissions from Deforestation and Forest Degradation (REDD+) and Measurement, Reporting and Verification Program (MRV) they have as yet to incorporate estimations of the 2/3rd majority below ground biomass particular to mangroves and considered important for quantifying carbon mitigation potential and sequestered reserves in the coastal fringe. In Suriname MSc and BSc studies were coordinated by CELOS as part of a Suriname Coastal Protected Area Management Project (SCPAM). The Nature Conservation Division (NCD) as part of the Ministry of Physical Affairs has set up permanent sampling plots for forest carbon monitoring.

63. Mangroves have a documented role in reducing wave energy (both living and dead mangrove stands) implying important value and cost-benefit arguments for protection of in-land coastal infrastructure and reduction of storm surge depending on mangrove condition, belt thickness, positioning and installation of concrete dykes. Global predictive models to help evaluate cost to coastal infrastructure (were mangroves removed) are available, but have yet to be applied for the NBS region.

- Hindu cultural and spiritual activities are also conducted in mangrove areas, including spiritual sites affected in recent years from coastal erosion (Suriname) but are not as yet included in a formal appraisal of mangrove worth. The Youth in Action for mangroves NGO works in Suriname to raise appreciation of mangrove ecosystems in popular culture including their role for coastal protection and mitigating climate change impacts.
- In terms of water quality, upstream pollution has been observed in mangrove areas (pers. comm. CI-Guyana) but is as yet not well documented.

**<u>Mangrove relevant policy and management initiatives between the two countries.</u>**

64. In terms of mangrove relevant policy there are important antecedents as well as recent advances in the two NBS project countries. In the case of Guyana:

[9] SBB; CELOS; CATIE; NZCS. 2017 report. "State-of-the-art study: Best estimates for emission factors and carbon stocks for Suriname including mangrove forest."

[10] Jaikishun 2013,"Carbon Storage Capacity of Mangrove Species in Guyana". This research provides estimations for the above ground carbon stock in the two mangrove species (*R. mangle L.* and *A. germinans* (L). L.) in all six coastal Regions.

- Guyana has a National Mangrove Management Action Plan which was developed in 2010 under the NAREI mangrove restoration program (GMRP), Ministry of Agriculture and since implemented by the Guyana Forestry Commission (GFC). The plan needs to be updated to reflect lessons from GMRP and new restoration interventions.
- There is also a 2011 code of practice for mangrove harvesting following a Forestry Act (CAP 67:01) declaring mangroves as protected species in 2010. The Environmental Protection Authority (EPA Act CAP 18-01), Fisheries Act and Defense Acts (CAP:46:01) deal with environmental policies which include coastal zone management, but as yet include no laws specific to mangrove protection.

65. Suriname operates under a Nature Conservation law dating from 1954 with a renewed law being currently being drafted. Under the Forest Management Act there is also the possibility that mangrove forest could be assigned as 'special protected forest'. Although Suriname has to date no national mangrove action plan there are several national policies and management plans relevant to mangrove and nature protection in Suriname:

    - A Coalition Agreement and Government Policy Statement (2010 – 2015) with national development plan 2012 – 2016 provide statement of intent and broad guidelines for nature conservation and development.
    - The National Biodiversity Strategy 2006 - 2020 (March 2006) and National Biodiversity Action Plan 2012-2016 (NBAP February 2013).
    - A "Suriname in Transformation" and Interim Strategic Action Plan for Suriname Forest and timber 2009-2013 is in effect (SABH, 2009).
    - The National Capacity Assessment Strategy 2008 (NCAS) and Capacity Development Action Plan (CDAP, April 2009).
    - Multiple Use Management Areas (MUMAs) were assigned per Ministerial decree to the Minister of Physical Planning, Land and Forest Management (ROGB) responsible for nature protection with responsibility of implementing rational management. These include the Management Areas of Bigi Pan (S. B. 2002 no. 80), North Commewijne / Maroni (S.B. 2002 no. 85), North Coronie (S. B. 2002 no. 87) and North Saramacca (S. B. 2002 no. 88).
    - The 281,420 ha of Multiple Use Marine Areas (MUMAs) of North Coronie, North Saramacca, North Commewijne-Marowijne, and Bigi Pan include recent drafts of management, monitoring and business plans for sustainable tourism and benefit sharing with local communities. Before 2014 plans for effective and efficient management & monitoring of the area did not exist (although there is presently no funding available to actually implement these plans).

66. The National Institute for Environment and Development of Suriname (NIMOS) leads the REDD+ and Readiness Preparation Proposal (RPP) process for Suriname and is in its preparatory phase as of 2013.

**Proof of concept of EbA mangrove measures for protection of coastal communities.**

67. Given IPCC warming scenarios for the region, recent mangrove conservation initiatives between government, local universities and NGOs have prioritized proof of concept work involving accretion studies and mangrove rehabilitation as a nature based coastal protection solution that could be up-scaled. Although this does not preclude the need for planned urban relocation under sea level rise scenarios it does mitigate sea level rise impacts which are gradual and become more pronounced during strong tide and weather events over time.

68. There is work underway with a number of pilot programs including stabilization engineering and mangrove rehabilitation programs in Guyana and sediment trapping units with Anton de Kom University in Suriname looking to evaluate options to protect and recover viable mangrove settlement banks and clearly present realistic scenarios for coastal development under increased flood risk. These include:

    - Geoengineering proposals to restore suitable mangrove habitat where artificially eroded. These include enhancement of sediment accretion using Sediment Trapping Units (as being evaluated by Anton de Kom University and partners in Suriname), placement of permeable groins perpendicular to the coast in degraded regions placed behind migrating mud banks as they develop and the artificial nourishment of mud by agitation dredging to improve flux of fine sediments to the coast during the inter-bank phases (when no mud banks are passing a region of coast).
    - Pilot works in Guyana include the construction of two detached breakwater structures using geo-tubes at Victor to help "de-water" sediment and mitigate erosion. Brushwood barriers were constructed using iron bamboo at mangrove restoration sites (Buxton, Anna Regina, Walton Hall and Lusignan) to also encourage sedimentation. A rock groyne was constructed at Mon Repos and Cane Garden Leguan to reduce wave energy. A groyne was also constructed at Devonshire Castel using geo-tubes to reduce wave energy and *Spartina* grass planted to stabilize sediment at restoration sites (Guyana GMRP annual report, 2016).
    - In terms of monitoring studies there is some recent work on using sediment macro-invertebrates as bio-indicators for accretion in Mangrove Forest in Annandale, Guyana (Katherine 2012).
    - In the 'Weg naar Zee' region in Suriname, sediment trapping units (or STUs) are being tested to rehabilitate sediment and allow mangroves to recover their function as permeable barriers, this being linked to help re-establish and diversify local livelihoods and economy. Proposals are being submitted to extend ten experimental STUs for proof of concept with a view to upscaling.
    - There have been learning interchanges with other regions such as Indonesia (e.g. Zoological Society of London exchanges on mangrove restoration with Suriname and a recent exchange between Guyana with Ecuador).Topics included spatial planning and set-back lines of mangrove protected green belt, the identification of coastal flood hazard zones, as well as recognizing the need to find realistic alternatives to new urban expansion into the high risk coastal wetlands and mangroves that would otherwise protect coastal populations (particularly north of Paramaribo in Suriname).
    - Other measures include restoration of hydrological connections interrupted by dykes and new coastal roads and the need to determine an appropriate type of mangrove rehabilitation that is scoped to the natural dynamic of the area (Deltares, ICZM Plan scoping report 2009).

**Mangrove habitat threat analysis following recognized international standards.**

69. Consultancies and NGO strategic planning exercises have already started looking at how to best apply available information to integrated coastal zone planning by country and next steps should involve consolidation of those efforts. Those results have yet to be organized, developed where necessary, socialized and presented as inputs as part of a wider coordinated transboundary process. The recommendations available, including both reviews of traditional knowledge and those of national, international experts are important contributions relevant for national mangrove planning and wider learning opportunities across the region.

**Progress in transboundary coordination, information sharing and strategic planning.**

70. In Guyana the National Mangrove Plan instigated in 2010 is now overdue for revisions creating an opportunity to reactivate planning and encourage a wider integrated vision involving a wider set of stakeholders. Guyana does not currently subscribe to the RAMSAR wetlands convention but there are two proposed sites which have gained some traction nationally.

71. Suriname has been a contracting party to the RAMSAR convention since 1985 which implies regular evaluation of its single Coppename Monding Nature Reserve (also a western hemisphere shorebird reserve). This reserve started a process for ICZM and a public awareness plan in 2009. In contrast to Guyana it does not as yet have a National Mangrove Plan. There is however a body of national experts that are already volunteer members of the advisory Mangrove Forum Suriname (MAFOSUR).

72. There are also several encouraging recent works evaluating coastal planning options given prior and ongoing research experience and conservation planning in the region. For example a 2009 expert "Teunissen" report submitted by the Dutch based hydrological research institute Deltares provides an overview of state of knowledge and challenges for planning stages and new efforts to advance Coastal Zone MPA planning, while a recent report supported by (Anthony 2015) reviews state of knowledge concerning the shifting nature of NBS mangrove banks.

73. The EU 11th European Development Fund (EDF) "Integrated Coastal Zone Management" includes performance indicators for the establishment of at least two mangrove 'protected areas" under the Forestry Act. These are being proposed as Forestry Reserves. The Financing Agreement for the 11th EDF has not been officially signed as yet.

74. The CLME+ Strategic Action Plan (or SAP) for the period 2015-2025 is a key output for the first UNDP/GEF CLME Project (2009-2014) relevant to transboundary ICZM for the NBS region. Numerous sister UN agencies, global and regional institutions and organizations, and more than 20 countries from the CLME+ region contributed to the development of the SAP which supports the strategies and actions required to improve the transboundary governance and management of shared living marine resources in the CLME and NBS region. As of May 9th, 2017, the CLME+ SAP had been politically endorsed by a total of 35 Ministers representing 25 countries and 6 overseas territories including Guyana and Suriname.

**Baseline projects:**

| Project Name | Years (Start-End) | Budget (USD) | Donor(s) | Objectives/Brief description of how it is linked to this GEF project |
|---|---|---|---|---|
| The National Mangrove Reforestation Program (NMRP) | 2010-present | TBD / year | NAREI | The NMRP works to establish administrative capacity, promote sustainable management of mangrove, establish a legal framework for mangrove ecosystem management, support research and development of Guyana's mangrove forest, develop effective protection and/or rehabilitation of mangrove ecosystems, increase public awareness and education on mangrove |
| Building with Nature. | 2015-2016 | $125,000 | CI-Suriname, Wetlands International, AdeKU. | The project involves test trials and cost benefit analysis of mangrove green belt and green-grey hybrid solutions for coastal protection in Suriname. |
| Integrated Coastal Zone Management. | EU Cooperation 2014-2020 | 34M EUR indicative for region (ongoing). | European Union. | The EU 11th EDF "Integrated Coastal Zone Management" includes performance indicators for the establishment of at least 2 mangrove 'protected areas" under the Forestry Act. These are being proposed as Forestry Reserves. The Financing Agreement for the 11th EDF has not been officially signed as yet. |
| Setting up a | 2017-2018 | $149,155 | GCCA+/EU | The project aims to collect accurate and up-to- |

| | | | | |
|---|---|---|---|---|
| Mangrove Biodiversity Monitoring System | | | | date information on the extent, the biodiversity and other characteristics of the mangrove forest. This information will be invaluable amongst others to determine the economic value of the mangrove forest. Suriname is developing a multipurpose National Forest Monitoring System (NFMS). Mangrove biodiversity monitoring will be embedded in the existing structures of the NFMS (including the Monitoring, Reporting and Verification (MRV) system for REDD+), building on these structures, and further strengthening them. Accessibility of robust information will be key in further development of relevant policies such as the National Mangrove Strategy. |
| Mangrove rehabilitation project at Weg naar Zee, Suriname, through sediment trapping technique | 2017-2018 | $72,000 | Canada Caribbean Disaster Risk Management Fund (CCDRM) | The main objective of this project is to mitigate coastal erosion (drastically) through application of wave breaking and sediment trapping techniques and the rehabilitation of mangroves. |
| WWF Guianas Marine Spatial Planning Initiative | 2017 -2021 | 1M EUR over 4 years. | EU/ WWF Guianas. | This project works to catalyze enhanced marine spatial planning (MSP) processes which will provide an ecosystem based framework for managing activities in the NBS marine environment. Coordination with help improve consistency in the mapping of transboundary ecosystem services. |

### c) The proposed alternative scenario, with a brief description of the expected outcomes and components of the project.

75. The alternative scenario presents an opportunity to develop and share a shared knowledge base between NBS countries of relevance to improved mangrove conservation. It looks to create a dialogue space to develop future transboundary opportunities and a joint stakeholder commitment to improve management of an the ecologically significant and functional proportion of the NBS regions' mangrove habitat.

76. By enabling informed decision making and constructing technical and coordination space between NBS countries the goal is to facilitate a range of wider global environmental benefits such as protection of diverse natural heritage, provision of services, sequestered (above and below ground) carbon and to strengthen the capacity of the low lying NBS countries to mitigate climate impacts including that of sea level rise as a legacy for future generations.

***The project is organized into a single component (C1) looking to establish a multi-sectoral consensus and knowledge foundation for the development of an Integrated Coastal Zone Management (ICZM) Plan for NBS mangroves.***

77. This involves the generation of necessary baseline knowledge and technical assessments as inputs towards a collaborative vision and coordinated well informed management of North Brazil Shelf (NBS) mangrove systems. Information needs for Guyana and Suriname were prioritized to best facilitate an equitable level of understanding of mangrove systems to that of neighboring NBS-LME countries Brazil (Amapá) and French Guiana.

78. The project also works to establish a transboundary coordination mechanism(s) between the countries of Guyana, Suriname, French Guiana and Brazil (Amapá) towards the improved integrated coastal

management of the extensive, ecologically connected yet vulnerable mangrove habitat of the North Brazil Shelf (NBS) region. This in turn should be substantiated and validated through the improved knowledge base.

79. **OUTCOME 1.1** looks to improve awareness and access to the biophysical, social and economic information most relevant to the conservation and sustainable use of mangroves in Guyana and Suriname through synthesizing results of existing work and undertaking new research where gaps exist. This is the technical foundation for building an NBS Integrated Coastal Management Plan for mangroves, as well as the base-line for future monitoring and evaluation.

80. Following the results of a scoping exercise with government, NGO and CSO stakeholders (held in Paramaribo, Suriname on 15-16th June 2017), parties agreed that in order to achieve an adequate and comparable knowledge base between the four NBS countries (including Brazil (Amapá) and French Guiana) , targeted research was first required to fill knowledge gaps in the countries of Guyana and Suriname and hence best generate and share prioritized information of immediate relevance for national and wider NBS regional planning.

81. Understanding that the level of research, policy framework and conservation setting concerning mangroves differ in some areas (but not all) between the two countries of Guyana and Suriname a series of activities were proposed, each being scoped to the information needs of the two countries for improved mangrove conservation.

82. These include:

    i. Mapping and systematic estimation of current mangrove extent and condition.
    ii. Targeted research on underlying biophysical processes necessary for informed management.
    iii. Dimensioning of the ecosystem goods and services mangroves provide at the local, national and global level.
    iv. A comparable review of relevant policy, tenure rights and potential conservation initiatives between the two countries and in reference to best practice in other regions.
    v. Threat analysis and an IUCN habitat red listing exercise which will use the generated information to help summarize and qualify the current state of mangrove habitat, goods and services in the NBS region relevant to future sustainable development and conservation planning.

**For Guyana and Suriname this will involve the following outputs and indicative activities:**

83. **Output 1.1.1:** Update of national mangrove coverage maps showing the extent of loss since the 1980 baseline.

    1.1.1.a. Recent remotely sensed imagery will be obtained where not already available along with comparable remote, in-situ, ground truthing data and community knowledge to prepare regional mangrove forest cover and change estimates since the early baseline established nationally and by FAO (i.e. 1980-2015).

84. GIS databases of mangrove cover are publically available (USGS Global Mangrove Project, https://lca.usgs.gov/, Giri et al 2011) and provide a source of initial lower resolution mangrove cover data. However, some applications such as achieving higher IPCC Tier inventories, or higher resolution of site specific assessments, will require further data collection. Remote sensing techniques are used to classify land-use types and to track changes in land use over time in mangrove ecosystems. Additional ground-generated field assessments and mapping are often necessary, especially in sparser coastal mangrove environments where accurate remote imaging may be challenging.

85. **Responsible parties:** The update of mangrove condition and extent is undertaken by the Guyana Forestry Commission and NAREI (with support of a national consultant in Guyana) and the Foundation for Forest Management and Production Control (SBB in Dutch) in Suriname.

86. **Output 1.1.2:** By December 2018 ecosystem valuation of main ecosystem services provided by mangroves improved in Guyana and Suriname where this is lacking.

87. Three evaluations will be completed (local, national and global scale as described below) with partners. This should facilitate consistency in approaches, synthesis, use of international standards, prioritization and presentation of information. It is expected that the assessments will draw on both existing information and support ongoing targeted research during the project.

88. ***Indicative activities:***

**1.1.2.a** Evaluate the cultural and economic values mangroves provide to local communities (e.g. comparative assessment of natural, degraded and rehabilitated sites). Include a baseline assessment on the linkages between mangroves, fisheries and tourism to inform development of relevant management policies.

**1.1.2.b** Determine the value of mangroves for national protection and industry (including estimating the cost and feasibility of protecting and generating 'green infrastructure' vs 'gray infrastructure' and hybrid 'green-gray solutions').

**1.1.2.c** Estimate the contribution of national mangrove carbon stores (above and below ground) within the global carbon budget.

89. In order to perform the economic valuation of the mangroves' ecosystem services, the project will adopt the Economics of Ecosystems and Biodiversity (TEEB) methodology. This comprehensive approach determines the value generated by ecosystems to people, including both monetary value and also the non-monetary, aesthetical and ethical benefits that people receive from nature.

90. Local communities identify with a set of values (monetary and non-monetary) that come from a variety of uses such as fishing, the extraction of material (tannins, wood, building materials), the use of recreational areas by locals, and the development of tourism. At the national level, stakeholders identify with values such as the protection of coastal areas against extreme weather events, and the control of erosion of coastline. At the global level, the international community identifies mangrove contribution towards mitigating climate change by sequestrating and storing carbon. The project will explore the three "tiers" of local, national and global EGS contributions through three related studies. Cross-fertilization between the three studies and ensure complementarity and consistency of results for the ICZM planning process (Output 1.2) will be explored.

91. An important application of such information involves integrating mangroves into national climate change mitigation policy or related activities. This requires assessment of carbon stock in these ecosystems and evaluating the potential carbon emissions that would result from their conversion or degradation. An effective assessment process evaluates 1) the past and present distribution of mangrove ecosystems linked to human uses of the area, 2) the current carbon stock within the ecosystem and rate of carbon accrual, and 3) the potential carbon emissions that will result from expected or potential changes to the mangrove ecosystem's landscape. The resulting inventory of carbon stocks in mangroves can be at site, regional and national scales.

92. In a mangrove ecosystem, carbon is stored as aboveground living biomass, aboveground dead biomass, belowground living biomass (such as living root systems), and soil carbon. For accurate carbon inventories in mangrove ecosystems, all of these carbon pools must be included.

93. The project also aims to comply with Intergovernmental Panel on Climate Change (IPCC) standards as guidance for national carbon assessments and inventories in mangroves and other coastal wetlands, including emissions resulting from specific land uses in these ecosystems (Chapter 4, IPCC 2014). Using

the IPCC guidance, mangrove carbon inventories can be assessed at different levels of detail and certainty.

94. The IPCC recommends that countries should aspire for the highest Tier possible for the measurement of key carbon stocks[11]. Best possible practice for countries or sites with limited technical capacity and/or resources is to generate and use site or regional specific data whenever possible and hence achieve the highest tier of carbon inventory possible. Where only limited carbon data is available, site-specific data can often be generalized across a larger area. This also draws on the results of Output 1.1.1 which assesses the extent and condition of mangroves and the types of land use.

95. Generating a carbon inventory using the best available data requires technical understanding of the general patterns of carbon distribution in mangrove ecosystems. The IPCC Wetlands Guidelines and Coastal Blue Carbon Manual (Howard et al 2014) will provide essential guidelines on this process[12.]

96. **Responsible parties:** Studies in Guyana will be undertaken through consultancy in coordination with the University of Guyana (FEES), Department of Fisheries and NAREI. In Suriname the local and national assessments (1.1.2(a-b) will be undertaken by a consultant working with AdKUS, and with the SBB in estimation of carbon stores (1.1.2(c)). The project can benefit from experience gleaned from the international Blue Carbon Initiative.

97. **Output 1.1.3:** By December 2018 biophysical characterization and threat assessments for mangroves for each country where this is lacking.

***Indicative activities:***

**1.1.3.a** Synthesize existing knowledge and undertake targeted research to improve understanding of key regional biophysical processes relevant to management (e.g. regional hydrology, natural sedimentation and mobile mangrove formations).

**1.1.3.b** Determine drivers of mangrove deforestation and current land-use in the coast (using Open Conservation Standards or similar validated approach for national inputs prior to and part of regional ICM end of project workshop 1.2.4.b)

**1.1.3.c** Undertake the globally recognized standard IUCN Ecosystem Red List evaluation to evaluate current condition and main threats posed to mangroves as a means to inform policy requirements required for effective management strategies.

**1.1.3.d** Assess the effectiveness of existing restoration efforts and efficiencies achievable at scale.

98. An understanding of the factors influencing sediment accretion and erosion underpins habitat suitability for mangrove growth, shoreline stabilization and regeneration programs in degraded areas. This output looks to help understand and frame the conservation challenges for the region towards an ICZM process.

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[11] **Tier 1** assessments have the least accuracy and certainty and are based on simplified assumptions using published IPCC default values. These assessments may have large error range of +/- 50% for aboveground pools and +/- 90% for the variable soil carbon pools, but are sufficient if no country or site-specific data are available.
**Tier 2** assessments include some country or site-specific data and hence have increased accuracy and resolution.
**Tier 3** assessments require highly specific data of the carbon stocks in each component ecosystem or land use area, and repeated measurements of key carbon stocks through time to provide estimates of change or flux of carbon into or out of the area.

Please see Giri, C., Ochieng, E., Tieszen, L. L., Zhu, Z., Singh, A., Loveland, T., Masek, J. and Duke, N. (2011), Status and distribution of mangrove forests of the world using earth observation satellite data. Global Ecology and Biogeography, 20: 154–159. doi:10.1111/j.1466-8238.2010.00584.x; Howard, J., Hoyt, S., Isensee, K., Pidgeon, E., Telszewski, M. (eds.) (2014). Coastal Blue Carbon: Methods for assessing carbon stocks and emissions factors in mangroves, tidal salt marshes, and seagrass meadows. Conservation International, Intergovernmental Oceanographic Commission of UNESCO, International Union for Conservation of Nature. Arlington, Virginia, USA.; IPCC 2014, 2013 Supplement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories: Wetlands, Hiraishi, T., Krug, T., Tanabe, K., Srivastava, N., Baasansuren, J., Fukuda, M. and Troxler, T.G. (eds). Published: IPCC, Switzerland.

99. Using a common framework for threat assessments (based on data collated in 1.1.3.a) will help ratify the available information and consolidate next steps with stakeholders. Although there are various toolboxes available, the "Open Standards for the Practice of Conservation"[13] is an approach already commonly used between NGOs and multilateral aid agencies to help advance strategic planning through direct stakeholder participation. It also serves to help construct a consensus vision with stakeholders based around a conceptual framework (theory of change) and can help develop results chains that are measurable steps towards agreed goals (such as zero net NBS mangrove deforestation). This activity supports the structuring of an ICZM process.

100. The project also aims to apply the recently developed IUCN Red List of Ecosystems. This is a global standard to assess the conservation status of ecosystems (please see http://iucnrle.org/ ) where IUCN as Executing Agency have the in-house network and experience to lead such an exercise. Being applicable at local, national, regional and global levels the process is based on a set of rules, or criteria, for performing evidence-based, scientific assessments of the risk of ecosystem collapse, as measured by reductions in geographical distribution or degradation of the key processes and components of ecosystems (in this case the transboundary NBS mangrove habitat).

101. **Responsible parties:** 1.1.3.a would be undertaken by a single consultant for both countries to provide a consistent approach given the regional scope of the processes involved. The threat analysis activities 1.1.3 b, c, d would be undertaken by a consultant who will consult with IUCN-Brazil, CI and stakeholder partners: NAREI, EPA, ROGB, AdeKUS and the SBB. IUCN with in-house expertise will lead the IUCN Ecosystem Red List evaluation.

102. **Output 1.1.4.** By July 2018 policy analyses for each country that identify spatial management, use regulations and tenure arrangements relating to mangroves.

103. **Indicative activities:**

**1.1.4 a.** Undertake a comprehensive policy analysis of all legal instruments relating to mangrove conservation and sustainable use as a means to identify policy gaps and opportunities for improvements that would reduce threats and improve mangrove condition and the ecosystem services they provide.

**1.1.4.b.** Utilize improved knowledge of mangroves in Guyana and Suriname to inform relevant polices and plans for their management in a manner that is informed by and consistent with the developing NBS regional initiative.

104. **Responsible parties:** Two national studies using comparable methods for an NBS regional synthesis will be completed. This will be coordinated with the Guyana Fisheries Department and NAREI/Mangrove Department and ROGB in Suriname.

105. **Output 1.1.5.** By July 2018 mapping and other relevant outputs from the project shared with the larger regional process of CLME+.

106. ***Indicative activities:***

**1.1.5.a.** Develop an online platform to communicate and share information on regional mangrove cover, location and movement of mud banks and other output.

107. **Responsible parties:** CI and IUCN in coordination with UNEP (CLME+ project), NAREI (Guyana) and SBB (Suriname).

108. **OUTCOME 1.2** aims to reach a broad-based multi-sectoral consensus regarding how to manage Guyana, Suriname and Brazil's mangrove in a coordinated fashion. This is framed with the goal of achieving

[13] Information regarding the common standards for conservation planning and evaluation can be found at http://cmp-openstandards.org/ .

progress on six Aichi Targets, UN Sustainable Development Goals (SDGs) and a zero net mangrove loss rate by 2030.

109. The alternative scenario involves an inclusive stakeholder process that supports a multi-disciplinary information base and furthermore helps instigate a regional coordination mechanism beyond the one year project that will work towards multi-sectoral consensus for wider integrated coastal management within and between countries.

110. The project will implement elements of the CLME+ Strategic Action Plan pertaining to the dynamic mangrove systems that most directly underpin human wellbeing in the North Brazil Shelf LME. It will achieve this by building upon and supporting the body of ongoing initiatives and actions underway by NBS country governments and NBS based CSOs and NGOs**.**

111. The project furthermore will, with government, NGO and CSO counterparts, instigate formative steps towards an inclusive mechanism for information sharing and regional coordination **(Outcome 1.2**). This will explore challenges and options for a future transboundary Integrated Coastal Management (ICM) plan (by 2021) appropriate to the joint needs and sustainable development of mangrove systems in the NBS countries of Guyana Suriname, Brazil (Amapá) and French Guiana.

112. Hence, activities proposed between the two countries of Guyana and Suriname under Outcome 1.1 are designed as catalyst and prerequisite for further effective national planning and steps towards improved regional planning and coordination in the wider region under Outcome 1.2. National coordination is a fundamental pre-condition for effective regional coordination.

113. The approach is intended as collaborative, inclusive and participatory, grounded in relevant research prioritizing research and measures that allow regular appraisals of forest change and estimation of tangible benefits to coastal societies. It is expected to help catalyze cross learning, development of coherent policies and coordinated actions that draw upon positive experiences of participating organizations and from other regions.

114. **Output 1.2.1:** By Apr. 2018 NBS regional mangrove coordination body (as considered in the CLME+ SAP) is created and operational.

115. This involves support and coordination with national technical mangrove group(s) and determine the most appropriate platform(s) for the periodic review of state of current knowledge, knowledge sharing and research/ conservation prioritization exercises. It also facilitates stakeholder participation and the creation of a Regional Mangrove Action Committee with NBS-LME partners.

116. ***Indicative activities:***

**1.2.1a.** National technical coordination: Establish (or reconstitute) a working group that synthesizes the information generated by this and other projects to provide rigorous scientific advice to decision-makers and stakeholders.

**1.2.1b.** Multi-sectoral coordination: Establish (or reconstitute) a multi-sectoral forum convened by the relevant national authority(ies) and that includes the stakeholders that are required to adopt and implement effective mangrove conservation and management.

**1.2.1.c.** Convene an inception meeting to establish a Regional Mangrove Action Committee in coordination with relevant regional NBS initiatives such as the CLME+ project.

117. **Responsible parties:** A task force formed between IUCN and CI (also with invitation to UNEP for the CLME+ project) will coordinate with NCPs, NAREI (Guyana) and the Cabinet of the President (KabPres) (Suriname) to identify national and regional mangrove committees.

118. **Output 1.2.2 :** By Mar. 2018 French Guyana and Brazil become participating members in the NBS regional mangrove coordination body.

119. The intention of the project is to facilitate a transboundary management for ecologically connected coastal resources, and hence will involve project partner Government of Brazil (Amapá) and French Guiana. This activity builds on contacts and dialogue between ongoing IUCN-Brazil, CI, UNEP CLME+ (sub-regional NBS project) initiatives.

120. ***Indicative activities:***

**1.2.2.a.** Establish and implement an appropriate process to engage French Guiana and Brazil participation as part of the NBS regional mangrove coordinating body.

121. **Responsible parties:** A task force formed between IUCN-Sur/ Brazil, CI, NAREI (Guyana) and KabPres (Suriname) will engage government counterparts in the neighboring NBS countries of French Guiana and Brazil.

122. **Output 1.2.3:** By May 2018, the NBS regional mangrove coordination body agrees on internal operational arrangements, a work-plan and a timeline to produce the information base required for generating a framework for how to generate a three-country ICZM plan for mangroves and share the mapping and other relevant outputs with complementary programs such as the CLME+ regional process.

123. With ratified participation of countries in the Regional Mangrove Action Committee, the next planning steps involve presentation, discussion and agreement on project research and synthesis activities (Outcome 1.1) between the partner countries. This involves developing working guidelines for the mangrove committee, identifying key collaborations, commitments to timely execution of activities and knowledge sharing (Output 1.1.5) to support appropriation of an NBS regional coastal planning initiative by the member NBS-LME countries.

124. **Indicative activities:**

**1.2.3.a.** Convene and undertake a planning workshop (as part of project inception) to establish arrangements, a work-plan and a timeline to produce the information base required.

125. **Responsible parties:** IUCN and CI will facilitate the inception workshop and planning exercise in coordination with NAREI (Guyana) and KabPres.

126. **Output 1.2.4:** By Dec. 2018, a framework charting the scope, content, process and institutional arrangements required for creating a transboundary Integrated Coastal Management (ICM) plan by 2021 developed and approved by the 3 countries (ministerial level).

127. It will have established necessary formative coordination steps and seeks NBS partner endorsement as the first transboundary sustainable development initiative for the NBS-LME region focused on sustainable coastal development, improved resilience, food security and flood risk reduction to coastal communities across the mangrove dominated coastline.

**1.2.4.a.** Undertake a preliminary scoping exercise to establish the enabling conditions, challenges and alternatives for a multi-sectoral and multi-national framework as inputs for a synthesis and planning workshop in Q1-Q2 2018.

**1.2.4.b.** Convene and host a synthesis and planning workshop to determine institutional commitments and an approved framework towards creation of a transboundary Integrated Water and Coastal Management Plan by 2021.

128. The intention is to support construction of a multi-stakeholder process that forms the basis and contributes towards national mangrove conservation planning, and that facilitates improved Integrated Coastal Zone Management between the NBS countries. The resulting road-map should be underpinned by the synthesis of existing understanding of NBS mangrove systems and would include additional prioritized information for management generated during the project (Outcome 1.1).

129. **Responsible parties:** A consultancy will be launched for the ICZM framework scoping exercise in coordination with IUCN, NAREI (Guyana) and KabPres (Suriname). The synthesis and planning workshop at the end of the project will review and consolidate a shared plan and framework for ICZM development.

### d) Incremental or additional cost reasoning and expected contributions from the baseline, the GEFTF, LDCF/SCCF and co-financing.

130. The countries of Guyana and Suriname were selected given that there are gaps in existing understanding of mangrove systems which should be addressed in order to achieve a comprehensive and comparable synthesis with the level of research developments from neighboring countries Brazil and French Guiana. Both Guyana and Suriname are eligible geographies under the GEF solicitation and in a position in short term to greatly benefit from the catalyst nature and incentive for international coordination, support from experiences in Brazil and French Guiana and the wider IW-Learn community of practice offered under the GEF-IW framework and through project partners IUCN and Conservation International.

131. By helping to establish a common regional coastal Ecosystem Based Management (EBM) framework across NBS mangrove systems the 1-step medium sized project will help coordinate collaboration between government, CSO and NGO partners in the four countries of Guyana, Suriname, French Guiana and Northern Brazil/ Amapá. Regional coordination, focused diagnostics to find solutions and cooperative networking when coupled with development of national mangrove agendas and coastal planning potentially improves the ability of countries to meet individual commitments to global sustainable development conventions including the Convention on Biological Diversity (CBD) and United Nations Framework Convention on Climate Change (UNFCCC) goals.

132. The project also works to further steps outlined in the CLME+ Strategic Action Plan and importantly coincides with the United Nations Environment Program (UNEP) led CLME+ sub-regional project on the North Brazil Shelf Large Marine Ecosystem under submission for an October 2017 inception. By being additive and complementary to that large ongoing GEF program, the coordination and work proposed helps consolidate knowledge and develop a shared actionable NBS agenda between a wider range of stakeholders.

133. Developing a knowledge based Community of Practice (CoP) spanning NBS boundaries supports economy of investment and effort and builds on the base line investment to date in the region. An open dialogue space at national and regional technical levels will both help advance an agenda for the most appropriate actions applicable for each country. A regional process also improves visibility and general awareness when applying knowledge towards well informed policy decisions, helping to organize and encourage national agendas that support progressive and incremental research / pilot field projects.

134. A CoP will also help retain institutional memory, encourages productive exchange of ideas, joint development of solutions and help avoid duplicated effort.

135. The NBS countries as low elevation geographies are recognized as being candidates for nature based green (mangrove belt) and grey hybrid solutions that address the significant risk posed to essentially coastal communities from climate related sea level rise and increased flooding. Given that urgency and a number of ongoing and prior investments to develop proof of concept the two countries are essentially on the front line for coastal engineering and management solutions that have direct practical relevance for other parts of the world at risk from coastal flooding.

136. The two project countries harbor a combination of degraded and still pristine extensions of ecologically important mangrove habitat that in most instances do not yet fall under protected area designations being subject to extractive practices and unplanned future coastal developments. A relatively modest investment to help proactively improve coastal planning at this time is particularly cost-effective given that retroactive attempts to later rephrase established policy, influence and mitigate unsustainable practice in

societies and industry is far more challenging once well established and has arguably a much lower likelihood of success.

### e) Global Environmental Benefits (GEFTF) and/or Adaptation Benefits (LDCF/SCCF).

137. Support to national mangrove planning through synthesis of existing information, identifying and resolving key knowledge gaps and facilitating a regional mangrove peer network and road map towards a regional ICM plan work towards a number of expected GEBs. These are summarized below:

| Baseline | Alternative | GEBs |
|---|---|---|
| There are active mangrove research groups in both countries operating with limited resources and a Mangrove Action Plan since 2010 in Guyana.<br>NBS countries have as yet limited formal coordination or planning of actions that aim to jointly ensure healthy transboundary ecological processes that are relevant to needs of stakeholders in their and neighboring countries.<br>The Strategic Action Plan developed for the C-LME countries and NBS region under the CLME+ project is an important step towards improved management, but it has yet to be operationalized for the NBS region. | By supporting implementation of the existing and approved CLME+ strategic action plan agreement already subscribed to by the NBS country governments, the project furthers wider coordination and opportunities for benefit sharing, targeted research and systematic regional coastal planning.<br>This should result in a greater degree of coordination facilitated by project partners between stakeholders including coastal communities and government. It is expected that this would also optimize the use of existing resources, explore new joint funding avenues and generate credibility and stewardship for coastal management for the region. By generating a roadmap or action plan between countries joint planning measures and standards for evaluation are likely to be more cost-effective planning and result in improved coastal sustainability measures for the region. | **Multi-state and multi-stakeholder cooperation** helps to reduce environmental threats through knowledge sharing, resource sharing, wider networking and transboundary initiatives that recognize ecological connectivity and the causal biophysical and socio-ecological relationships between resource use and mangrove health across national borders. |
| The region lacks a common technical body to help coordinate and encourage knowledge sharing. There are no recognized mechanisms in place to evaluate, and where successful upscale pilot initiatives developed under the specific challenges recognized for NBS coastal management. | The project will generate a comparative body of knowledge necessary in Guyana and Suriname to improve in-country capacity and national mangrove conservation agendas across the wider NBS region (including a review of existing knowledge based in French Guiana and North Brazil).<br>A common regional framework between the NBS countries generates a number of benefits for on-the-ground mangrove conservation including economy of conservation effort, a more productive learning environment, capacity building and improved knowledge based decision making. | **Scaling of benefits** helps facilitate, validate and establish minimum standards and best practices that conform to the international biodiversity and sustainable development conventions adopted by each country. It also provides opportunities to prioritize and leverage counterpart that helps ensure the longevity of mangrove conservation incentives in the region. |
| Given understanding of mangroves in other region and the high levels of outflow from the Amazon delta it is reasonable to assume that NBS | Mangrove conservation under improved ICM across the region helps ensure that mangroves provide a “protective shield” to filter contaminants in the outflow from land based sources until more effective | **Reduced pollution load** in international waters from land based sources. Protecting mangroves helps maintain their ability to filter and sequester |

| Baseline | Alternative | GEBs |
|---|---|---|
| mangroves play an important filtration role (trapping and processing nutrients, heavy metals, sediments and other pollutants) hence reducing the pollutant load (e.g. Ewel et al 1998, Wang et al 2010). | upstream controls for pollution are in effect.<br>Additionally, the project when reviewing regional and national policy will investigate provisions for accountability of source-to-stream pollutant impacts on other coastal ecosystems. Well managed mangrove areas receive and trap contaminants from upstream terrestrial sources and coastal waters, removing these materials from the water hence reducing the pollutant load to other offshore marine habitats. | harmful elements flowing down from mining and agriculture activities via the considerable Guiana and Amazon basin drainage. |
| Existing mangroves support important biodiversity and facilitate a range of productive uses and economic revenue for coastal communities (e.g. small-scale fisheries, nature based tourism etc.). These are presently undertaken within small communities but already show signs of unsustainable use.<br>Beyond artisanal uses for honey production or local estuarine fisheries, it is very likely that nearshore and offshore fisheries have important lifecycle stages or feeding dependencies linked to coastal mangroves and their productivity (e.g. an estimated 80% of global fish catches are estimated to be directly or indirectly dependent on mangroves (Ellison, 2008)). | An improved awareness and understanding of the magnitude of ecosystem goods and services provided by mangroves to coastal societies in the project areas leads to advocacy for sustainable development initiatives and informed decision making.<br>By increasing conservation of mangroves, the project will have immediate benefit for these ecosystem goods and services, including the improved protection of globally relevant biodiversity in support of achieving Aichi targets, retention of ecologically important spaces and processes (such as habitat patterning important for migratory species) and the carbon sequestration and storage capacity which reduces global warming. Carbon sequestration and storage estimates for mangroves show that mangroves are very effective sinks retaining up to 5 times more carbon in their trees, soil and root systems than other forest types. Restoring these systems and limiting their degradation prevents loss of carbon sequestration and avoids the significant emission of stored carbon into the atmosphere and ocean. Reduced carbon emissions help mitigate climate change impacts. | **Restored and sustained coastal and marine ecosystems goods and services.**<br>Mangroves are globally recognized for their importance in stabilizing coasts against erosion, mediating storm impacts & flooding, maintaining coastal water quality, supporting coastal fisheries, providing biodiversity, and sequester and store significant amounts of carbon. If managed sustainably, mangroves can also naturally adjust to sea level.<br>By developing and sharing scalable EbA tools for the NBS region that build resilience and adaptive capacity for coastal communities there are transferable lessons to help improve climate change preparedness globally. |
| Suriname and Guyana rank second and fifth globally in terms of population living in low-elevation coastal zones(LECZ) at risk from sea level rise (SLR) (McGranahan, 2007).<br>Current projections for sea level rise suggest severe risk to coastal societies and their associated ecosystems including mangrove forests and the large | The project by supporting and accelerating actions for mangrove protection and conservation will help secure mangroves protective function as a cost-effective alternative or complement to traditional and costly concrete dyke protective measures.<br>The ecosystem Based Adaptation (EbA) role of mangroves that help improve societal resilience to climate disturbance (in this case sea level rise) is greatly facilitated by coordinated actions that | **Reduced vulnerability to climate variability through multi-state cooperation:**<br>The role of mangroves in reducing vulnerability to climate variability and other climate-related risks is well established. Along coasts globally they provide coastal protection against storms, reduce coastal erosion and build ecosystem resilience for fisheries and |

| Baseline | Alternative | GEBs |
|---|---|---|
| expanses of low lying arable land drained in recent history. | accelerate application of preventative and restorative measures to mitigate climate impacts in the mid-long term.<br>Furthermore, the project supports an integrated management along the coastal fringe that includes recognizing source to stream processes as part of the defining regime for viable mangrove habitat. | biodiversity critical for livelihoods (Alongi 2007, Barbier 2011). |

## f) Innovation, sustainability and potential for scaling up.

138. The project is based around an Ecosystem Based Adaptation (EBA) approach to help mitigate climate risk to coastal societies by protecting mangrove green belt as "green defenses" with the many services they provide to people. In this sense mangrove conservation is something of a testing ground with much potential, being a tangible way to bring nature based solutions to bear on coastal development issues, but still with much background work needed to raise awareness, understanding and coordinated action. Their condition (extent and health) affects not only local communities and economies, but also impacts global carbon emissions. This is in part given their great sequestration ability (largely replaced by carbon emitting vs. carbon sink activities) and that stored carbon is released when lost, not only above ground but also importantly below ground once sediment is destabilized.

139. Much of the research work underway in the NBS region to understand the hydrology and sediment dynamics influencing the shifting mud banks that dominate the coastal system is also innovative, in many senses quite particular to the needs of the region but with important applications beyond the region. In this sense the knowledge sharing and pilot work supported has wider applications.

140. The threat analysis considered in the project as part of the IUCN ecosystem red listing exercise will also be an opportunity to advance discussion on regional or national policy and management that addresses a full suite of pressures that has resulted in mangrove deforestation and loss including integrated water management typically not well integrated with coastal zone management.

141. This project also will take place within the framework of a region where existing national initiatives have contributed within the last decade to set up enabling conditions that help ensure success of new conservation initiatives. Despite challenges, governments of the region are generally increasingly willing and committed to support conservation efforts recognizing to some extent the link between healthy mangrove habitat and human well-being.

142. Longer term institutionalized knowledge sharing will be developed with the support of the CLME+project (sub-regional NBS project) to draw together the project outputs and learning experiences between in-country activities as well as in IUCN and CI conservation forums (including the new Global Mangrove Alliance partnership between CI, TNC, WWF and IUCN). This work will explore sharing and hosting of resources and links through government OFPs, and other NGO mangrove support networks in the region.

143. The development of a framework to develop a transboundary Integrated Coastal Zone Management (ICZM) plan by 2021 as an explicit outcome is the means by which the one-year Medium Sized Project investment aims to be transformative, leverage new investments and additive to the baseline work discussed in the region.

144. A shared and adaptive ICZM framework sustained by international commitment, framed by a technical process (a regional think-tank) and facilitated by knowledge sharing can contribute towards innovation, sustainability, upscaling and innovation in tangible and practical ways. Inter-government and inter-agency coordination can encourage complementary national agendas and investments for shared and ecologically

linked resources (such as convene other complementary national and multi-lateral investments for the NBS region). Structured planning and evaluation based around technical discussion spaces can more productively integrate NGO, CSO and academia contributions as well as orient regional and national investments for national planning towards improved sustainability policy and practice.

2. *Child Project?* If this is a child project under a program, describe how the components contribute to the overall program impact.
**N/A**

3. *Stakeholders.* Will project design include the participation of relevant stakeholders from civil society organizations (yes X /no☐) and indigenous peoples (yes X /no☐)? If yes, elaborate on how the key stakeholders engagement is incorporated in the preparation and implementation of the project.

| Stakeholder | Interests in the Project | Stakeholder Influence in the Project | Project Effect(s) on Stakeholder |
|---|---|---|---|
| Government of Guyana): National Agricultural Research and Extension Institute (NAREI). | The former Guyana Mangrove Restoration Project (GMRP) is now a Mangrove Unit based and financed in NAREI and principal technical wetlands agency for GoG. | Guyana authorities responsible for mangrove replantation and education programs and developments in shore protection from storm surges and erosion. | Support for mangrove restoration practice, research and education at the national scale in Guyana. Involvement in all regional networking and planning discussions. |
| Guyana Forestry Commission (GFC). | National sustainable forestry. | Forestry management including coastal forests. | Inputs towards EGS valuation and Integrated Coastal Zone Management. |
| Department of Fisheries (DoF – Guyana) | National sustainable fisheries. | Fisheries management as relevant to mangrove health and coverage. | Inputs towards EGS valuation and Integrated Coastal Zone Management. |
| Cabinet of the President (KabPres) | Oversight and development of national participation in regional initiatives. | Responsible for national policy and development agenda. | National representation in regional coordination and ICZM developments. |
| **Government of Suriname (GoS):**<br><br>Nature Conservation Division of the Suriname Forest Service.<br>(Min. of ROGB in Dutch).<br>Department of Fisheries in the Ministry of Agriculture, Animal Husbandry and Fisheries.<br><br>Maritime Authority Suriname | Principal technical counterparts for GoS for the project. Through the ICM planning process, lessons learnt and benefits can be multiplied beyond the scope of the original project | Suriname national environmental authorities responsible for the Suriname Coastal Protected Area Management Program and resource management.<br>. | Support for mangrove conservation planning, regional networking and synthesis of baseline knowledge. |
| Foundation for Forest Management and Production | Sustainable forestry and | Forestry management | Inputs towards EGS valuation and Integrated Coastal Zone |

| Stakeholder | Interests in the Project | Stakeholder Influence in the Project | Project Effect(s) on Stakeholder |
|---|---|---|---|
| Control (known as SBB in Dutch) | rational resource use. | including coastal forests. | Management. |
| **Local communities.**<br><br>(Includes community groups such as the Victoria Guyana Village Mangrove Action Committee) | Principal resource users in the coastal zone and interested community groups. | Stakeholder inputs are key to the ICZM planning process and the inclusion of traditional knowledge and needs regarding the mangrove dynamic in the region. | Beneficiaries of mid-long term coastal management outcomes. |
| Private sector (fishers, tourism developers, upstream industry). | Sustainable production in the NBS region. | Representation in ICZM solutions for the region. | Sustainable outcomes for local industry. |
| NBS country research institutions and universities and international academic community. | Local mangrove researchers (in particular those based in University of Guyana, Anton de Kom University, University of Suriname) and international experts will make key technical contributions to the project. This also includes links to regional research agencies including FURG (Brazil) and Brazil Federal & State Universities (Amapá) and research entities in French Guiana. | Researchers provide the technical reference and advisory behind ICZM and mangrove conservation planning steps that could be implemented for the region. There are important existing research committees such as the Mangrove Forum in Suriname. | Will provide an opportunity for networking and improved research opportunities as well as synthesis in fields of interest relevant to mangrove conservation and applied actions based on the information base in the region. |
| **NGOs**<br>WWF-Guianas<br>Wetlands International<br>Suriname Radio and Television Foundation (SORTS)<br>Green Heritage Fund Suriname (GHFS).<br>Guyana Marine Conservation Society (GMCS) | WWF-Guianas has a long-standing program in the Guianas region and is a partner for transboundary mapping of ecosystem services and ICZM development for the region.<br>Wetlands International has expertise between global programs looking for "building with nature" coastal defense options and conservation incentives in wetland communities in collaboration with AdeKUS and CI in Suriname.<br>SORTS is a local | Complementary actions ensure consistency in transboundary marine spatial planning, development of new NBS Protected Areas, awareness building for conservation measures and nature based solutions for coastal protection. | Synergies between complementary projects provide opportunity for collaboration, coordinated efforts and a multi-actor agenda to better address the various challenges behind achieving NBS sustainable development goals. |

| Stakeholder | Interests in the Project | Stakeholder Influence in the Project | Project Effect(s) on Stakeholder |
|---|---|---|---|
| | Suriname NGO working in awareness for mangrove conservation with institutions and communities.<br>GHFS / GMCS work in local wildlife conservation and research. | | |
| **Multilateral and bilateral development programs** (UNDP, UNEP, US-AID, EU-11th EDF) | UNDP - is leading the Global Climate Change Alliance + (GCCA+) project in the NBS.<br>UNDP/ UNEP – leads the NBS GEF-CLME+ based sub-project.<br>US-AID – is supporting Caribbean Climate Adaptation Project work in the region in 2018. | These projects are counterpart to country activities and complementary to future ICZM and the improved climate preparedness of the NBS region. | Complementary actions should improve the effectiveness of individual initiatives through coordination and contributions towards under a joint ICZM transboundary planning process. |
| **Indigenous Peoples communities.** | 13 IP communities live adjacent to mangrove areas in the two project countries. | Mangrove resources users. | IP communities as with local communities involved in knowledge review, threat assessment, EGS evaluation and any future ICZM planning. |

| Indigenous or Traditional Peoples | Engagement in the Project |
|---|---|
| **Guyana:**<br>There are 11 Amerindian communities that adjoin or are within the Shell Beach Protected Area.<br><br>**Suriname:**<br>The indigenous peoples community of Kalebaskreek lies in the estuary zone of the Coppename monding (district of Sarammaca: Ramsar site: 304) which is an important mangrove area.<br><br>The Indigenous Peoples community of Galibi (Distr. Marowijne) also live in the mangrove system along the Marowijne estuary. | Coastal Indigenous people are closely associated with mangrove and other coastal ecosystems in large part adjacent to existing protected areas in the two countries of Suriname and Guyana and as such are an important inclusion in both base-line risk assessments as well as due process and consideration for any future ICZM planning.<br><br>For the purposes of a one-year project the evaluation of EGS and threat assessment will involve an appraisal of IP community roles and uses (including gender roles) in the coastal zone in as much as is possible given access to existing information.<br><br>Possibilities for any additional consultations will be evaluated with a safeguards expert if appropriate given that an FPIC or analogous process for consultation with IP communities in the two countries has yet to be clarified. The project recommends that where feasible, IP representation be included in the ICZM planning process in coordination with national leads. An IP engagement assessment will be included in the start-up workshop between stakeholders with a view to ensuring appropriate consultation and participation as an ICZM roadmap develops. |

4. *Gender Equality and Women's Empowerment.* Are gender equality and women's empowerment taken into account (yes X /no☐)? If yes, elaborate how it will be mainstreamed into project implementation and monitoring, taking into account the differences, needs, roles and priorities of women and men.

145. Work with communities will consider inclusivity, gender aspects and access rights. In the case of Indigenous Peoples (Kalebaskreek, Suriname; Amerindian, Guyana) appropriate consultation measures will be taken following CI and in-country protocols that ensure respect of traditional rights and cultures.

146. The project partners IUCN and CI aim for inclusive participation and will not discriminate between men, women or age groups in the provision or availability of project results which will go into the public domain and/or participation in management/decision-making across the project geography.

147. CI field teams in Guyana and Suriname have also received training in rights based management, which includes gender dimensions, this approach incorporates measures such as household surveys and single gender focus groups (and facilitation) to encourage equitable gender participation in project events as part of the gender mainstreaming strategy for the project.

148. The project will include gender disaggregated data during the base-line assessment exercises where possible and will provide an opportunity to explore any possible positive/negative associations on men and women and their roles in mangrove associated communities of relevance to future mangrove conservation planning.

5. *Benefits.* Describe the socioeconomic benefits to be delivered by the project at the national and local levels. Do any of these benefits support the achievement of global environment benefits (GEF Trust Fund) and/or adaptation to climate change?

149. Human well-being in the coastal tropics is closely linked to the fate of mangrove and coastal wetlands. In the case of the NBS region coastal communities make up 80-90% of the total population: 12k in Amapá; 225k F. Guiana; 500k Suriname, 693k Guyana and hence are living in the intervention geography of the project and subject to the benefits that healthy mangroves directly and indirectly provide to people. These include improved coastal defenses, health, tourism and fisheries food security. As discussed, the role of mangrove breakwater is particularly important for a region at great risk from flooding and sea level rise.

150. Development of a common knowledge base behind the planning steps for ICZM also works towards improving awareness of the role of mangroves to coastal communities and the stewardship needed to safeguard a range of benefits for coastal societies.

151. Work to raise understanding of key sustainability concepts and the particular shifting dynamic of NBS mangrove banks is an investment in developing a more informed popular culture that supports sustainable practice. In the mid-long term community based and endorsed conservation actions (such as the mangrove concession system in Ecuador) can be more effective than traditional top down governance measures that also depend on compliance (and often do not have the resources for effective enforcement over such large areas). Furthermore, the ICZM process is designed to increase the climate change resilience and adaptive capacity of communities along the NBS-LME coastline through protection from erosion and flooding and ensuring food security from mangrove-associated fisheries.

152. Transboundary coordination and the opportunities it affords will support future national and NBS strategic action plan(s) that address national UNFCCC and CBD commitments through net zero mangrove deforestation and the conservation of critical climate and productive services provided by NBS mangroves to its coastal, national and global communities. Hence there are a number of expected contributions to sustainable development goals (SDGs) throughout the project:

- SDG #1 on poverty reduction as mangroves provide multiple valuable ecosystem services on which jobs/income are based and that reduce financial loss through coastal protection.

- SDG #2 on hunger reduction as mangroves underpin productive food fisheries.
- SDG #3 on health and wellbeing and SDG #6 on clean water and sanitation as mangroves naturally remediate polluted waters that cause sickness.
- SDG #11 on sustainable cities as mangroves provide natural green infrastructure to provide coastal defense in place of more expensive and less effective conventional gray infrastructure often used in efforts to protect urban areas.
- SDG #13 on climate action as mangroves are one of the ecosystems that naturally stores the greatest carbon stocks per unit area.
- SDG #14 on Oceans as mangrove health is central to healthy productive oceans given their role in pollution remediation, land stability and as nursery grounds for inshore and pelagic species.

153. Aichi Targets to which this project contributes include:

- Target #5: Rate of loss of natural habitats (mangroves) are halved;
- Target #6: Adoption of ecosystem based approaches and that all fisheries are harvested sustainably.
- Target #8: Pollution has been brought to levels not detrimental to ecosystem function and biodiversity.
- Target #11: Ten per cent of coastal and marine areas are conserved through effectively and equitably managed, ecologically representative and well-connected systems of marine protected areas (MPAs) and other effective area-based conservation measures.
- Target #12: Extinction of threatened species prevented.
- Target #14: Ecosystems that provide essential services, contribute to livelihoods and well- being, are restored and safeguarded, taking into account the needs of women, indigenous and local communities, and the poor and vulnerable.

6. *Risks.* Indicate risks, including climate change, potential social and environmental future risks that might prevent the project objectives from being achieved, and if possible, propose measures that address these risks:

154. Key project risks and mitigation measures are summarized below:

| Project Outcome | Risks | Rating (High, Substantial, Modest, Low) | Risk Mitigation Measures |
|---|---|---|---|
| **<u>Outcome 1.1:</u>** The biophysical, social and economic information most relevant to the conservation and sustainable use of mangroves in Guyana and Suriname is obtained from synthesizing results of existing work and undertaking new research where gaps exist as the technical foundation for building an NBS | A one-year project limits results from new research relevant to a coastal planning exercise.<br><br>Social impacts are considered minimal.<br><br>Climate conditions can affect data collection and application. | Low (L).<br><br>[There is a probability of up to 25% that assumptions may fail to hold or materialize, and/ or the project may face only modest risks] | The project draws on a body of information that already exists to underpin the project and through gap analysis complements that baseline investment with targeted research. Where research is ongoing the creation of a technical mangrove coordination body encourages continuity and periodic updates for the purposes of application in ICZM by 2021.<br><br>Information sharing aims to provide transparent and relevant information to stakeholders. |

| | | | |
|---|---|---|---|
| Integrated Coastal Management Plan for mangroves. | | | Climate variability is an opportunity to characterize biophysical conditions. Analysis will involve multiyear data. |
| **Outcome 1.2:** Broad-based multi-sectoral consensus is reached regarding how to manage Guyana, Suriname and Brazil's mangrove in a coordinated fashion and with the goal of achieving progress on six Aichi Targets , UN Sustainable Development Goals (SDGs) and a zero net loss rate by 2030 and contributing to the achievement of the relevant SDGs and Aichi Targets. | Stakeholder involvement (including indigenous people) is not representative during the ICZM planning process.<br><br>Multi-sectoral consensus for future planning measures may not be achievable in the short term.<br><br>Government agencies may not be in conditions to participate fully in the planning process. | Modest (M).<br><br>[There is a probability of between 26% and 50% that assumptions may fail to hold or materialize, and/ or the project may face only modest risks]. | Proactive convening and reasonable disclosure time-frames for project events. Identification of key sector representatives will also help encourage representation. The PMU will monitor engagement each quarter and directly suggest corrective measures if warranted with government partners and the ICZM planning task-force.<br><br>Although there are no guarantees for collaboration between countries and agencies, the project will provide an opportunity to develop dialogue as the cornerstone for a shared agenda. The scoping exercise for the ICZM process should also include clear visualization of benefits based around improved well-being for coastal societies.<br><br>The SAP developed under the CLME+ project as agreed by member countries also provides a regional framework, and a wider institutional support base that lends continuity to a 1-year MSP process. The SAP represents an existing country level commitment to improved ICZM. |

7. *Cost Effectiveness*. Explain how cost-effectiveness is reflected in the project design:

155. In looking to resolve key knowledge gaps for mangrove conservation in Guyana and Suriname the project will support comparable research methods, synthesis and knowledge sharing for a wider and improved transboundary management. This implies a certain economy of research investment, both in investigation and application costs and potentially a richer research environment through interchanges of information, improved data exchange and collaboration.

156. Although methodological differences exist between research endeavors, there is space for binational or multinational synthesis that is cost effective and can provide an enriching learning experience given the connectivity, analogies (and also contrasts) in socio-ecological settings (all subject to a unifying connectivity across the Guianas fringe NBS system). There is much potential for cross-learning and information sharing to improve economy of research effort in the region.

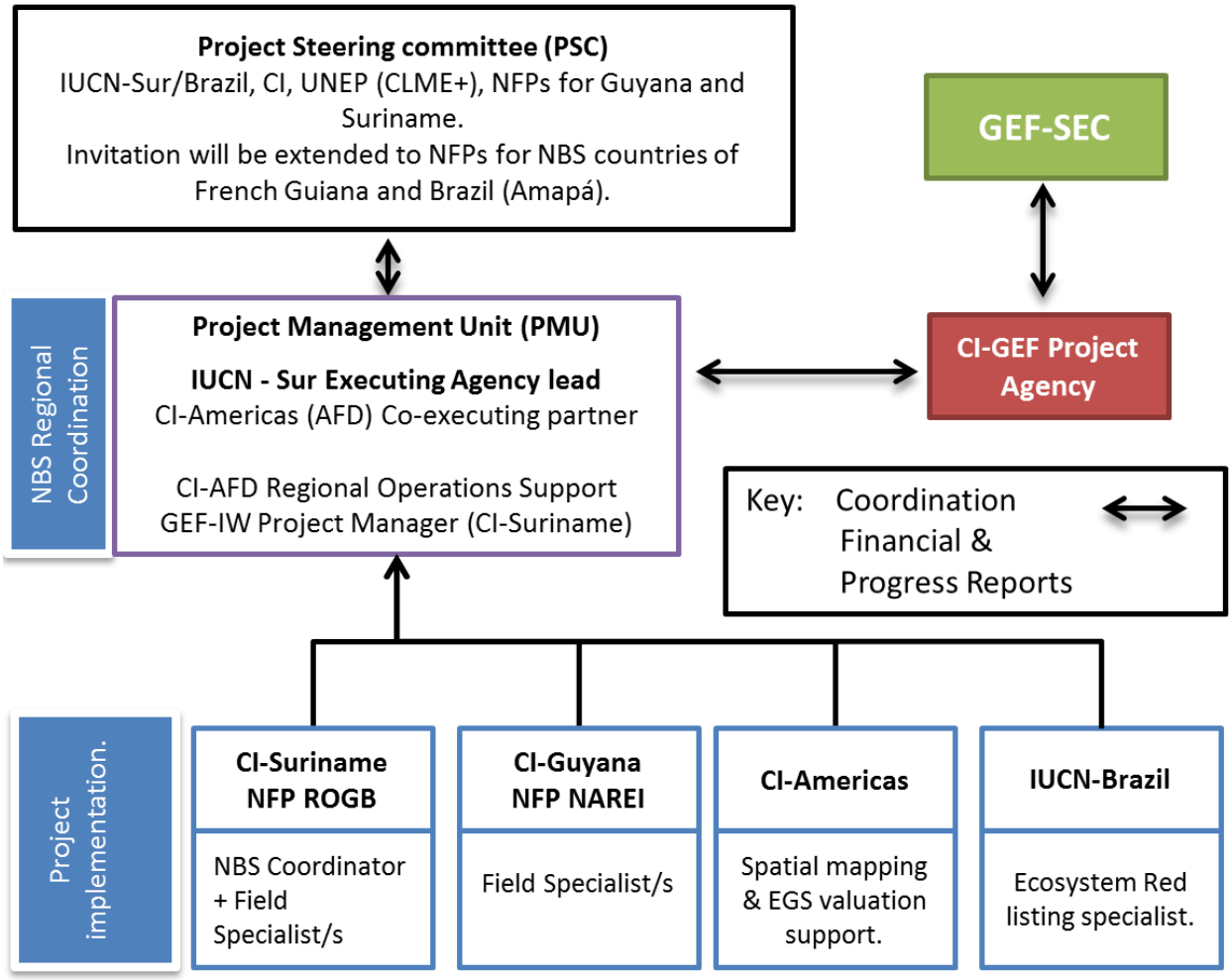
157. The CLME+ project also brings an established and formalized process and framework through its ongoing advances towards international agreements and commitment to constructing an integrated coastal zone management for the region. It would not be as cost effective to integrate into the necessary government channels without the facility provided by such an arrangement.

*8. Coordination.* Outline the coordination with other relevant GEF-financed projects and other initiatives [not mentioned in 1]:

| Initiative | Coordination |
|---|---|
| UNDP-GEF "CLME+: Catalyzing Implementation of the Strategic Action Programme for the Sustainable Management of shared Living Marine Resources in the Caribbean and North Brazil Shelf Large Marine Ecosystems" | Project aims at facilitating Ecosystem-Based Management (EBM) and implementation of the Ecosystem Approach to Fisheries (EAF) in the CLME+ region, in order to ensure the sustainable and climate-resilient provision of goods and services from shared living marine resources.<br>is a 5-year project that specifically aims at facilitating the implementation of the 10-year politically endorsed Strategic Action Programme for the Sustainable Management of the Shared Living Marine Resources of the Caribbean and North Brazil Shelf Large Marine Ecosystems (CLME+ SAP). The project seeks to achieve this by facilitating ecosystem based management/an ecosystem approach to fisheries (EBM/EAF) within the CLME+ region, in such a way that a sustainable and climate resilient provision of goods and services from the region's living marine resources can be secured.<br><br>It is expected that coordination between the two projects through the CLME+ sub-regional NBS-LME EBM project will assist stakeholders in achieving improved coordination, collaboration and integration among the wide array of ongoing and newly planned projects and initiatives that are of relevance to the wider objectives of the CLME+ Strategic Action Plan.<br>UNEP confirm that further coordination actions between the two projects are to be planned during the inception workshop in earl y October 2017. CI is also a partner in the CLME+ project supporting transboundary diagnostics (O1). |
| EU-Global Climate Change Alliance (GCCA+ 2014- present) | The project aims to reduce Suriname's vulnerability to negative effects of climate change, and to enhance Suriname's capacity for developing and undertaking appropriate and effective measures to adapt to climate change.<br><br>It consists of two components:<br><br>1. Collection of climate data collection, improve the performance of the national meteorological service, improve water resources management at the country level, and adaptive research in the agricultural sector aiming to reduce the sector's vulnerability to the negative effects of climate change.<br><br>2. Address the problem of ongoing destruction of the mangrove ecosystems which provide a natural defense of the coastal area against sea level rise and erosion.<br><br>As a result of this project essential tools and structures for sustainable management, focused on conservation of mangrove ecosystems, will be in place:<br><br>• A National Mangrove Strategy will be developed;<br>• An economic (monetary) valuation study of the mangrove ecosystems will be performed;<br>• Management plans of 4 coastal MUMAs will be implemented;<br>• Public and community awareness campaigns will be designed and implemented. |
| WWF-GEF IW5 "Improving mangrove conservation across the Eastern Tropical Pacific Seascape (ETPS) through coordinated regional and national strategy | Mangrove work coordinated between ETPS governments and the same CI team involved in the NBS proposal supports transferable learning between a series of scalable conservation initiatives at ETPS sites, policy development and national and regional mangrove action planning. The project has transferable learning, knowledge sharing & networking components of relevance to this project and a |

| | |
|---|---|
| development and implementation". CI (EA), CPPS and UNESCO-Quito. | regional interchange event planned during the project period 2017 – 2018. It also involves a mangrove EGS scoping exercise to examine the viability of Experimental National Environmental Accounts at the regional scale and supports the implementation of a regional intergovernmental mangrove expert group and regional and national mangrove actions plans through the CPPS convention of parties. |
| US-AID Caribbean Climate Adaptation Project (CCAP) | Currently developing a proposal to extend pilot work in Sediment Trapping Units for recovery of coastal mangrove habitat between CI-Suriname and Anton de Kom University. |

9. *Institutional Arrangement.* Describe the institutional arrangement for project implementation:




158. **The Project Management Unit (PMU)** will be represented by IUCN-Sur (regional office based in Quito) as the Executing Agency (EA) in partnership with the CI-Americas Field Division (AFD). IUCN-Sur as EA will be responsible for coordinating overall CI-GEF requirements during project implementation with the support of CI-AFD.

159. IUCN-Sur will support an IUCN Project Manager, (also the project red listing specialist) based in the IUCN Brazil office. CI will support a Field Project Manager (an on-site marine specialist based in CI-Suriname) with assistant to oversee project actions embedded in the NBS country marine programs. The Field Project Manager will be the on-site technical counterpart to the IUCN project manager.

160. The PMU will be responsible for reporting to the Project Steering Committee, the timely execution of partnership and consultation agreements, workplan, budget and procurement compliance, sub-grant administration and management, project Monitoring and Evaluation, due diligence for triggered CI-GEF safeguards and reporting to the CI-GEF Project Agency. PMU staffing is expected to be based on existing positions with assistant roles contracted if necessary.

161. The PMU will also coordinate with the GEF UNEP sub-regional NBS-LME project (as part of the GEF UNDP CLME+ project), as well as the complementary EU funded WWF spatial planning, stakeholder review and GAP analysis planned as collaborators to the project.

162. The Project Steering Committee (PSC) is represented by National Focal Points (NFPs) of the governments of Guyana and Suriname, project partners IUCN-Sur, CI, UNEP (as EA of the CLME+ sub-regional NBS project), as well as invited representation of the Governments of Brazil and French Guiana. The PSC will provide technical oversight and coordination throughout the project through on-site meetings that coincide with inception and end of project events and interim quarterly on-line video conferences. It is expected that the PSC support the higher-level regional dialogue and networking necessary to develop an action plan towards regional ICZM (Outcome 2).

163. The core project staff will be responsible for facilitating with partners and stakeholders the design, standardization of project methodology and data quality, ensuring comparable results from the study regions and coordination in line with the proposed goals of the project, including development of necessary steps in future ICZM planning.

164. This also includes stakeholder coordination, an outreach and communication plan for the project detailing during project inception how the project will communicate with and coordinate with the NBS countries. The project will identify CSOs already engaged in aspects of coastal management, mangrove conservation and climate change planning, and work with them to provide coordinated and complementary information to national and multi-national planning processes. This will ensure that project threat assessments will be developed based on the most comprehensive sourcing available and communicated to existing and planned GEF projects and other government and donor funded efforts as early as possible.

165. In support of knowledge management for Outcome 1, the PMU will determine during inception a 3-5 person science advisory panel with NBS country and international representation to ensure that project methods reflect current state-of-the science approaches and provide the best available insight into biophysical processes and the planned IUCN ecosystem threat assessment. This will also include invitation to the GEF Science and Technical Advisory Panel (STAP). The panel will review and comment on project methods before they are approved for use in the regional spatial mangrove cover assessments.

166. The CI-GEF Project Agency will provide project assurance, including supporting project implementation by maintaining oversight of all technical and financial management aspects, and providing other assistance upon request of the Executing Agency. The CI-GEF Project Agency will also monitor the project's implementation and achievement of the project outputs, ensure the proper use of GEF funds, and review and approve any changes in budgets or work-plans. The CI-GEF Project Agency will arbitrate and ensure resolution of any conflicts during project implementation.

**Institutional roles.**

167. **IUCN-Sur** as the IUCN regional office for South America (based in Quito, Ecuador) will act as **Executing Agency.** IUCN-Sur will directly coordinate the participation of IUCN-Brazil based in Brasilia as lead executing partner bringing regional expertise in the Ecosystem Red Listing Process. IUCN Brazil has important experience from Northern Brazil (Amapá State) and supports the project's commitment for close collaboration with the Brazilian authorities as the southerly extension of the NBS region. IUCN-Brazil will furthermore work directly with the CI-NBS team represented by the CI project lead in CI-Suriname and CI-Guyana for the implementation of activities in the NBS region.

168. IUCN together with CI, WWF and TNC are also founding members of the recently announced Global Mangrove Alliance launched at the SDG UN meeting in New York (2016-2017). The NBS project provides an example of the potential for this Alliance bringing complementary strengths together as a first step toward a much larger more ambitious mangrove project for the NBS region.

*10. Knowledge Management.* Outline the knowledge management approach for the project, including, if any, plans for the project to learn from other relevant projects and initiatives, to assess and document in a user-friendly form, and share these experiences and expertise with relevant stakeholders.

169. The project will develop a knowledge management (KM) plan between project partners. This will be in coordination with, and linked to, information sharing mechanisms proposed under the CLME+ project regional process. These include at the regional level:

- Updates through the existing network of national and technical focal points of the Cartagena Convention and its Protocols through electronic means;
- Formal Intergovernmental meetings both at Scientific level (STACs) and the Conference of Parties (COPs) which take place every two years.;
- Existing websites as well as web portals and clearing house mechanisms that will be developed by UN Environment CEP under CLME+ project;
- Existing Caribbean Marine Protected Area Management Network (CaMPAM), which has a comprehensive distribution list;
- the Western Central Atlantic Fishery Commission (WECAFC) Shrimp and Groundfish Working Group (http://www.wecafc.org/en/working-groups/spiny-lobster.html);
- Through research and community networks, CSOs and NGOs such as the Suriname Mangrove Forum, Suriname Green Heritage Foundation
- GMRP has in house a Community Development officer who conducts regular awareness activities in mangrove regions/communities. These activities include coastal cleanups, mangrove school tours, hosting of volunteers at mangroves sites, community outreach programs, school presentations, distribution of brochures, etc.
- Project developments will also be shared as part of the wider GEF IW-Learn network and in conservation themed on-line media such as Mongabay.com[14].

170. The project KM Plan will be developed in the project inception phase (Q1) as part of project development and include updated information on knowledge sharing opportunities presented by the CLME+ project (and NBS sub-regional project) as well as those of the participating NBS countries and partners. A communication planning template developed by CI for an analogous Eastern Tropical Pacific regional mangrove project is available to help develop the communications plan, including guidance on a shared

[14] Please see an example at https://news.mongabay.com/2017/07/going-under-mangrove-restoration-in-low-lying-guyana-a-vital-need-say-experts/

vision, definition of audiences, key messages and impact media etc. (GEF-IW5 #5771; underway 2016-2019).

*11. Consistency with National Priorities*. Is the project consistent with the National strategies and plans or reports and assessements under relevant conventions? (yes ☐ /no☐ ). If yes, which ones and how: NAPAs, NAPs, NBSAPs, ASGM NAPs, MIAs, NCs, TNAs, NCSA, NIPs, PRSPs, NPFE, BURs, INDCs, etc.

171. As relevant to this proposal, the MSP will contribute to development and implementation of the UNFCCC National Adaptation Planning process (NAPs) in the project countries of Guyana (relevant to multiple activities in the Guyana Climate Action Plan, 2001) and Suriname (National Adaptation Plan and GAP assessment ongoing process as of March 2017). The information to be developed is also complementary to recent national Japan-Caribbean Climate Change Baseline Partnership Assessments (2015) and advances in the drafted National Climate Change Policy and Strategic Action Plan (Suriname 2014-2021). The MSP is aligned with UNFCCC objectives and requirements and linkages to NAP reporting will be explored as transversal support to government counterparts by project field offices.

172. The MSP is also aligned with the Suriname (v2; 2012-2016) and Guyana (v3; 2012-2020) National Biodiversity Strategy and Action Plan as part of national CBD commitments that advance the agenda of the National Biodiversity Strategy and Action Plan. These include reference to the development of an ICZM plan is part of the strategy to achieve Aichi 2020 targets and support other recent initiatives in the region such as earlier work towards Guiana Shield Biodiversity Corridors (2014). Information synthesized is expected to be relevant to those national plans (forest, biodiversity action, land use, mangrove management action plan, fisheries management etc.) in effect from 2000 onwards within the two countries.

173. The MSP is also aligned with the politically endorsed CLME+ Strategic Action Plan where Guyana, Suriname, Brazil and French overseas territory French Guiana form part of 35 C-LME and NBS-LME member state countries exploring Ecosystem Based Management options and an Ecosystem Approach to Fisheries (as of May 9th 2017). Knowledge and ICZM development in this project helps address compatible SAP goals to ensure sustainable and climate resilient services from shared living marine resources across the CLME+ geographies.

*12. M & E Plan.* Describe the budgeted monitoring and evaluation plan.

**a) Monitoring and Evaluation Roles and Responsibilities.**

174. The Project Management Unit will be responsible for initiating and organizing key monitoring and evaluation tasks. This includes the project inception workshop and report, quarterly progress reporting (financial and technical), annual progress and implementation reporting, documentation of lessons learned, and support for and cooperation with the independent external evaluation exercises.

175. IUCN as the project Executing Agency is responsible for ensuring the monitoring and evaluation activities are carried out in a timely and comprehensive manner, and for initiating key monitoring and evaluation activities, such as the independent evaluation exercises.

176. CI as project executing partner is responsible for providing any and all required information and data necessary for timely and comprehensive project reporting, including results and financial data, as necessary and appropriate through field offices in Suriname and Guyana.

177. The Project Steering Committee plays a key oversight role for the project, with regular meetings to receive updates on project implementation progress and approve annual work-plans. The Project Steering

Committee also provides continuous ad-hoc oversight and feedback on project activities, responding to inquiries or requests for approval from the Project Management Unit or Executing Agency.

178. The CI-GEF Project Agency plays an overall assurance, backstopping, and oversight role with respect to monitoring and evaluation activities.

179. The IUCN Internal Audit function is responsible for contracting and oversight of the planned independent external evaluation exercises at the end of the one-year project.

### b) Monitoring and Evaluation Components and Activities

### The M&E plan will include the following components:

180. **Inception workshop:** A project inception workshop will be held within the first three months of project start with the main project stakeholders. An overarching objective of the inception workshop is to assist the project team in understanding and taking ownership of the project's objectives and outcomes. The inception workshop will be used to detail the roles, support services and complementary responsibilities of the CI-GEF Project Agency and the IUCN Executing Agency. The project's M&E plan will be presented and finalized at the project inception workshop, including a review of indicators, means of verification, and the full definition of project staff M&E responsibilities.

181. **Inception Workshop Report.** The Executing Agency will produce an inception report documenting all changes and decisions made during the inception workshop to the project planned activities, budget, results framework, and any other key aspects of the project. The inception report will be produced within one month of the inception workshop, as it will serve as a key input to the timely planning and execution of project start-up and activities.

182. **Results Monitoring Plan (Objective, Outcomes, and Outputs).** A Project Results Monitoring Plan will be developed by the EA which includes objective, outcome and output indicators, metrics to be collected for each indicator, methodology for data collection and analysis, baseline information, location of data gathering, frequency of data collection, responsible parties, and indicative resources needed to complete the plan. In addition to the objective, outcome, and output indicators, the Project Results Monitoring Plan table will also include any indicators identified in the stakeholder screening and safeguard plan. The monitoring of these indicators throughout the life of the project will be necessary to assess if the project has successfully achieved its expected results.

183. **Focal Area Tracking Tools**. The IW GEF Focal Area Tracking Tool was completed prior to project start-up, and will be updated at the time of the terminal evaluation

184. **Project Steering Committee (PSC)** meetings will be held at project inception, midterm and at the end of the project. PSC meetings will be conducted in person where they coincide with project events (inception and final ICZM road-map workshop) through teleconference at mid-term and on an ad-hoc basis where needed. Meetings shall be held to review and approve project annual budget and work plans, discuss implementation issues and identify solutions, and to increase coordination and communication between key project partners. The meetings held by the PSC will be monitored and results adequately reported.- GEF Project Agency Field Supervision Missions.

185. The CI-GEF PA will conduct an annual visit to the project country and potentially to project field sites based on the agreed schedule in the project's Inception Report/Annual Work Plan to assess first hand project progress. Oversight visits will most likely be conducted to coincide with the timing of PSC meetings. Other members of the PSC may also join field visits. A Field Visit Report will be prepared by the CI-GEF PA staff participating in the oversight mission, and will be circulated to the project team and PSC members within one month of the visit.erly Progress Reporting

186. The Executing Agency will submit quarterly progress reports to the CI-GEF Project Agency, including a budget follow-up and requests for disbursement to cover expected quarterly expenditures.

187. **Annual Project Implementation Report (PIR)** and Final Project Report. Being a single year project, the Executing Agency will prepare a single annual/ final report to report on progress made since project start. The PIR will summarize the quarterly project results and progress. A summary of the report will be shared in advance with the Project Steering Committee.

188. **Independent External Mid-term Review**. As a single year project an independent mid-term review is not necessary.

189. **Independent Terminal Evaluation.** An independent Terminal Evaluation will take place within six months after project completion and will be undertaken in accordance with IUCN and GEF guidance. The terminal evaluation will focus on the delivery of the project's results as initially planned (and as corrected through quarterly evaluation, if any such correction took place). The Executing Agency in collaboration with the PSC will provide a formal management answer to the findings and recommendations of the terminal evaluation.

190. **Lessons Learned and Knowledge Generation.** Results from the project will be disseminated within and beyond the project intervention area through existing information sharing networks and forums. The project will identify and participate, as relevant and appropriate, in scientific, policy-based and/or any other networks, which may be of benefit to project implementation though lessons learned. The project will identify, analyze, and share lessons learned that might be beneficial in the design and implementation of similar future projects. There will be a two-way flow of information between this project and other projects of a similar focus.

191. Annual Financial reports submitted by the Executing Agency will be audited annually by external auditors appointed by the Executing Agency.

192. The Terms of References for the evaluations will be drafted by the CI-GEF PA in accordance with GEF requirements. The procurement and contracting for the independent evaluations will handled by IUCN's General Counsel's Office. The funding for the evaluations will come from the project budget, as indicated at project approval.

### Table 2: Project M&E Plan Summary

| Type of M&E Activity | Responsible Parties | Time-frame | Budgeted costs |
|---|---|---|---|
| Inception Workshop (IW) | IUCN with support from Conservation International. It may also be possible to combine with the CLME+ NBS-LME sub regional project inception workshop (under discussion with UNEP). | Within 3 months of project start (tentatively December 2017). | USD$ 19,000 |
| Project Inception Report | IUCN (based on internal reporting from CI-Suriname and CI-Guyana) | 1 month after project inception workshop. | USD$2,000 |
| Supervision and rating of progress in APRs and PIRs | CI-GEF Agency. | Annual | GEF Agency |
| Project Progress Reports | IUCN with with CI-Suriname | Quarterly | USD$7,000 |

| Type of M&E Activity | Responsible Parties | Time-frame | Budgeted costs |
|---|---|---|---|
| Project Implementation Review report | IUCN | Annual | USD$ 4,000 |
| Co-financing Reports | IUCN with project partners. | Annual | USD$ 1,000 |
| Final evaluation | IUCN with CI-Suriname | Annual | USD$ 2,000 |
| Terminal Report | IUCN with CI-Suriname | Within 3 months of project end. | USD$ 4,000 |
| **Total Budget** | | | **USD$ 39,000** |

## PART III: APPROVAL/ENDORSEMENT BY GEF OPERATIONAL FOCAL POINT(S) AND GEF AGENCY(IES)

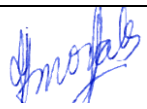
**A. Record of Endorsement[15] of GEF Operational Focal Point (S) on Behalf of the Government(S):** (Please attach the *Operational Focal Point endorsement letter(s)* with this template. For SGP, use this SGP OFP endorsement letter).

| NAME | POSITION | MINISTRY | DATE *(MM/dd/yyyy)* |
|---|---|---|---|
| Kemraj Parsram | GEF OFP, Guyana | **ENVIRONMENTAL PROTECTION AGENCY, GUYANA** | **08/30/2017** |
| Nataly Plet | GEF OFP, Suriname | **OFFICE OF THE PRESIDENT, REPBULIC OF SURINAME** | **09/11/2017** |
| | | | |
| | | | |
| | | | |
| | | | |

**B. GEF Agency(ies) Certification**

| **This request has been prepared in accordance with GEF policies[16] and procedures and meets the GEF criteria for a medium-sized project approval under GEF-6.** | | | | | |
|---|---|---|---|---|---|
| **Agency Coordinator, Agency name** | **Signature** | **DATE** *(MM/dd/yyyy)* | **Project Contact Person** | **Telephone** | **Email Address** |

[15] For regional and/or global projects in which participating countries are identified, OFP endorsement letters from these countries are required even though there may not be a STAR allocation associated with the project.
[16] GEF policies encompass all managed trust funds, namely: GEFTF, LDCF, SCCF, and CBIT

| | | | | | |
|---|---|---|---|---|---|
| Miguel Morales |  | 10/19/2017 | Daniela Carrion | 7033415526 | dcarrion@conservation.org |
| | | | | | |
| | | | | | |

**C. ADDITIONAL GEF PROJECT AGENCY CERTIFICATION** *(Applicable only to newly accredited GEF Project Agencies)*

For newly accredited GEF Project Agencies, please download and fill up the required **GEF Project Agency Certification of Ceiling Information Template** to be attached as an annex to this project template.

**ANNEX A: PROJECT RESULTS FRAMEWORK** (either copy and paste here the framework from the Agency document, or provide reference to the page in the project document where the framework could be found).

| Expected Outcomes and Indicators | Project Baseline | End of Project Target | Expected Outputs and Indicators |
|---|---|---|---|
| **Component 1:** Multi-sectoral consensus and knowledge foundation established for the development of an Integrated Coastal Management (ICZM) Plan for Mangroves. | | | |
| **Outcome 1.1:**<br>The biophysical, social and economic information most relevant to the conservation and sustainable use of mangroves in **Guyana** and **Suriname** is obtained from synthesizing results of existing work and undertaking new research where gaps exist as the technical foundation for building an NBS Integrated Coastal Management Plan for mangroves.<br><br>***Indicators 1.1.:***<br><br>*# Knowledge gap analysis for decision making (priority and thematic) (completed).*<br><br>*# studies, (synthesis of existing work and new research) planned, initiated and published to address critical knowledge gaps.* | Although base-line research and monitoring has been advanced to varying degrees across the two project countries of Guyana and Suriname (and is currently underway) to characterize mangrove dynamics in the NBS countries, there is still differing levels of understanding of mangrove EGS and critical knowledge gaps, early synthesis and limited sharing of information through an as yet incipient community of practice (scoped to the particular social, economic and environmental challenges and situational context of the Amazon – Orinoco delta upstream and coastal region).<br><br>***Base-line 1.1***<br>• *A first assessment of state of NBS region mangrove knowledge was prepared by CI as part of project development in 2017 and is a starting point for knowledge gap analysis.*<br>• *Existing research for the most part is not synthesized in a format to support decision making.*<br>• *New research will be instigated during the project.* | Current state of understanding is improved given synthesis of existing, and new research including the level of access and divulgation and centralization of key results necessary for sound mangrove conservation and management of the EGS (particularly coastal protection, but also fisheries and local production) they provide to NBS coastal communities.<br><br>***Target 1.1***<br>• A comprehensive gap analysis underpins a shared research agenda for ICZM development.<br>• Mangrove mapping, understanding of biophysical regimes, EGS valuation studies and threat analysis for the NBS region are underway and significantly advanced as a result of the project. | **Output 1.1.1**<br>By Dec. 2018 updated **national mangrove cover maps** showing extent of loss since 1980 baseline.<br><br>*Indicator 1.1.1.: 2 updated national mangrove maps/ country (Guyana and Suriname).*<br><br>**Output 1.1.2**<br>By Dec. 2018 **ecosystem valuation** of main ecosystem services provided by mangroves in each country where this is lacking.<br><br>*Indicator 1.1.2.: 3 ecosystem valuation assessments completed (local, national and global level) for both Guyana and Suriname.*<br><br>**Output 1.1.3**<br>By Dec 2018 biophysical characterization and **threat assessments** for mangroves for each country where this is lacking.<br><br>*Indicator 1.1.3.: At least one biophysical characterization study improved; one threat assessment completed for both Guyana and Suriname; one IUCN ecosystem red listing process for the NBS region completed.*<br><br>**Output 1.1.4**<br>By Dec 2018 **policy analyses** for each country that identify spatial management, use regulations and tenure arrangements relating to mangroves.<br><br>*Indicator 1.1.4.: One policy assessment completed for both Guyana and Suriname.*<br><br>**Output 1.1.5**<br>By Dec 2018 mapping and other **relevant outputs** from the |

| | | | |
|---|---|---|---|
| | | | project **shared** with the larger regional process of the CLME+ project.<br><br>*Indicator 1.1.5.: At least one technical space identified and/or generated by project as a clearing house for information relevant to regional NBS ICZM planning and in support of the CLME+ process.* |

| | | | |
|---|---|---|---|
| **Outcome 1.2**<br>Broad-based multi-sectoral consensus is reached regarding how to manage Guyana, Suriname and Brazil's mangrove in a coordinated fashion and with the goal of achieving progress on six Aichi Targets, UN Sustainable Development Goals (SDGs) and a zero net loss rate by 2030 and contributing to the achievement of the relevant SDGs and Aichi Targets.<br><br>***Indicator 1.2.:***<br><br>*# Consensus agreement achieved committing to multi-sectoral coordination for future NBS mangrove conservation.* | Effective application of available information to decision making for improved and integrated coastal zone management is limited by the challenges posed by national and transboundary coordination, and the lack of an organized technical and decision-making platform, shared and ratified objectives by member countries with resources to effect long term planning in the coastal zone that meets and is driven by stakeholder expectations.<br><br>The recent CLME+ sub-regional NBS call for strategic planning having been supported by Guyana and Suriname governments with those of neighboring countries provides a timely opportunity to advance a shared agenda in transboundary planning but to date has limited resources and technical presence/ organization for the NBS-LME region.<br><br>***Base-line 1.2***<br><br>• *Although there are national commitments to the CLME+* | Opportunity for a transboundary ICZM between project countries is recognized and endorsed by stakeholders based on the most appropriate relevant technical information available (using the IUCN ecosystem red listing tool and others) as applied to mangroves.<br><br>As a result, a roadmap is constructed for planning beyond the scope of the one-year project towards improved national and transboundary ICZM and in support of the C/NBS-LME SAP, existing and future national commitments to international biodiversity and sustainable development conventions.<br><br>***Target 1.2***<br><br>• *Suriname, Guyana and Brazil (with invitation to French Guiana) agree upon a shared plan for* | **Output 1.2.1**<br>By **Apr. 2018 NBS regional mangrove coordination body** (as considered in the CLME+ SAP) is **created and operational**.<br><br>*Indicator 1.2.1.: One established NBS coordination group or forum.*<br><br>**Output 1.2.2**<br>By **May. 2018** French Giana and Brazil become participating members in the NBS regional mangrove coordination body.<br><br>*Indicator 1.2.2.: French Giana and Brazil are represented along with Guyana and Suriname in the NBS coordination body.*<br><br>**Output 1.2.3**<br>By **May. 2018,** the **NBS regional mangrove coordination body agrees on internal operational arrangements, a work plan and a timeline** to produce the information base required for generating a framework for how to generate a three-country ICM plan for mangroves and share the mapping and other relevant outputs with complementary programs such as the CLME+ regional process.<br><br>*Indicator 1.2.3.: Operational guidelines, work plan and timeline produced and ratified by participating countries.*<br><br>**Output 1.2.4**<br>By **Dec. 2018**, a framework charting the scope, content, process and institutional arrangements required for creating a transboundary Integrated Coastal Management (ICM) plan by 2021 developed and approved by the 3 countries (ministerial level). |

| | | | |
|---|---|---|---|
| | *SAP, to date NBS countries have yet to engage in a shared ICZM development plan for the region.* | *ICZM development in the region.* | *Indicator 1.2.4: At least three NBS counties support a regional coordination mechanism and road map that will enable further integrated coastal zone management beyond the one year project* |

## ANNEX B: PROJECT TIMELINE

| Outcome | Output | Output Description (simplified) | # | Activity (simplified) | 2018 | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | J | F | M | A | M | J | J | A | S | O | N | D |
| **1.1** | **1.1.1** | Updated mangrove cover and change estimates. | **a** | Lit review/ synthesis. | | X | X | X | | | | | | | | |
| | | | **b** | Remote data costs | | | | | X | X | X | X | | | | |
| | | | **c** | Ground truthing / field costs | | | | | | | | | X | X | X | |
| | **1.1.2** | Mangrove ESG valuation studies. | **a** | Local / community value (Economy & well-being) study. | X | X | X | X | X | X | | | | | | |
| | | | **b** | National value (Flood defense) study. | X | X | X | X | X | X | | | | | | |
| | | | **c** | Global value (Carbon mitigation) study. | | X | X | X | X | X | X | X | X | X | X | X |
| | **1.1.3** | Biophysical characterization (regional) and threat assessments. | **a** | Research + synthesis on key biophysical processes. | X | X | X | X | | | | | | | | |
| | | | **b** | Open standards conservation planning exercise for Suriname and Guyana mangrove habitat. | | | | | X | X | X | | | | | |
| | | | **c** | IUCN Red List Habitat evaluation workshop & documentation. | | | | | | | X | X | X | | | |
| | | | **d** | Restoration methods + effectiveness desktop review | | | | | | | | | | X | X | X |

| Outcome | Output | Output Description (simplified) | # | Activity (simplified) | 2018 | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | J | F | M | A | M | J | J | A | S | O | N | D |
| | **1.1.4** | Mangrove policy analysis for each country. | **a** | Policy analysis. | | | | X | X | | | | | | | |
| | | | **b** | NBS mangrove knowledge made available for policy makers. | | | | | | X | X | | | | | X |
| | **1.1.5** | Project knowledge sharing with CLME+ | **a** | Online platform with CLME+ | | | | | | X | X | X | X | X | X | X |
| **1.2** | **1.2.1** | NBS Regional Coordination Body established. | **a** | Set up or reactivate national working group. | | X | | | | | | | | | | |
| | | | **b** | Establish appropriate multi-sectoral coordination forum or task force. | | | X | | | X | | | X | | | X |
| | | | **c** | Convene Inception meeting + Regional Mangrove Action Committee. | | X | X | | | | | | | | | |
| | **1.2.2** | French Guyana + Brazil become participating members of regional body. | **a** | Engage and formalize French Guiana and Brazil participation. | | X | X | X | | | | | | | | |
| | **1.2.3** | Agreed 3 country work plan (G,S,B) + timeline for NBS mangrove/ ICM base-line | **a** | Planning workshop during inception meeting to develop workplan and timeline. | | X | X | X | | | | | | | | |

| Outcome | Output | Output Description (simplified) | # | Activity (simplified) | 2018 | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | J | F | M | A | M | J | J | A | S | O | N | D |
| | **1.2.4** | Agreed framework & road map for a NBS 2021 regional ICM plan. | **a** | ICM scoping consultancy as workshop input. | | | | X | X | X | X | X | X | X | X | |
| | | | **b** | Synthesis and planning workshop. | | | | | | | | | | | X | X |

**ANNEX C: CALENDAR OF EXPECTED REFLOWS (**if non-grant instrument is used**)**

Provide a calendar of expected reflows to the GEF/LDCF/SCCF/CBIT Trust Funds or to your Agency (and/or revolving fund that will be set up)

# ANNEX D: SAFEGUARD SCREENING RESULTS

CONSERVATION INTERNATIONAL

gef GLOBAL ENVIRONMENT FACILITY INVESTING IN OUR PLANET

**CI-GEF PROJECT AGENCY**

## SCREENING RESULTS AND SAFEGUARD ANALYSIS

(To be completed by CI-GEF Coordination Team)

### I. BASIC INFORMATION

**A. Basic Project Data**

| | |
|---|---|
| **Country**: Guyana and Suriname | **GEF Project ID**: |
| **Project Title**: Setting the foundations for zero net loss of the mangroves that underpin human wellbeing in the North Brazil Shelf LME | |
| **Executing Agency**: International Union for the Conservation of Nature (IUCN). | |
| **GEF Focal Area**: International Waters | |
| **GEF Project Amount**: USD$700,000 | |
| **Reviewer(s)**: Ian Kissoon | |
| **Date of Review**: September 29, 2017 | |
| **Comments**: Analysis completed and approved | |

**B. Project Objective:**

To create the multi-disciplinary information base, regional coordination mechanism and multi-sectoral consensus required to implement elements of the CLME+ Strategic Action Plan pertaining to the mangroves that most directly underpin human wellbeing in the North Brazil Shelf Large Marine Ecosystem (NBS-LME or NBS).

**C. Project Description:**

The project works to enable a more integrated and transboundary treatment of coastal zone and integrated management influencing an estimated 250,000 – 300,000 ha of mangrove ecosystem within the NBS via the following activities:

I. Update mangrove cover and estimates from literature review and synthesis, use of remote sensing data and ground truthing scoped to the needs of each country.
II. Link among the three countries, mangrove Ecosystem Goods and Services Valuation studies and examine mangrove economy and human well-being of local communities, national flood defenses and global carbon mitigation potential.
III. Research biophysical characterization, conduct a conservation planning exercise and IUCN Ecosystem Red List assessment, and review restoration methods and effectiveness in the NBS region.
IV. Link policy analysis to recommendations for decision makers.
V. Establish an online knowledge sharing platform in coordination with the CLME+ sub-regional NBS project.
VI. Set up and/ or reactivate mangrove regional coordination group(s) and develop a multi-sectoral coordination mechanism.
VII. Engage and formalize French Guiana and Brazil participation in a shared ICZM opportunity.
VIII. Develop a three-country work plan (Guyana, Suriname and Brazil) to establish the ICZM mangrove baseline.

IX. Establish a framework and road map for an NBS 2021 regional ICM plan through scoping consultancy and a synthesis and planning workshop.

**D. Project location and biophysical characteristics relevant to the safeguard analysis:**

The mangrove systems between the Amazon and Orinoco river outflows support a range of critical ecosystem services to coastal NBS societies yet were and are subjected to varying degrees of deforestation and incidental degradation given installation of precautionary concrete shore defenses, conversion of coastal land for agriculture, cattle grazing and urbanization in the last century. In the case of the NBS region coastal communities make up 80-90% of the total population: 12k in Amapá; 225k F. Guiana; 500k Suriname, 693k Guyana, and hence are living in the intervention geography of the project subject to the benefits that healthy mangroves directly and indirectly provide to people.

The project recognizes the need for participatory, well informed and inclusive process between local communities, public institutions, multilateral investment, academia, NGOs, research and the private sector (fishers, tourism developers, upstream industry and land managers, offshore oil prospectors and investors etc.) in construction of an ICZM strategy for the NBS countries. The ICZM process is intended to be fully inclusive for men, women and age groups, to better understand, reflect and respect the diversity of uses and roles of different demographic groups in the NBS coastal zone. As a project that aims to scope and enable ICZM (without significant on the ground interventions at this stage), this also includes an appraisal of Indigenous Peoples (IP) community roles and uses in the coastal zone. In Guyana this involves 11 Amerindian communities that adjoin or are within the Shell Beach Protected Area and in the case of Suriname, the Indigenous Peoples community of Kalebaskreek in the estuary zone of the Coppename Monding Ramsar site and the community of Galibi in the Marowijne district, all of which reside adjacent to important mangrove areas.

**E. Executing Agency's Institutional Capacity for Safeguard Policies:**

The Executing Agency indicated that they have the capacity to implement safeguard measures as described by the CI-GEF Agency ESMF guidelines. They have published protocols for developing and instigating Ecological and Social Impact Assessments which are underpinned and compliant with their GEF accredited Agency guidance materials. Their safeguard staff members are capable of advising field teams, providing targeted support and training. The project staff also have experience in developing and implementing safeguard plans for GEF and analogous projects based upon World Bank Environmental and Social Framework and standards (also having experience in applying the same GMS and IP concepts for work with mangrove user communities the Eastern Tropical Pacific region).

## II. SAFEGUARD AND POLICIES

**Environmental and Social Safeguards:**

| Safeguard Triggered | Yes | No | TBD | Date Completed |
|---|---|---|---|---|
| **1. Environmental & Social Impact Assessment (ESIA)** | | X | | |
| *Justification: No significant adverse environmental and social impacts that are sensitive, diverse, or unprecedented is anticipated* | | | | |
| **2. Natural Habitats** | | X | | |
| *Justification: The project is not proposing to alter natural habitats* | | | | |
| **3. Involuntary Resettlement** | | X | | |
| *Justification: The project is not proposing involuntary resettlement or restriction of access/use of natural resources.* | | | | |
| **4. Indigenous Peoples** | X | | | |
| *Justification: The project plans to assess socio-economic attributes, and engage indigenous communities and leaders particularly in defining their participation in the ICZM planning process with country NFPs.* | | | | |
| **5. Pest Management** | | X | | |
| *Justification: There are no proposed activities related to pest management* | | | | |
| **6. Physical & Cultural Resources** | | X | | |
| *Justification: There are no proposed activities related to physical and cultural resources* | | | | |
| **7. Stakeholder Engagement** | X | | | |
| *Justification: The project is required to engage stakeholders* | | | | |
| **8. Gender mainstreaming** | X | | | |
| *Justification: The project is required to mainstream gender at all levels* | | | | |
| **9. Accountability and Grievance Mechanisms** | X | | | |
| *Justification: As a publicly funded GEF project, a Grievance Mechanism is required.* | | | | |

## III. KEY SAFEGUARD POLICY ISSUES AND THEIR MANAGEMENT

1. Describe any safeguard issues and impacts associated with the proposed project. Identify and describe any potential large scale, significant and/or irreversible impacts:

*From information provided in the Safeguard Screening Form, this project has triggered four safeguard policies. These are:*

*I. Indigenous Peoples,*
*II. Stakeholder Engagement,*
*III. Gender Mainstreaming, and*
*IV. Grievance Mechanism.*

2. Describe any potential indirect and/or long term impacts due to anticipated future activities in the project area:

*No indirect and/or long term impacts due to anticipated future activities are foreseen at this time.*

3. Describe any project alternatives (if relevant) considered to help avoid or minimize adverse impacts:

*The proposed approach of the project is expected to avoid or minimize adverse impacts. As such, no better alternative can be conceived at this time.*

4. Describe measures to be taken by the Executing Agency to address safeguard policy issues.

I. *Indigenous Peoples*
*To ensure that the project meets CI-GEF Project Agency's "Indigenous Peoples Policy #4", the Executing Agency is required to develop an Indigenous Peoples Plan. The CI-GEF Project Agency will oversee the implementation of this plan throughout the duration of the project.*

II. *Grievance Mechanism*
*To ensure that the project meets CI-GEF Project Agency's "Accountability and Grievance Mechanism Policy #7", the Executing Agency is required to develop an Accountability and Grievance Mechanism that will ensure people affected by the project are able to bring their grievances to the Executing Agency for consideration and redress. The mechanism must be in place before the start of project activities, and also disclosed to all stakeholders in a language, manner and means that best suits the local context. The Executing Agency must inform the CI-GEF Project Agency of any grievance received.*

III. *Gender Mainstreaming*
*To ensure that the project meets CI-GEF Project Agency's "Gender Mainstreaming Policy #8", the Executing Agency is required to develop a "Gender Mainstreaming Plan" that will ensure the mainstreaming of gender issues throughout the project. The CI-GEF Project Agency will provide a gender mainstreaming guideline, and will approve and oversee the implementation of the Gender Mainstreaming Plan throughout the duration of the project.*

IV. *Stakeholder Engagement*
*To ensure that the project meets CI-GEF Project Agency's "Stakeholders' Engagement Policy #9", the Executing Agency is required to develop a Stakeholder Engagement Plan. The CI-GEF Project Agency will oversee the implementation of this plan throughout the duration of the project.*

5. Identify the key stakeholders and describe the mechanisms for consultation and disclosure on safeguard policies, with an emphasis on potentially affected people:

*The key stakeholders are the local communities, public institutions, multilateral investment, academia, NGOs, research and the private sector.*

*The mechanisms for consultation and disclosure should be culturally appropriate, gender sensitive, effective, and in keeping with local customs. Engagement can take the form of village meetings, group meetings, workshops, interviews/surveys, etc. and done using local languages and methods. The Executing Agency should take these contexts into consideration when designing engagement activities.*

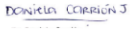
## IV. PROJECT CATEGORIZATION

| PROJECT CATEGORY | Category A | Category B | Category C |
|---|---|---|---|
| | | | X |
| *Justification: The proposed project activities are likely to have minimal or no adverse environmental and social impacts.* | | | |

## V. EXPECTED DISCLOSURE DATES

| Safeguard Plan | CI Disclosure Date | In-Country Disclosure Date |
|---|---|---|
| **Environmental & Social Impact Assessment (ESIA)** | *NA* | *NA* |
| **Environmental Management Plan (EMP)** | *NA* | *NA* |
| **Voluntary Resettlement Action Plan (V- RAP)** | *NA* | *NA* |
| **Process Framework for Restriction of Access to Natural Resources** | *NA* | *NA* |
| **Indigenous Peoples Plan (IPP)** | *Within 15 days of CI-GEF approval* | *Within 30 days of CI-GEF approval* |
| **Pest Management Plan (PMP)** | *NA* | *NA* |
| **Stakeholder Engagement Plan (SEP)** | *Within 15 days of CI-GEF approval* | *Within 30 days of CI-GEF approval* |
| **Gender Mainstreaming Plan (GMP)** | *Within 15 days of CI-GEF approval* | *Within 30 days of CI-GEF approval* |
| **Accountability and Grievance Mechanism** | *Within 15 days of CI-GEF approval* | *No later than inception workshop/kick-off meeting* |

## VI. APPROVALS

| ***Signed and submitted by:*** | | |
|---|---|---|
| **Sr. Director Project Development & Implementation:**  | **Name:** **Free de Koning** | **Date:** **2017-09-29** |
| ***Approved by:*** | | |
| **Safeguard Manager:**  | **Name:** **Ian Kissoon** | **Date:** **2017-09-29** |
| **Project Manager:**  | **Name:** **Daniela Carrión** | **Date:** **2017-09-29** |

## ANNEX E: PROJECT RESULTS MONITORING PLAN

| Indicators | Metrics | Methodology | Baseline | Location | Frequency | Responsible Parties | Indicative Resources |
|---|---|---|---|---|---|---|---|
| **Objective: To create the multi-disciplinary information base, regional coordination mechanism and multi-sectoral consensus required to implement elements of the CLME+ Strategic Action Plan pertaining to the mangroves that most directly underpin human wellbeing in the North Brazil Shelf LME.** | | | | | | | |
| **Indicator a:** *Prioritized knowledge available for decision making in each country as relevant to mangrove conservation and the sustainable use of mangrove resources* | *# Studies planned and underway addressing identified knowledge gaps as a result of project actions.*<br><br>*# Synthesis reports available for decision making and ICZM process in the NBS region.* | *Through synthesis exercises of current understanding knowledge gaps addressed (or to be addressed) advances during the project period will be compared to the pre-project baseline (NBS mangrove knowledge checklist compiled by the CI-AFD team in 2017).* | An NBS Mangrove knowledge checklist based on literature review and a 2017 NBS regional workshop summarizes pre-project level of understanding of mangrove systems in the NBS countries. | NBS-LME region, specifically Guyana and Suriname. | 6 months and Project end (1 year). | CI-Suriname + CI-AFD. | M&E Salary + 20% of pre-spending grant preparing thematic baseline (estimated 10k staff time) . |
| **Indicator b:** *Roadmap/ framework established for the creation of a transboundary NBS ICZM plan and ratified by at least three participating countries.* | *# of NBS countries that ratify a process for development of an ICZM initiative by Dec 2018.* | Revision of national agreements as part of the ICZM plan development process. | No countries are committed to develop a coordinated transboundary ICZM roadmap at project inception. | NBS-LME region, specifically Guyana and Suriname. | Project end (1 year) | IUCN, CI-Suriname + CI-AFD. | M&E staff time. |
| **Component 1:** Multi-sectoral consensus and knowledge foundation established for the development of an Integrated Coastal Management (ICZM) Plan for Mangroves. | | | | | | | |
| Indicator 1.1.: | # A completed knowledge gap analysis for decision making (prioritized and thematic). | Revise the status/ synthesis work determining knowledge gaps. | *A preliminary literature review and stakeholder meeting was undertaken before project inception.* | *Knowledge gap assessment complete for Guyana and Suriname.* | *Quarterly updates.* | CI-AFD + Partners. | *PMU staff time.* |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Indicator 1.1.1.: | *2 updated national mangrove maps/ country (Guyana and Suriname).* | Revision of technical reports and data products. | *National mapping data in different states of development and resolution.* | *A comparable mangrove distribution map is available across the NBS region.* | *Quarterly updates.* | CI-AFD + Partners | *Direct staff costs* |
| Indicator 1.1.2.: | *3 ecosystem valuation assessments completed (local, national and global level) for both Guyana and Suriname.* | Revision of technical reports and data products. | *No assessments or complete mangrove EGS valuation datasets for region.* | *One synthesis EGS assessment exercise per country.* | *Quarterly updates.* | CI-AFD + Partners | *Direct staff costs* |
| Indicator 1.1.3.: | *At least one biophysical characterization study improved; one threat assessment completed for both Guyana and Suriname; one IUCN ecosystem red listing process for the NBS region completed.* | Revision of publication records, technical reports and data products. | *Base-line research at differing levels between countries (see section 1)* | *At least 2 priority research and/or monitoring initiatives/ country advanced between Suriname and Guyana.*<br><br>*At least 1updated threat assessment completed (IUCN ecosystem red listing) at NBS regional level.* | *Quarterly updates.* | *CI-Suriname and IUCN-Brazil with partners.* | *Direct staff costs* |
| Indicator 1.1.4.: | *One policy assessment completed for both Guyana and Suriname.* | Revision of policy assessments. | *No NBS policy assessment* | *Completed policy assessments are per country.* | *Quarterly updates.* | *CI-Suriname and IUCN-Brazil with partners.* | *Direct staff costs* |
| Indicator 1.1.5.: | *At least one technical space identified and/or generated by project as a clearing house for information relevant to regional NBS ICZM planning and in support of the CLME+ process.* | Revise results of ICZM planning process. | *No discussion spaces planned for ICZM planning at project inception.* | *Active national and NBS regional ICZM planning groups/ task force.* | *Quarterly updates.* | *IUCN-Brazil, CI with partners.* | *Direct staff costs* |
| Indicator 1.2.: | # Consensus agreements achieved committing to multi-sectoral coordination for future NBS mangrove conservation. | Revise agreements from ICZM planning process. | *No consensus agreement.* | *Consensus agreements brokered between NBS countries.* | *Quarterly updates.* | *IUCN-Brazil, CI with partners.* | *Direct staff costs* |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Indicator 1.2.1.: | *One established NBS coordination group or forum.* | Maintain meeting attendance records *(gender disaggregated).* | *Stakeholders not represented in ICZM planning.* | *Stakeholder groups appropriately represented in ICZM planning for each NBS country.* | *Quarterly updates.* | *IUCN-Brazil, CI with partners.* | *Direct staff costs* |
| Indicator 1.2.2.: | *French Giana and Brazil are represented along with Guyana and Suriname in the NBS coordination body.* | Revise ICZM cooperation agreement / instrument (mechanism TBD in project). | *No countries.* | *At least three countries represented in NBS coordination body (Guyana, Suriname, Brazil).* | *Quarterly updates.* | *IUCN-Brazil, CI with partners.* | *Direct staff costs* |
| Indicator 1.2.3.: | *Operational guidelines, work plan and timeline produced and ratified by participating countries.* | Revise ICZM planning agreements by country and products from planning process. | *No ratified NBS ICZM process.* | *Roadmap agreement for NBS ICZM planning ratified and supported by member governments.* | *Quarterly updates.* | *IUCN-Brazil, CI with partners.* | *Direct staff costs* |
| Indicator 1.2.4.: | *At least three NBS counties support a regional coordination mechanism and road map that will enable further integrated coastal zone management beyond the one-year project* | Revise ICZM planning agreements by country. | *No countries support an ICZM planning process.* | *End of project result.* | *Annual update.* | *IUCN-Brazil, CI with partners.* | *Direct staff costs* |
| **Safeguard Plans: Stakeholder Engagement Plan** | | | | | | | |
| Indicator SEP 1.: | *Number of government agencies, civil society organizations, private sector, indigenous peoples and other stakeholder groups that have been involved in the project implementation phase on an annual basis* | Revision of participation lists for events during the project. | *No stakeholders involved until project inception.* | *All major stakeholder groups identified as relevant to the project (as indicated in the Project Document) are represented.* | *Quarterly updates.* | *IUCN-Brazil, CI with partners.* | *Direct staff costs* |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Indicator SEP 2.: | *Number persons (sex disaggregated) that have been involved in project implementation phase (on an annual basis)* | Gender disaggregated information obtained from participation records. | *None at inception.* | *By NBS country.* | *Quarterly updates.* | *IUCN-Brazil, CI with partners.* | *Direct staff costs* |
| Indicator SEP 3.: | *Number of engagements (e.g. meeting, workshops, consultations) with stakeholders during the project implementation phase (on an annual basis)* | Summarize engagement in project activities by output. | *None at inception* | *By NBS country.* | *Quarterly updates.* | *IUCN-Brazil, CI with partners.* | *Direct staff costs* |
| Indicator SEP 4.: | *Percentage of stakeholders who rate as satisfactory the level at which their views and concerns are taken into account by the project* | Structured opinion poll conducted as part of terminal evaluation of project. | *None at inception* | *By NBS country.* | *Quarterly updates.* | *CI-GEF Agency; undertaken by consultant as part of the MTR and Terminal Evaluation.* | *Direct staff costs* |
| ***Safeguard Plans: Gender Mainstreaming Strategy*** | | | | | | | |
| Indicator GMS 1.: | *At least 30% of men or women participate in project activities (e.g. meetings, workshops, consultations subject to situational context)* | Summary of meeting records. | *None at inception* | *By NBS country.* | *Quarterly updates.* | *IUCN-Brazil, CI with partners.* | *Direct staff costs* |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Indicator GMS 2.: | *Number of men and women that received benefits (e.g. employment, income generating activities, training, access to natural resources, land tenure or resource rights, equipment, leadership roles) from the project* | Review of project beneficiaries. | *None at inception* | *By NBS country.* | *Quarterly updates.* | *IUCN-Brazil, CI with partners.* | *Direct staff costs* |
| Indicator GMS 3.: | *Number of strategies, plans (e.g. management plans and land use plans) and policies derived from the project that include gender considerations* | Review of strategies, plans and policies elaborated during the project. | *None at inception* | *By NBS country and for the region.* | *Quarterly updates.* | *IUCN-Brazil, CI with partners.* | *Direct staff costs* |
| ***Safeguard Plans: Accountability and Grievance Mechanism*** | | | | | | | |
| Indicator AGM 1: | *Number of conflict and complaint cases reported to the project's Accountability and Grievance Mechanism* | Receipt of complaints by EA. | *None at inception* | *By NBS country.* | *Quarterly updates.* | *IUCN-Brazil, CI with partners.* | *Direct staff costs* |
| Indicator AGM 2: | *Percentage of conflict and complaint cases reported to the project's Accountability and Grievance Mechanism that have been resolved* | Proportion of cases attended to by project staff that reached a favorable conclusion for all parties. | *None at inception* | *By NBS country.* | *Quarterly updates.* | *IUCN-Brazil, CI with partners.* | *Direct staff costs* |

# ANNEX F: DETAILED PROJECT BUDGET AND SUMMARY BUDGET

**Detailed GEF Project budget**

**Version (date) :** 9/21/2017

GEF Project ID: TBD

Project Title: "Setting the foundations for zero net loss of the mangroves that underpin human wellbeing in the North Brazil Shelf LME."

Executing Agencies : IUCN-Sur (EA lead) with CI (executing partner)

| | | | |
|---|---|---|---|
| Project Amount GEF-funded (USD) : | 700,000 | Indicative Project starting date : | **11/1/2017** |
| Project Amount co-financing (USD) : | | Indicative Project end date : | **10/31/2018** |
| Total Project Amount (USD) : | 700,000 | Duration (in years): | 1 |

Component 1 description : To help establish the multi-sectoral consensus and knowledge foundation necessary for the development of an Integrated Coastal Management (ICZM) Plan for Mangroves:

Component 2 description: NA

Component 3 description: NA

| GEF FUNDED BUDGET | | | | Project budget by component (in USD) | | | Project budget per year (in USD) | | |
|---|---|---|---|---|---|---|---|---|---|
| EXPENSES TYPE | *DESCRIPTION* | *DETAILED DESCRIPTION* | *OUTPUTS* | Component 1 | Project Management Costs | Total | YR1 | | TOTAL |
| **IUCN** | | | | | | | | | |
| Salaries and benefits | *IUCN: Sur (regional) + Brazil office* | *PM (IUCN) + Red Listing Specialist (30% time) - Brazil.* | *1.1.3; 1.2.2; 1.2.3; 1.2.4* | 7,500 | 25,000 | **32,500** | 32,500 | | **32,500** |
| **Conservation International** | | | | | | | | | |
| Salaries and benefits | *CI: Amercias Field Division, Guyana & Suriname offices.* | *Project support (PMU + Technical including NBS site manager)* | *All outputs* | 139,459 | 10,681 | **150,140** | 150,140 | | **150,140** |
| | | | | | | - | - | | - |
| **Total Personnel Salaries and benefits** | | | | **146,959** | **35,681** | **182,640** | **182,640** | - | **182,640** |
| | | | | | | - | - | | - |
| **IUCN** | | | | | | | | | |
| Professional Services | *IUCN: End of year audit* | *External auditing fees* | *PMC* | | 6,000 | **6,000** | 6,000 | | **6,000** |
| Professional Services | *IUCN: Independent Terminal Evaluation* | *End of project evaluation contracted by GEF Agency* | *PMC* | 20,000 | | **20,000** | 20,000 | | **20,000** |
| **CI-Americas** | | | | | | | | | |
| Professional Services | *CI-AFD: ICZM process planning workshop - facilitation services* | *National: Facilitation and documentation of event est'd 15 days* | *1.2.3* | 2,000 | | **2,000** | 2,000 | | **2,000** |
| Professional Services | *CI-AFD: Synthesis workshop facilitation services* | *National: Facilitation and documentation of event est'd 15 days* | *1.2.4* | 2,000 | | **2,000** | 2,000 | | **2,000** |
| Professional Services | *IUCN: End of year audit* | *External auditing fees* | *PMC* | | 2,000 | **2,000** | 2,000 | | **2,000** |
| **CI-Guyana** | | | | | | | | | |
| Professional Services | *CI-G: Lit review + GIS mapping services* | *National: Estimated duration 3 months* | *1.1.1* | 10,000 | | **10,000** | 10,000 | | **10,000** |
| Other fees / professional services | *CI-G: Remote sensing data costs* | *Reciept & processing of satellite imagery (4 month)* | *1.1.1* | 19,000 | | **19,000** | 19,000 | | **19,000** |
| Professional Services | *CI-G: EGS community study* | *National: 6 months* | *1.1.2* | 7,000 | | **7,000** | 7,000 | | **7,000** |
| Professional Services | *CI-G: EGS Flood defense study* | *National: 6 months* | *1.1.2* | 5,000 | | **5,000** | 5,000 | | **5,000** |
| Professional Services | *CI-G: Carbon mitigation study* | *National: 11 months* | *1.1.2* | 16,000 | | **16,000** | 16,000 | | **16,000** |
| Professional Services | *CI-G: Biophysical process research* | *National: 4 months* | *1.1.2* | 16,000 | | **16,000** | 16,000 | | **16,000** |
| Professional Services | *CI-G: Open standards Conservation Planning* | *National: 3 months* | *1.1.3* | 4,000 | | **4,000** | 4,000 | | **4,000** |
| Professional Services | *CI-G: Restoration effectiveness review* | *National: 3 months* | *1.1.3* | 5,000 | | **5,000** | 5,000 | | **5,000** |
| Professional Services | *CI-G: Policy analysis* | *National: 2 months* | *1.1.4* | 2,000 | | **2,000** | 2,000 | | **2,000** |
| Professional Services | *CI-G: NBS Mangrove outreach to decision makers* | *National: 3 months* | *1.1.4* | 3,000 | | **3,000** | 3,000 | | **3,000** |
| Professional Services | *CI-G: Online KM sharing platform (with CLME+ project)* | *National: 2 months* | *1.1.4* | 3,000 | | **3,000** | 3,000 | | **3,000** |
| Professional Services | *CI-G: Planning workshop (linked to Inception meeting)* | *National: 2 months* | *1.2.3* | 3,000 | | **3,000** | 3,000 | | **3,000** |
| Professional Services | *CI-G: ICM scoping consultancy as workshop input.* | *National: 2 months* | *1.2.4* | 4,000 | | **4,000** | 4,000 | | **4,000** |
| **CI-Suriname** | | | | | | | | | |
| Professional Services | *CI-S: EGS community study* | *National: 6-8 months TBD* | *1.1.2* | 22,000 | | **22,000** | 22,000 | | **22,000** |
| Professional Services | *CI-S: EGS Flood defense study* | *National: 6-8 months TBD* | *1.1.2* | 20,000 | | **20,000** | 20,000 | | **20,000** |
| Professional Services | *CI-S: Open standards Conservation Planning* | *National: 3 months* | *1.1.3* | 2,000 | | **2,000** | 2,000 | | **2,000** |
| Professional Services | *CI-S: Policy analysis* | *National: 2 months* | *1.1.4* | 5,000 | | **5,000** | 5,000 | | **5,000** |
| Professional Services | *CI-S: Online KM sharing platform (with CLME+ project)* | *National: 2 months* | *1.1.4* | 3,000 | | **3,000** | 3,000 | | **3,000** |
| Professional Services | *CI-S: ICM scoping consultancy as workshop input.* | *National: 2 months* | *1.2.4* | 5,000 | | **5,000** | 5,000 | | **5,000** |
| | | | | - | - | - | - | | - |
| **Total Professional Services** | | | | **178,000** | **8,000** | **186,000** | **186,000** | - | **186,000** |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **IUCN** | | | | | | | - | - | | - |
| Professional Services | *IUCN: End of year audit* | *External auditing fees* | *PMC* | | | 6,000 | **6,000** | 6,000 | | **6,000** |
| Professional Services | *IUCN: Independent Terminal Evaluation* | *End of project evaluation contracted by GEF Agency* | *PMC* | | 20,000 | | **20,000** | 20,000 | | **20,000** |
| **CI-Americas** | | | | | | | | | | |
| Professional Services | *CI-AFD: ICZM process planning workshop - facilitation services* | *National: Facilitation and documentation of event est'd 15 days* | *1.2.3* | | 2,000 | | **2,000** | 2,000 | | **2,000** |
| Professional Services | *CI-AFD: Synthesis workshop facilitation services* | *National: Facilitation and documentation of event est'd 15 days* | *1.2.4* | | 2,000 | | **2,000** | 2,000 | | **2,000** |
| Professional Services | *IUCN: End of year audit* | *External auditing fees* | *PMC* | | | 2,000 | **2,000** | 2,000 | | **2,000** |
| **CI-Guyana** | | | | | | | | | | |
| Professional Services | *CI-G: Lit review + GIS mapping services* | *National: Estimated duration 3 months* | *1.1.1* | | 10,000 | | **10,000** | 10,000 | | **10,000** |
| Other fees / professional services | *CI-G: Remote sensing data costs* | *Reciept & processing of satellite imagery (4 month)* | *1.1.1* | | 19,000 | | **19,000** | 19,000 | | **19,000** |
| Professional Services | *CI-G: EGS community study* | *National: 6 months* | *1.1.2* | | 7,000 | | **7,000** | 7,000 | | **7,000** |
| Professional Services | *CI-G: EGS Flood defense study* | *National: 6 months* | *1.1.2* | | 5,000 | | **5,000** | 5,000 | | **5,000** |
| Professional Services | *CI-G: Carbon mitigation study* | *National: 11 months* | *1.1.2* | | 16,000 | | **16,000** | 16,000 | | **16,000** |
| Professional Services | *CI-G: Biophysical process research* | *National: 4 months* | *1.1.2* | | 16,000 | | **16,000** | 16,000 | | **16,000** |
| Professional Services | *CI-G: Open standards Conservation Planning* | *National: 3 months* | *1.1.3* | | 4,000 | | **4,000** | 4,000 | | **4,000** |
| Professional Services | *CI-G: Restoration effectiveness review* | *National: 3 months* | *1.1.3* | | 5,000 | | **5,000** | 5,000 | | **5,000** |
| Professional Services | *CI-G: Policy analysis* | *National: 2 months* | *1.1.4* | | 2,000 | | **2,000** | 2,000 | | **2,000** |
| Professional Services | *CI-G: NBS Mangrove outreach to decision makers* | *National: 3 months* | *1.1.4* | | 3,000 | | **3,000** | 3,000 | | **3,000** |
| Professional Services | *CI-G: Online KM sharing platform (with CLME+ project)* | *National: 2 months* | *1.1.4* | | 3,000 | | **3,000** | 3,000 | | **3,000** |
| Professional Services | *CI-G: Planning workshop (linked to Inception meeting)* | *National: 2 months* | *1.2.3* | | 3,000 | | **3,000** | 3,000 | | **3,000** |
| Professional Services | *CI-G: ICM scoping consultancy as workshop input.* | *National: 2 months* | *1.2.4* | | 4,000 | | **4,000** | 4,000 | | **4,000** |
| **CI-Suriname** | | | | | | | | | | |
| Professional Services | *CI-S: EGS community study* | *National: 6-8 months TBD* | *1.1.2* | | 22,000 | | **22,000** | 22,000 | | **22,000** |
| Professional Services | *CI-S: EGS Flood defense study* | *National: 6-8 months TBD* | *1.1.2* | | 20,000 | | **20,000** | 20,000 | | **20,000** |
| Professional Services | *CI-S: Open standards Conservation Planning* | *National: 3 months* | *1.1.3* | | 2,000 | | **2,000** | 2,000 | | **2,000** |
| Professional Services | *CI-S: Policy analysis* | *National: 2 months* | *1.1.4* | | 5,000 | | **5,000** | 5,000 | | **5,000** |
| Professional Services | *CI-S: Online KM sharing platform (with CLME+ project)* | *National: 2 months* | *1.1.4* | | 3,000 | | **3,000** | 3,000 | | **3,000** |
| Professional Services | *CI-S: ICM scoping consultancy as workshop input.* | *National: 2 months* | *1.2.4* | | 5,000 | | **5,000** | 5,000 | | **5,000** |
| | | | | | - | - | - | - | | - |
| **Total Professional Services** | | | | | **178,000** | **8,000** | **186,000** | **186,000** | - | **186,000** |
| **IUCN** | | | | | | | - | - | | - |
| International Transportation | *IUCN: Red listing expert travel to Ecosystem RL* | *NBS region/ IUCN expert travel 2-* | *1.1.3* | | 5,500 | | **5,500** | 5,500 | | **5,500** |
| Local transportation | | | *1.1.3* | | 200 | | **200** | 200 | | **200** |
| Lodging / meals / perdiem | | | *1.1.3* | | 2,300 | | **2,300** | 2,300 | | **2,300** |
| International Transportation | *IUCN: Inception Workshop Travel* | *S.Am region/ IUCN Project Manager 1-2 pax/ 4 days* | *PMC* | | | 3,000 | **3,000** | 3,000 | | **3,000** |
| Local transportation | | | *PMC* | | | 200 | **200** | 200 | | **200** |
| Lodging / meals / perdiem | | | *PMC* | | | 800 | **800** | 800 | | **800** |
| International Transportation | *IUCN: M& E Travel to NBS region.* | *S.Am region/ IUCN Project Manager 1-2 pax/ 4 days* | *PMC* | | | 3,000 | **3,000** | 3,000 | | **3,000** |
| Local transportation | | | *PMC* | | | 200 | **200** | 200 | | **200** |
| Lodging / meals / perdiem | | | *PMC* | | | 800 | **800** | 800 | | **800** |
| **CI-Americas** | | | | | | | | | | |
| International Transportation | *CI-AFD: Red listing expert travel* | *International/ Invited red listing experts 3-4 partip/ 4 days* | *1.1.3* | | 6,000 | | **6,000** | 6,000 | | **6,000** |
| Local transportation | | | *1.1.3* | | 200 | | **200** | 200 | | **200** |
| Lodging / meals / perdiem | | | *1.1.3* | | 3,300 | | **3,300** | 3,300 | | **3,300** |
| International Transportation | *CI-AFD: Planning workshop (linked to Inception meeting)* | *NBS region/ 4-7 pax TBD/ 4 days* | *1.2.3* | | 9,000 | | **9,000** | 9,000 | | **9,000** |
| Local transportation | | | *1.2.3* | | 300 | | **300** | 300 | | **300** |
| Lodging / meals / perdiem | | | *1.2.3* | | 4,950 | | **4,950** | 4,950 | | **4,950** |
| International Transportation | *CI-AFD: Synthesis & ICZM planning workshop* | *NBS Region/ 5-8 pax TBD/ 4 days* | *1.2.4* | | 9,000 | | **9,000** | 9,000 | | **9,000** |
| Local transportation | | | *1.2.4* | | 600 | | **600** | 600 | | **600** |
| Lodging / meals / perdiem | | | *1.2.4* | | 4,950 | | **4,950** | 4,950 | | **4,950** |
| International Transportation | *CI-AFD Inception Workshop Travel* | *International/ 1 pax/ 3 days* | *PMC* | | | 1,655 | **1,655** | 1,655 | | **1,655** |
| Local transportation | | | *PMC* | | | 100 | **100** | 100 | | **100** |
| Lodging / meals / perdiem | | | *PMC* | | | 400 | **400** | 400 | | **400** |
| International Transportation | *CI-AFD: Travel for 2 participants in CI-GEF/ IW Learn Quito (Ecuador) Event 2018.* | 2 pax NBS region to Quito/ lodging | *1.1.5* | | 3,000 | | **3,000** | 3,000 | | **3,000** |
| Local transportation | | | *1.1.5* | | 100 | | **100** | 100 | | **100** |
| Lodging / meals / perdiem | | | *1.1.5* | | 1,200 | | **1,200** | 1,200 | | **1,200** |
| | | | | | | | - | - | | - |
| **CI-Guyana** | | | | | | | - | - | | - |
| Local transportation | *CI-G: Field ground truthing travel* | Local travel | *1.1.1* | | 1,500 | | **1,500** | 1,500 | | **1,500** |
| Local transportation | *CI-G: Local community EGS study* | Local travel | *1.1.2* | | 3,000 | | **3,000** | 3,000 | | **3,000** |
| International Transportation | *CI-G IUCN Red Listing Workshop Travel* | *Invited red listing expert 2* | *1.1.3* | | 1,500 | | **1,500** | 1,500 | | **1,500** |
| Local transportation | | | *1.1.3* | | 100 | | **100** | 100 | | **100** |
| Lodging / meals / perdiem | | | *1.1.3* | | 825 | | **825** | 825 | | **825** |
| International Transportation | *CI-G: Engage French Guiana & Brazil particpation* | NBS region - 2 trips/ 1 pax @ 2 day | *1.2.2* | | 1,200 | | **1,200** | 1,200 | | **1,200** |
| Local transportation | | | *1.2.2* | | 100 | | **100** | 100 | | **100** |
| Lodging / meals / perdiem | | | *1.2.2* | | 725 | | **725** | 725 | | **725** |
| International Transportation | *CI-G: Planning workshop (includes attendance at* | NBS region/ 4-6 pax/ 3 days | *1.2.3* | | 3,200 | | **3,200** | 3,200 | | **3,200** |
| Local transportation | | | *1.2.3* | | 200 | | **200** | 200 | | **200** |
| Lodging / meals / perdiem | | | *1.2.3* | | 1,550 | | **1,550** | 1,550 | | **1,550** |
| **CI-Suriname** | | | | | | | | | | |
| International Transportation | *CI-S IUCN Red Listing Workshop Travel* | *International/ Invited red listing* | *1.1.3* | | 1,500 | | **1,500** | 1,500 | | **1,500** |
| Local transportation | | | *1.1.3* | | 200 | | **200** | 200 | | **200** |
| Lodging / meals / perdiem | | | *1.1.3* | | 1,650 | | **1,650** | 1,650 | | **1,650** |
| International Transportation | *CI-S: Engage French Guiana & Brazil particpation* | *NBS region -2 trips/ 1 pax @ 2* | *1.2.2* | | 1,200 | | **1,200** | 1,200 | | **1,200** |
| Local transportation | | | *1.2.2* | | 100 | | **100** | 100 | | **100** |
| Lodging / meals / perdiem | | | *1.2.2* | | 1,650 | | **1,650** | 1,650 | | **1,650** |
| | | | | | | | - | - | | - |
| **Total Travel and Accommodations** | | | | | **70,800** | **10,155** | **80,955** | **80,955** | - | **80,955** |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **CI-Americas** | | | | | | | - | - | | - |
| Space rental and material for Workshops | *CI-AFD: ICZM Planning workshop (includes inception hosting)* | *3-4 day event TBD Suriname* | *1.2.3* | 1,500 | | | **1,500** | 1,500 | | **1,500** |
| Catering | | | *1.2.3* | 500 | | | **500** | 500 | | **500** |
| Space rental and material for Workshops | *CI-AFD: Synthesis & ICZM planning workshop* | *3-4 day event TBD NBS region* | *1.2.4* | 1,500 | | | **1,500** | 1,500 | | **1,500** |
| Catering | | | *1.2.4* | 500 | | | **500** | 500 | | **500** |
| | | | | | | | | | | |
| **CI-Guyana** | | | | | | | | | | |
| Space rental and material for Workshops | *CI-G: EGS community study* | *Local meetings* | *1.1.2* | 3,000 | | | **3,000** | 3,000 | | **3,000** |
| Catering | | | *1.1.2* | 1,094 | | | **1,094** | 1,094 | | **1,094** |
| Space rental and material for Workshops | *CI-G: Open standards Conservation Planning* | *National meetings* | *1.1.3* | 2,000 | | | **2,000** | 2,000 | | **2,000** |
| Catering | | | *1.1.3* | 1,000 | | | **1,000** | 1,000 | | **1,000** |
| Space rental and material for Workshops | *CI-G: IUCN Red Listing Workshop (local)* | *Pre event national meetings: 2-3 day event TBD* | *1.1.3* | 2,000 | | | **2,000** | 2,000 | | **2,000** |
| Catering | | | *1.1.3* | 500 | | | **500** | 500 | | **500** |
| Space rental and material for Workshops | *CI-G: Reactivate National Mangrove Working group* | *National meetings* | *1.2.1* | 4,000 | | | **4,000** | 4,000 | | **4,000** |
| Catering | | | *1.2.1* | 1,000 | | | **1,000** | 1,000 | | **1,000** |
| Space rental and material for Workshops | *CI-G: Establish appropriate multi-sectoral coordination forum or task force.* | *National meetings* | *1.2.1* | 4,000 | | | **4,000** | 4,000 | | **4,000** |
| Catering | | | *1.2.1* | 1,000 | | | **1,000** | 1,000 | | **1,000** |
| | | | | | | | | | | |
| **CI-Suriname** | | | | | | | | | | |
| Space rental and material for Workshops | *CI-S: IUCN Red Listing Workshop* | *2-3 day event TBD* | *1.1.3* | 1,000 | | | **1,000** | 1,000 | | **1,000** |
| Catering | | | *1.1.3* | 300 | | | **300** | 300 | | **300** |
| Space rental and material for Workshops | *CI-S: ICZM Planning workshop (includes inception hosting)* | *3-4 day event TBD Suriname* | *1.2.3* | 1,000 | | | **1,000** | 1,000 | | **1,000** |
| Catering | | | *1.2.3* | 300 | | | **300** | 300 | | **300** |
| | | | | | | | - | - | | - |
| **Total Meetings and workshops** | | | | **26,194** | | **-** | **26,194** | **26,194** | **-** | **26,194** |
| | | | | | | | - | - | | - |
| **CI-Suriname** | | | | | | | | | | |
| Grants & Agreements | Grant to Foundation for Forest Management and Production Control (Suriname) for mangrove monitoring/ field ground truthing. | Ground truthing / field costs. | *1.1.1* | 25,000 | | | **25,000** | 25,000 | | **25,000** |
| | | | | | | | - | - | | - |
| **Total Grants & Agreements** | | | | **25,000** | | **-** | **25,000** | **25,000** | **-** | **25,000** |
| | | | | | | | - | - | | - |
| **CI-Suriname** | | | | | | | | | | |
| Equipment >5000 USD | Purchase of monitoring equipment, drones and lab tests to measure biophysical processes | Ground truthing / field costs. Detailed equip. costs from CI-Suriname/ SBB govt agency. | *1.1.1* | 35,000 | | | **35,000** | 35,000 | | **35,000** |
| | | | | | | | - | - | | - |
| **Total Equipment** | | | | **35,000** | | **-** | **35,000** | **35,000** | **-** | **35,000** |
| | | | | | | | - | - | | - |
| **IUCN** | | | | | | | | | | |
| Office / storage rent | *IUCN: Other direct costs* | | *1.1.3; 1.2.2; 1.2.3; 1.2.4* | 4,000 | | | **4,000** | 4,000 | | **4,000** |
| Office supply | *IUCN: Other direct costs* | | *1.1.3; 1.2.2; 1.2.3; 1.2.4* | 450 | | | **450** | 450 | | **450** |
| | | | | | | | | | | |
| **Conservation International** | | | | | | | | | | |
| Reimbursement pre-project spending | Reimbursement to CI-AFD for pre-project development costs. | Please see detailed pre-spending budget (CI-AFD/ ref. L. Culcay) | *Pre-Project Phase* | - | | | - | - | | - |
| Office / storage rent | *CI-AFD: Other direct costs* | | *All outputs* | 7,000 | | | **7,000** | 7,000 | | **7,000** |
| Office supply | *CI-AFD: Other direct costs* | | *All outputs* | 545 | | | **545** | 545 | | **545** |
| Office / storage rent | *CI-G: Other direct costs* | | *All outputs* | 20,041 | | | **20,041** | 20,041 | | **20,041** |
| Office supply | *CI-G: Other direct costs* | | *All outputs* | 3,859 | | | **3,859** | 3,859 | | **3,859** |
| Office / storage rent | *CI-S: Other direct costs* | | *All outputs* | 18,276 | | | **18,276** | 18,276 | | **18,276** |
| Office supply | *CI-S: Other direct costs* | | *All outputs* | 2,242 | | | **2,242** | 2,242 | | **2,242** |
| | | | | | | | - | - | | - |
| **Total Other Direct Costs** | | | | **56,413** | | **-** | **56,413** | **56,413** | **-** | **56,413** |
| | | | | | | | | | | |
| **Total GEF funded project costs** | | | | **538,366** | **-** | **53,836** | **592,202** | **592,202** | **-** | **592,202** |

| CO-FINANCING | | | | Co-financing by component (in USD) | | | Co-financing per year (in USD) | | |
|---|---|---|---|---|---|---|---|---|---|
| SOURCES OF CO-FINANCI | NAME OF CO-FINANCIER | CO-FINANCING DESCRIP | TYPE OF COFINANCING | Component 1 | Project Management Cost | Total | TR1 | TR2 | TOTAL |
| Other multilateral organization | International Union for the Conservation of Nature (IUCN | Letter received X | In-kind | 40,000 | 20,000 | **60,000** | 60,000 | | **60,000** |
| NGO | Conservation International (CI). | Letter receivedX | In-kind | 40,000 | 40,000 | **80,000** | 80,000 | | **80,000** |
| NGO | World Wildlife Fund Guianas. | Letter received X | In-kind | 89,750 | | **89,750** | 89,750 | | **89,750** |
| NGO | United Nations Development Programme (UNDP) Globa | Letter received X | In-kind | 249,155 | | **249,155** | 249,155 | | **249,155** |
| Other multi-lateral Agency | Foundation for Forest Management and Production Control (SBB Suriname) | UNDP /GCCA+ | In-kind | 152,000 | | **152,000** | 152,000 | | **152,000** |
| Government agency/ Foundation | National Agricultural Research & Extension Institute (NAREI Guyana) | Letter received X | In-kind | 39,000 | | **39,000** | 39,000 | | **39,000** |
| Government agency | Guyana Forestry Commission (GFC Guyana) | Letter received X | In-kind | 41,000 | | **41,000** | 41,000 | | **41,000** |
| Government agency | Government of Brazil | Letter received X | In-kind | 127,354 | | **127,354** | 127,354 | | **127,354** |
| - | | | | - | - | - | - | - | - |
| **Sub Total Co-financing IN-KIND** | | | | **778,259** | **60,000** | **838,259** | **838,259** | - | **838,259** |
| **Sub Total Co-financingIN CASH** | | | | - | - | - | - | - | - |
| **Total Co-financing** | | | | **778,259** | **60,000** | **838,259** | **838,259** | - | **838,259** |
| **TOTAL PROJECT BUDGET** | | | | **1,316,625** | **113,836** | **1,430,461** | **1,430,461** | - | **1,430,461** |

## Planned Project Budget by Component

| | Project budget by component (in USD) | | | | |
|---|---|---|---|---|---|
| | Component 1 | Component 2 | Component 3 | PMC | Total budget |
| ***Personnel Salaries and benefits*** | $ 146,958.97 | | | $ 35,681.00 | $ 182,640 |
| ***Contractual services*** | $ 178,000.00 | | | $ 8,000.00 | $ 186,000 |
| ***Travels and accommodations*** | $ 70,800.00 | | | $ 10,155.00 | $ 80,955 |
| ***Meetings and workshops*** | $ 26,194.00 | | | $ - | $ 26,194 |
| ***Grants & Agreements*** | $ 25,000.00 | | | $ - | $ 25,000 |
| ***Equipment*** | $ 35,000.00 | | | $ - | $ 35,000 |
| ***Other Direct Costs*** | $ 56,412.99 | | | $ - | $ 56,413 |
| ***TOTAL GEF FUNDED PROJECT*** | $ 538,366 | $ - | $ - | $ 53,836 | $ 592,202 |

**Planned Project Budget by Year**

| | Project budget by component (in USD) | | | | |
|---|---|---|---|---|---|
| | Year 1 | Year 2 | Year 3 | Year 4 | Total budget |
| ***Personnel Salaries and benefits*** | $ 182,640 | | | | $ 182,640 |
| ***Contractual services*** | $ 186,000 | | | | $ 186,000 |
| ***Travels and accommodations*** | $ 80,955 | | | | $ 80,955 |
| ***Meetings and workshops*** | $ 26,194 | | | | $ 26,194 |
| ***Grants & Agreements*** | $ 25,000 | | | | $ 25,000 |
| ***Equipment*** | $ 35,000 | | | | $ 35,000 |
| ***Other Direct Costs*** | $ 56,413 | | | | $ 56,413 |
| ***TOTAL GEF FUNDED PROJECT*** | $ 592,202 | $ - | $ - | $ - | $ 592,202 |

**ANNEX G: CO-FINANCING LETTERS**

Please see attachments for Co-financing Letters.

## ANNEX H: STAKEHOLDER ENGAGEMENT PLAN

*1. Introduction.*

1. The project works to enable a more integrated and transboundary treatment of coastal zone and integrated management influencing an estimated 250,000 – 300,000 ha of mangrove ecosystem within the North Brazil Shelf Large Marine Ecosystem (NBS-LME or NBS). Situated along the north eastern coast of South America the NBS-LME spans ~1.1 million km2 over six countries, being bordered by the Caribbean Sea in Central America and extending south to the Atlantic Parnaiba River delta along the margin of Maranhão and Piauí States in Brazil (Ekau & Knoppers, 2003). It is a region that retains and supports great natural richness and cultural diversity, yet is also subject to increasing development pressures, potentially game-changing inchoate industries (such as offshore oil extraction) and subject to high flooding risk for the largely coastal population given IPCC climate scenarios.

2. It is a one year project that aims to generate necessary baseline knowledge and technical assessments as inputs towards a collaborative vision and coordinated well informed management of North Brazil Shelf (NBS) mangrove systems, with emphasis upon the information needs of countries Guyana and Suriname. Although the project collaborates with Brazil and French Guiana, the two countries of Guyana and Suriname were identified during the planning phase (as part of a participatory multi-government workshop held in Suriname June 2017) as being the most relevant beneficiaries for a one year investment to provide a balanced representation of information, organization and capacity necessary to further a shared transboundary ICZM agenda for the region.

3. Building on initial assessments initiated in the pre-project phase, this is to be achieved through participatory knowledge gap analysis organized between project partners, targeted support to monitoring, mapping and research in the two countries, updated threat assessments (applying Ecosystem Red Listing expertise with IUCN) and knowledge sharing for decision making. This is in coordination with complementary actions underway and planned for November 2017 onwards as part of the GEF/ UNDP CLME+ sub-regional NBS project (that includes the NBS countries as part of the recently developed transboundary Strategic Action Program (SAP) ratified by CLME+ (including NBS) countries into 2017-2021).

4. Strengthening the knowledge base to achieve a more comparable level between NBS countries supports development of a transboundary coordination mechanism(s) between the countries of Guyana, Suriname, French Guiana and Brazil (Amapá). The overall expected outcome is an improved integrated coastal management of the extensive, ecologically connected yet vulnerable mangrove habitat of the North Brazil Shelf (NBS) region. This catalyst project over one year is intended to support the aforementioned CLME+ SAP implementation and actions within the NBS-LME region.

*2. Policies and Requirements.*

5. This plan is intended to fulfill the CI-GEF agency Environmental and Social Management Framework (ESMF) and Policy 9 on the processes of informing and engaging the partners and stakeholders in the project. The CI-GEF Project Agency oversees the Executing Entity involving all stakeholders as early as possible in the preparation process and makes sure that their views and concerns are taken into account. The CI-GEF Project Agency team will further ensure that the Executing Entity will continue to hold consultations throughout the project as described in this plan. To address this requirement and respond to the design of the project, the stakeholder engagement plan is organized to best achieve its two principal Outcomes – (1) development and sharing of the knowledge base for mangrove conservation in the region and (2) multi-actor construction of a technical and governance process for a transboundary ICZM in the NBS region.

6. Although only a one-year project, stakeholder feedback is also an important part of adaptive management of the project given that it is intended as a planning and staging process for continued ICZM developments.

*3. Summary of Stakeholder Engagement activities during project development.*

7. The project development team (represented by IUCN, CI-Americas Field Division (AFD), CI-Suriname and CI-Guyana country offices) has engaged in a series of information sharing and consultation activities with a range of project stakeholders throughout the project development phase. Those consultations that took place from late 2016 and the stakeholders involved are summarized below.

8. During 18th-28th February 2016 CI conducted a first rapid marine assessment with a representative selection of stakeholders in Suriname. A small task group of marine experts focusing in fisheries, climate, ecology and marine protected design, social and economic conditions met with the productive sector (aquaculture, tuna fishers and processing facility, inshore fishing cooperatives, honey producers), government agencies, local community leaders, congress representatives, local NGOs, WWF-Guianas as well as the academic sector piloting green-grey coastal defense infrastructure work.

9. This generated a first marine strategy for CI based conservation work in Suriname with partners. The early review received perspectives from stakeholder groups and recommended a regional coordination between NBS countries for effective mangrove conservation in the region. The need to consolidate conservation measures for the near pristine nature of much of Suriname's coastline was recognized given the interest of government counterparts and probability of rapid development in the near future.

10. Following these consultations, the project design team based in CI received the support of IUCN-Sur in coordination with IUCN-Brazil who would act as Executing Agency for the project. CI proceeded to develop a desktop review of the current state of mangrove knowledge for the NBS region following a thematic structure developed during the formative steps of a new Global Mangrove Alliance between CI, IUCN, WWF and TNC during 2016. This involved a series of consultations with country CI-Guyana and CI-Suriname programs that liaised directly with government, CSO and academia in the region.

11. A series of over 30 follow-up meetings were held between stakeholders (government, NGO, academia and local private sector) during the pre-project phase in the countries of Guyana and Suriname from May-September culminated in a workshop 14th-15th June 2017 with the definitive objective to discuss and agree with NFPs and stakeholders the results based framework for the GEF-IW MSP submission. This also reviewed the preliminary state of mangrove developments and knowledge as base-line for a possible GEF-IW investment. A breakdown of the meetings socializing and discussing the project (stakeholders, objectives, agreed actions etc.) is available from CI upon request.

12. Subsequent meetings and correspondence for project development with government agency counterparts and project partners included coordination with the GEF UNDP CLME+ project (Project Manager Patrick Debels) and UNEP (Christopher Corbin) to identify synergies and possible planning steps between the presented project and the CLME+ sub-regional NBS project. Similar exchanges were undertaken with the UNDP GCCA+ program and the WWF-Guianas program which are undertaking relevant and complementary initiatives in the region. A formalized agreement with government of Brazil as partners, participants and in-kind supporters of the proposed work for the northerly Amapá and Para provinces was coordinated directly through the IUCN-Brazil and CI-Brazil offices.

13. Project document revisions were circulated by the development team to the governments of Guyana, Suriname and Brazil and received endorsement as documented in Annex J.

### *4. Project Stakeholders.*

14. The goal of this Stakeholder Engagement Plan is to involve all project stakeholders, including government NFPs, national protected areas agency staff, NGO staff, community representatives and the scientific community as early as possible in the implementation process and throughout the process, to make sure their views and input are received and taken into consideration. The plan will help the project establish effective lines of communication and working relationships. This also includes involving public as a means of engendering ownership of an eventual ICZM process and as integral proponents of problem solving and solutions for coastal sustainability in the region. Table 1 provides the list of stakeholders and their relationship to the project.

15. We will continue to engage national protected areas agency staff, local communities and the academic community through the local CI-Suriname and CI-Guyana offices in coordination with the GEF National Focal Points and with support of IUCN-Brazil and the CI Americas Field Division. Most engagement will be managed by the CI-Suriname Field Manager between field offices. Wider outreach will be coordinated with the CLME+ program for the region.

### *5. Stakeholder Engagement Program.*

16. Key stakeholders and stakeholder engagement methods are summarized in Table 1. It is expected that consultations will be in the format of structured meetings and interviews throughout the project given the nature of the project. Research concerning community value of mangroves is expected to involve questionnaires and opinion polls with focus groups.

17. The stakeholder engagement program will be implemented in conjunction with the Gender Mainstreaming Strategy and Action Plan thus ensuring that gender equity is maintained throughout project interactions with stakeholders. It also intends to provide due notice of project activities to local communities where relevant through internet placements and where access is limiting, community bulletin boards, SMS etc. and public fora.

18. In the case of indigenous people's communities, consultation with the CI-GEF safeguard expert will determine appropriate engagement protocol, following the CI-GEF ESMF Policy 4 and existing national guidelines and also taking into consideration traditional mechanisms for consultations and decision making.

**TABLE 1: PROJECT STAKEHOLDERS.**

| Stakeholder | Interests in the Project | Project Effect(s) on Stakeholder | Engagement During Project Implementation |
|---|---|---|---|
| **Government of Guyana (GoG).** | | | |
| National Agricultural Research and Extension Institute (NAREI). | The former Guyana Mangrove Restoration Project (GMRP) is now a Mangrove Unit based and financed in NAREI and principal technical wetlands agency for GoG. | Support for mangrove restoration practice, research and education at the national scale in Guyana. Involvement in all regional networking and planning discussions. | NAREI is the principal national agency and contact point for development of research activities, consolidation of a national mangrove working group and development of an ICZM road map in Guyana and coordinates directly with the CI-Guyana office. |
| Guyana Forestry Commission (GFC). | National sustainable forestry. | Inputs towards EGS valuation and Integrated Coastal Zone Management. | The GFC and DoF will be invited to contribute to all relevant project technical meetings |
| Department of | National sustainable | Inputs towards EGS | |

| Stakeholder | Interests in the Project | Project Effect(s) on Stakeholder | Engagement During Project Implementation |
|---|---|---|---|
| Fisheries<br>(DoF – Guyana) | fisheries. | valuation and Integrated Coastal Zone Management. | |
| Cabinet of the President (KabPres) | Oversight and development of national participation in regional initiatives. | National representation in regional coordination and ICZM developments. | CI-Suriname will directly advise KabPres concerning project developments throughout the project. |
| **Government of Suriname (GoS)** | | | |
| Nature Conservation Division of the Suriname Forest Service. (Min. of ROGB in Dutch).<br>Department of Fisheries in the Ministry of Agriculture, Animal Husbandry and Fisheries.<br>Maritime Authority Suriname | Principal technical counterparts for GoS for the project. Through the ICZM planning process, lessons learnt and benefits can be multiplied beyond the scope of the original project | Support for mangrove conservation planning, regional networking and synthesis of baseline knowledge. | ROGB and SBB are the principal national agencies and contact point for development of research activities, consolidation of the national mangrove working group, formation of a regional mangrove action committee and development of an ICZM road map in Guyana and coordinates directly with the CI-Suriname office. |
| Foundation for Forest Management and Production Control (known as SBB in Dutch) | Sustainable forestry and rational resource use. | Inputs towards mangrove cover estimations and monitoring, EGS valuation and Integrated Coastal Zone Management. | As above. |

| Stakeholder | Interests in the Project | Project Effect(s) on Stakeholder | Engagement During Project Implementation |
|---|---|---|---|
| **<u>Local communities.</u>**<br><br>(Includes community groups such as the Victoria Guyana Village Mangrove Action Committee) | Principal resource users in the coastal zone and interested community groups. | Beneficiaries of mid-long term coastal management outcomes. | Community mangrove groups will receive information concerning the project during inception and be invited to participate in both the ecosystem valuation studies (EGS) and local planning workshops (to be defined as part of the ICZM planning strategy). IN all cases study results will be presented where feasible to the community for early feedback and validation. |
| Private sector (fishers, tourism developers, upstream industry). | Sustainable production in the NBS region. | Sustainable outcomes for local industry. | |
| NBS country research institutions and universities and international academic community. | Local mangrove researchers (in particular those based in University of Guyana, Anton de Kom University, University of Suriname) and international experts will make key technical contributions to the project. This also includes links to regional research agencies including FURG (Brazil) and Brazil Federal & State Universities | Will provide an opportunity for networking and improved research opportunities as well as synthesis in fields of interest relevant to mangrove conservation and applied actions based on the information base in the region. | Local universities will be supported for mangrove characterization, biophysical research and synthesis of restoration options under the project. Interactions will be directly with the country CI and IUCN field offices in Suriname, Guyana and Brazil building on existing relationships. Where appropriate and indicated the PMU will also contact the international research community to help |

| Stakeholder | Interests in the Project | Project Effect(s) on Stakeholder | Engagement During Project Implementation |
|---|---|---|---|
| | (Amapá) and research entities in French Guiana. | | consolidate and review the research components of the project. Academia is expected to participate in both national and regional mangrove working groups. |
| **NGOs**<br>WWF-Guianas<br>Wetlands International<br>Suriname Radio and Television Foundation (SORTS)<br>Green Heritage Fund Suriname (GHFS).<br>Guyana Marine Conservation Society (GMCS) | WWF-Guianas has a long-standing program in the Guianas region and is a partner for transboundary mapping of ecosystem services and ICZM development for the region.<br>Wetlands International has expertise between global programs looking for "building with nature" coastal defense options and conservation incentives in wetland communities in collaboration with AdeKUS and CI in Suriname.<br>SORTS is a local Suriname NGO working in awareness for mangrove conservation with institutions and communities.<br>GHFS / GMCS work in | Synergies between complementary projects provide opportunity for collaboration, coordinated efforts and a multi-actor agenda to better address the various challenges behind achieving NBS sustainable development goals. | During the project inception period the IUCN and CI field offices will coordinate with local NGOs to identify shared discussion, actionable items and project development lines. This includes those already providing in-kind co-financing support to the project (e.g. WWF-Guianas) as well as potential new opportunities that may arise. |

| Stakeholder | Interests in the Project | Project Effect(s) on Stakeholder | Engagement During Project Implementation |
|---|---|---|---|
| | local wildlife conservation and research. | | |
| **Multilateral and bilateral development programs**<br><br>(UNDP, UNEP, US-AID, EU-11th EDF) | UNDP - is leading the Global Climate Change Alliance + (GCCA+) project in the NBS.<br>UNDP/ UNEP – leads the NBS GEF-CLME+ based sub-project.<br>US-AID – is supporting Caribbean Climate Adaptation Project work in the region in 2018. | Complementary actions should improve the effectiveness of individual initiatives through coordination and contributions towards under a joint ICZM transboundary planning process. | The PMU will coordinate at regular intervals with the other development programs underway in the region. |
| **Indigenous Peoples communities.** | 13 IP communities live adjacent to mangrove areas in the two project countries. | IP communities as with local communities involved in knowledge review, threat assessment, EGS evaluation and any future ICZM planning. | As communities influenced by a potential ICZM planning process, the project will fully respect IP stakeholder rights and process. This will follow international CI-GEF and WB standards and approaches with due deference and consideration of national IP guidelines. An appropriate mechanism for engagement as part of the ICZM planning process will be determined in consultation with NFPs in each country. |

*6. Methods Used for Consultation.*

21. The CI and IUCN field offices in the NBS region will coordinate consultation with stakeholder groups throughout the project having an established working history and peer network relevant to the situational context of the proposed work. This will follow the project work plan developed during project inception, in accordance with, and where appropriate facilitated by National Focal Points (NFPs).

22. We will also build engagement and consultation of NFPs, NGOs and development agencies into the ICZM strategy planning exercise during the project inception meeting where representation of stakeholder groups for an ICZM process will be determined. Part of that process will be determination of the decision making mechanic.

23. To ensure wide dissemination, all project data, decision-support tools and training materials will be made available through a web platform with the CLME+ project to provide where possible a single go-to reference point for an ICZM process. In addition, we will provide links to relevant websites through the IUCN and Conservation International websites.

24. The project aims to support mechanisms for national mangrove technical groups and a regional mangrove action committee. The latter will establish operational guidelines to help facilitate the adequate representation of stakeholders' perspectives and interests. It is encouraged that the flow of technical information to stakeholders be regular, accessible, well considered, transparent, centralized and agile as a basis for well informed decision making. This is an expected requisite for an ICZM development phase and part of project development. International NGOs will be engaged through the executing agency and through the project's international advisors.

25. The national mangrove working groups will be logical contributors to national mangrove threat assessments and the IUCN ecosystem level regional assessment. They will also provide a platform for discussion and validation of project technical results as well as the design of responses to impacts identified in the regional assessments as part of the ICZM planning agenda.

26. Where appropriate the project will engage the international scientific and development community through participation and presentations at conferences, including learning exchange opportunities such as the CI-GEF IW-Learn exchange organized for FY18 in Quito, Ecuador.

*7. Timetable.*

27. Estimated schedule for engagements by stakeholder group:

| Project Stakeholders | Q1 | Q2 | Q3 | Q4 |
|---|---|---|---|---|
| Government of Guyana, Suriname. | | | | |
| Local communities. | | | | |
| Private sector | | | | |
| NGOs | | | | |

| | | | | |
|---|---|---|---|---|
| Multilateral and bilateral development programs | | | | |
| Indigenous Peoples communities. | | | | |

*8. Resources and Responsibilities.*

28. IUCN-Sur is responsible for project execution and for ensuring implementation of the project's Stakeholder Engagement Plan (SEP) at the whole-project level. The Regional Leads based in IUCN-Brazil, CI-Suriname and CI-Guyana will be responsible for ensuring that the SEP is implemented at the level of country. This is also supported by established standards for engagement with stakeholders applied by IUCN and CI for each project geography.

*9. Accountability and Grievance Mechanism.*

29. The PSC will set up a process at the project inception meeting for resolving any and all grievances within and without the project. Instructions are provided on the IUCN and CI websites with contact information and grievance procedures. This will include contact information for PSC members and CI-GEF project agency staff.

30. The primary point of contact is IUCN-Sur who will respond to all grievances in writing within 15 working days of receipt, and can also be received at any of the CI country offices. Any grievances recorded will be entered into the project monitoring framework and responses sent to the claimant recorded. If the claimant is not satisfied with the response, the grievance may be submitted directly to the CI-GEF Project Agency.

31. In the event that this process does not resolve the grievance, the grievant may file a claim with the CI Director of Compliance (DOC) who can be reached at:

> **Electronic email**: GEFAccountability@conservation.org
> **Mailing address**: Direction of Compliance
> Conservation International
> 2011 Crystal Drive, Suite 500
> Arlington, VA 22202, USA.

32. The accountability and grievance mechanism used in this project is that generated by the CI-GEF Project Agency. It is documented as a Project Resource and on-line available here

**10. Monitoring and reporting.**

33. SEP specific indicators are proposed as part of Monitoring and Evaluation to help monitor the level of engagement during the project:

| | |
|---|---|
| Indicator SEP 1: | Number of government agencies, civil society organizations, private sector, indigenous peoples and other stakeholder groups that have been involved in the project implementation phase on an annual basis |
| Indicator SEP 2: | Number persons (sex disaggregated) that have been involved in project implementation phase (on an annual basis) |
| Indicator SEP 3: | Number of engagements (e.g. meeting, workshops, consultations) with stakeholders during the project implementation phase (on an annual basis) |
| Indicator SEP 4: | Percentage of stakeholders who rate as satisfactory the level at which their views and concerns are taken into account by the project (undertaken by independent terminal evaluation consultancy at end of project). |

## ANNEX I: GENDER MAINSTREAMING PLAN

Key terms and definitions

| | |
|---|---|
| Gender | Refers to the economic, social, political and cultural attributes and opportunities associated with being a man or a woman. These definitions vary among regions and cultures and change over time. |
| Gender integration | Refers to strategies applied in program assessment, design, implementation and evaluation to take gender into account and to compensate for gender-based inequalities. |
| Gender Mainstreaming | The process of incorporating a gender perspective into policies, strategies, programs, project activities, and administrative functions, as well as into the institutional organization of an organization. Goes above and beyond "gender integration". |
| Gender equity | The process of being fair to men and women and taking measures to compensate for historical and social disadvantages that prevent men and women from operating on a level playing field. |
| Gender equality | The state or condition that affords men and women equal enjoyment of human rights, socially valued goods, opportunities and resources. |

## 1. Goals and scoping for a Gender Mainstreaming Strategy.

### *1.1 Project brief*

1. The project aims to create the multi-disciplinary information base, regional coordination mechanism and multi-sectoral consensus required to implement elements of the CLME+ Strategic Action Plan pertaining to the mangroves that most directly underpin human wellbeing in the North Brazil Shelf LME.

2. This involves stakeholder consultations and participation to help build a multi-sectoral consensus based around a knowledge foundation necessary for the development of an Integrated Coastal Management (ICZM) Plan for Mangroves. The two principal project outcomes are organized within a single component:

   1.1 A coordinated effort between the countries of Guyana and Suriname to improve baseline knowledge of biophysical, social and economic information most relevant to the conservation and sustainable use of mangroves in Guyana and Suriname. This is to be obtained from synthesizing results of existing work and undertaking new research where gaps exist as the technical foundation for building an NBS Integrated Coastal Management Plan for mangroves.

   1.2 A broad-based multi-sectoral consensus is reached regarding how to manage Guyana, Suriname and Brazil's mangrove in a coordinated fashion and with the goal of achieving progress on six Aichi Targets, UN Sustainable Development Goals (SDGs) and a zero net loss rate by 2030 and contributing to the achievement of the relevant SDGs and Aichi Targets.

3. Indicative activities are as follows (please refer to the Project Document for further detail):

4. Knowledge development.

1.1.1 Updated mangrove cover and estimates from literature review and synthesis, use of remote sensing data and ground truthing scoped to the needs of each country.

1.1.2 Three linked mangrove Ecosystem Goods and Services Valuation studies examining mangrove economy and human well-being of local communities, national flood defenses and global carbon mitigation potential.

1.1.3 Biophysical characterization research, a conservation planning exercise, IUCN Ecosystem Red List assessment and a review of restoration methods and effectiveness in the NBS region.

1.1.4 A policy analysis linked to recommendations for decision makers.

1.1.5 An online knowledge sharing platform in coordination with the CLME+ sub-regional NBS project.

5. Developing a shared NBS Integrated Coastal Management Process.

1.2.1 Set up and/ or reactivate mangrove regional coordination group(s) and develop a multi-sectoral coordination mechanism.

1.2.2 Engage and formalize French Guiana and Brazil participation in a shared ICZM opportunity.

1.2.3 Develop a three country work plan (Guyana, Suriname and Brazil) to establish the ICZM mangrove baseline.

1.2.4 Through scoping consultancy and a synthesis and planning workshop, establish with stakeholders a framework and road map for an NBS 2021 regional ICM plan.

### *1.2 Gender considerations within the project*

6. The project is expected to interact with gender issues at various levels. The information gathering stage (Outcome 1.1) includes work with local communities to determine the value of mangroves to coastal societies. Having an ICZM planning and development focus (Outcome 1.2) the project engages a very specific audience of decision makers and sectorial representatives and participation, where we can help ensure that ICZM policy developments recommend consideration and inclusion of gender dimensions.

7. Both men and women living within and around mangrove areas influence and receive benefits from the ecosystem goods and services that they provide, and are often important custodians with customary roles and often distinct roles in local industry. Given the cultural history and societal gender roles in local communities, men and women both depend upon and interact with their natural environment for food, shelter, extracted resources etc. in different and often complex ways. These are important considerations when developing changes to environmental and tenure policy, particularly if it implies changes to livelihoods or access to resources. Equitable opportunities to build awareness of both men and women, understanding their societal roles and active participation and leadership in conservation themes, from communities to policy makers, is an important part of effective conservation and climate adaptation planning linked to mangroves, including efforts that aim to ensure the effective future placement and regulation of managed areas and networks.

8. The development of an ICZM planning process has important gender dimensions in view of the implications of eventual application (spatial ordination of uses in the coastal zone and related management measures) which would potentially effect (with the intention of improving) livelihoods in

and surrounded managed areas and furthermore increase disaster resilience from flooding risk in the coast. This provides an opportunity within the ICZM plan development phase to help ensure equitable opportunities, inclusivity of men, women and where relevant in decision making, age groups in participatory fora and dissemination of results throughout its implementation.

### *1.3 Project partners previous experience with and understanding of gender.*

9. Both IUCN as EA and CI as Executing Partner comply with GEF and World Bank gender mainstreaming standards in project work and advocate equitable gender participation in all levels of project work. This also recognizes that an effective project should look to understand the social relationships between men, women, and age groups in terms of their bearing on stewardship of project outcomes, conservation and sustainable development goals with local communities.

10. This includes consideration of the situational context for project placement and the relationship between gender roles, conservation objects and targets. It also is recognized that certain methods are more effective and appropriate when engaging communities and focus groups when looking to encourage an equitable participation which avoids marginalization of any social or cultural groups.

11. As the organization that will work closely with communities in the project countries of Guyana and Suriname, CI has considerable experience integrating the human dimension in conservation practice and ecosystem management.

12. Over the last four years, CI has focused considerable effort on the nexus of gender and conservation, developing tools and staff skills to help identify and address gender inequalities within conservation programming. Building on an institutional Gender Policy, the Gender Integration Guidelines were developed specifically for conservation staff. These guidelines are fully available to the project[17].

13. This GMP also benefits from advice and evaluation by IUCN and CI gender specialists. This project provides an opportunity to improve our understanding and practices in the specific area of gender and conservation.

### *1.4 Goals and purpose of the NBS-Mangroves Gender Mainstreaming Plan.*

14. In compliance with the CI-GEF Project Agency's "Gender Mainstreaming Policy", the Executing Agency is responsible for ensuring that the project in undertaken in such a way that both women and men:

    a) Receive culturally compatible social and economic benefits;

    b) Do not suffer adverse effects during the development process; and

    c) Receive full respect for their dignity and human rights.

15. Effectively the plan describes:

    - How gender issues will be effectively incorporated into recruitment processes, capacity building activities, consultations and decision-making bodies;
    - The measures that will be put in place to ensure the equitable participation of women and men in the project, and

[17] Please see http://www.conservation.org/How/Pages/gender-and-conservation.aspx

- The M&E system put in place to ensure that gender issues will be properly tracked over the life of the project to allow for adaptive management measures.

## 2. Gender Mainstreaming Plan.

16. CI field teams (working on-site) will consult with IUCN as Executing Agency for guidance in inferring or further development of gender dimensions linked to the ICZM planning process. CI offices also have access to Gender and Conservation Specialists in the CI-HQ Policy and Practice Unit. The construction of a multi-country transboundary management framework is encouraged to be participatory within the situational context appropriate to each country, important for ownership of developed plans and consensual decisions that may influence lifestyles between men and women (or between age groups). Hence gender considerations will be included in the research and synthesis phase in both improved understanding of societal roles (emphasis is in Output 1.2 which considers ecosystem goods and service provision by mangroves to local communities) and appropriate methodologies such as male or female focus groups, male or female facilitation of working groups, household surveys to ensure opportunity for participation and a well-rounded representation of perspectives in community survey work. The results of these developments should be part of recommendations in the ICZM planning briefs etc. (Outcome 1.2).

17. During the implementation of the project attention will be given to ensuring equitable opportunities for participation in research opportunities, distribution and access of results to both men and women. Sex disaggregated information concerning participation is included as part of the monitoring & evaluation plan for the project.

### *2.1 Recruitment Processes.*

18. IUCN and Conservation International as Project Executing partners are Affirmative Action/ Equal Opportunity Employer of minorities, females, protected veterans, and individuals with disabilities. It is the policy of IUCN and CI to afford equal employment opportunity to all employees and applicants for employment. In the context of the project, all contractual opportunities are subject to the CI-GEF procurement process18 including fair and non-discriminatory evaluation procedure.

### *2.2. Capacity building activities.*

19. Communication of project results development of the an updated risk analysis for NBS mangroves, the IUCN ecosystem red listing process, relevant research results and advances in ICZM planning will be coordinated with National Focal Points and facilitated through the CI national websites, as well as through local presentations in communities and as part of the mangrove technical fora between experts supported by the project. These events and opportunities should be equally available to both men and women and will also involve complementary actions with in-kind support to the project.

In the event of presentations to general public efforts should be made to ensure that adequate notice be given in public messaging and/or through social media to encourage participation. The timing of events should be such to enable equitable gender participation.

### *2.3 Decision making bodies.*

20. The project management team on the ground in Suriname and Guyana is responsible for ensuring that within the situational and cultural context of each country there is no discrimination that influences the

[18] http://www.conservation.org/about/Pages/CI-GEF-project-agency-resources.aspx

availability and receipt of culturally compatible social and economic benefits between men, women and different age groups and that their dignity and human rights are respected throughout the project.

21. Project support for coordinated research and synthesis towards NBS mangrove conservation aims to help reduce potential loss of benefits provided by mangroves for people by improving understanding of interdependencies and societal impacts as part of development of an ICZM decision making process.

22. Such information is the technical basis behind facilitating and enabling a mechanism with stakeholders to co-develop an ICZM planning process that manages diverse industries, expectations and the natural resource. The project hence expects to review and improve awareness of societal roles regarding mangroves and furthermore attend a broad audience with diverse interests, cultural and social backgrounds, including gender and age groups through capacity building, consultation and facilitated discussion in a series of planned in-person and on-line meetings.

23. The M&E system will include disaggregated data to help with adaptive management regarding equitable participation during the project. Since it is a 1 year catalyst project these will serve as important inputs and considerations to promote gender mainstreaming in the subsequent planning steps towards a regional ICZM and within national mangrove action plans.

## 3. Accountability and Grievance mechanism.

24. Stakeholders may raise a grievance at all times to the Executing Agency about any actions instigated by the project and the application of its safeguard frameworks. Affected stakeholders should be informed about this possibility and contact information of the respective organizations at relevant levels should be made available either on-line, during the project start-up workshop and/or in project affected sites where most relevant. Unless project-affected communities request an alternative process, the Accountability and Grievance Policy and Mechanism described in the Safeguard Policies and Processes section of the CI- ESMF shall apply.

25. The project Executing Agency IUCN (EA) will be the first point of contact in the accountability and grievance mechanism.

26. In the first instance any grievance should be addressed and where possible resolved locally. Local CI offices will typically be first point of contact and be responsible on behalf of IUCN as EA for informing project-affected communities about the Grievance provisions, including the ESMF's grievance mechanism. Contact information of the Executing Entity IUCN, CI, and the GEF will be made publicly available to all involved stakeholders. Complaints to the Executing Agency can be made through many different channels including, but not limited to face-to-face meetings, written complaints, telephone conversations, or e-mail.

27. In the event that this process does not resolve the grievance, the grievant may file a claim with the CI Director of Compliance (DOC) who can be reached at:

**Electronic email:** GEFAccountability@conservation.org

**Mailing address:** Direction of Compliance
Conservation International
2011 Crystal Drive, Suite 500

Arlington, VA 22202, USA.

## 4. Monitoring and Reporting:

28. Three indicators were identified to help the project teams follow trends in men's and women's participation related to the project and are included as part of the Monitoring and Evaluation Plan. Sex disaggregated information should be collected where possible throughout the project.

*Indicator GMS 1:* Number of men and women that participated in project activities (e.g. meetings, workshops, consultations).

*Indicator GMS 2:* Number of men and women that received benefits (e.g. employment, income generating activities, training, access to natural resources, land tenure or resource rights, equipment, leadership roles) from the project.

*Indicator GMS 3:* Number of strategies, plans (e.g. management plans and land use plans) and policies derived from the project that include gender considerations.

## ANNEX J: INDIGENOUS PEOPLES PLAN

**To de developed before project inception.**

## ANNEX K: ACCOUNTABILITY AND GRIEVANCE MECHANISM

1. CI-GEF as a Project Agency must ensure that project design, implementation, and learning mechanisms are continuously strengthened to prevent problems and ensure compliance from the onset and to deal with the legitimate concerns of project affected people at the project and operational levels wherever possible. It is the responsibility of CI's Project Agency to monitor any mitigating measures noted from the implementation of the GEF Environmental and Social Safeguards.

2. The CI-GEF Operations Manual details the ESMF that includes the Accountability and Grievance Mechanism as part of the implementation of the safeguards.

3. This includes:

   - Basic information about the complaint review procedures;
   - Instructions for how to file a complaint;
   - Detailed rules of procedure;
   - A registry of complaints, including basic information about the complaint and the complaint's status;
   - Draft and final terms of reference and investigation reports as discussed above; and
   - Annual reports describing the compliance review activities.

4. Stakeholders may raise a grievance at all times to the Executing Agency (EA) about any actions instigated by the project and the application of its safeguard frameworks. Affected stakeholders will be informed about this possibility and the relevant provisions of the CI-GEF ESMF with corresponding contact information of IUCN-Sur and CI-Country at the start of the project. This will be made available either on-line, during the project start-up workshop and/or in project affected sites where most relevant.

5. IUCN as the project EA works within the AGM standards established and described as part of the CI-GEF Agency Ecological and Social Management Framework.

6. IUCN implements an Environmental and Social Management System (ESMS) grievance mechanism to provide people or communities fearing or suffering adverse impacts from a project with an opportunity to raise their concerns. The mechanism covers complaints related to issues where IUCN projects have failed to respect ESMS principles, standards and procedures. The mechanism and complaint procedure are described in the guidance note available at:

   https://www.iucn.org/sites/dev/files/iucn_esms_sia_guidance_note.pdf

7. A template for submitting complaints is available at:

   https://www.iucn.org/sites/dev/files/iucn_esms_complaint_form_template.docx .

8. Guidance for signage can be found at:

   https://www.iucn.org/sites/dev/files/iucn_esms_guidance_on_signage_template.docx .

9. If this process does not result in resolution of the grievance at the local level with IUCN and CI-field offices, the grievant may file a claim through CI's Ethics Point Hotline at https://secure.ethicspoint.com . Through Ethics Point, CI will respond within 15 calendar days of receipt, and claims will be filed and included in project monitoring processes.

10. Alternatively, the grievant may file a claim with the Director of Compliance (DOC) who is responsible for the CI Accountability and Grievance Mechanism and who can be reached at:

11. Mailing address: Director of Compliance
Conservation International
2011 Crystal Drive, Suite 500
Arlington, VA 22202, USA.

12. Project level indicators for the AGM are as follows:

*Indicator AGM 1:* Number of conflict and complaint cases reported to the project's Accountability and Grievance Mechanism.

*Indicator AGM 2:* Percentage of conflict and complaint cases reported to the project's Accountability and Grievance Mechanism that have been resolved.

**ANNEX L: STATUS OF IMPLEMENTATION OF PROJECT PREPARATION ACTIVITIES AND THE USE OF FUNDS**

| PPG Grant Approved at PIF: **N/A (ONE STEP MSP SUBMISSION)** | | | |
|---|---|---|---|
| ***Project Preparation Activities Implemented*** | ***GEF/LDCF/SCCF Amount ($)*** | | |
| | ***Budgeted Amount*** | ***Amount Spent To date*** | ***Amount Committed*** |
| Salaries and Benefits (Staff time for project development and design) | | 45,208 | 45,208 |
| Travel (Stakeholder engagement with various partners | | 4,792 | 4,792 |
| **Total** | 0 | | 50,000 |

## ABBREVIATIONS

| | |
|---|---|
| **AdKU** | Anton de Kom University (Suriname) |
| **BBS** | National Herbarium of Suriname |
| **CATS** | Caribbean Aqua-Terrestrial Solutions Program |
| **CBD** | Convention on Biological Diversity |
| **CBO** | Community-based Organization |
| **CCAP** | Caribbean Climate Adaptation Project |
| **CCDRM** | Canada Caribbean Disaster Risk Management Fund (CCDRM) |
| **CDAP** | Capacity Development Action Plan |
| **CELOS** | Centre for Agricultural Research (Suriname) |
| **CEP** | Caribbean Environment Program |
| **CI** | Conservation International |
| **CI-AFD** | CI Americas Field Division |
| **CLME+** | Caribbean Large Marine Ecosystem Project |
| **CPUE** | Catch Per Unit Effort |
| **CoP** | Community of Practice |
| **CSO** | Civil Society Organization |
| **DoF-G** | Department of Fisheries (Guyana) |
| **EA** | Executing Agency |
| **EAF** | Ecosystem Approach to Fisheries |
| **EBA** | Ecosystem Based Adaptation |
| **EBM** | Ecosystem Based Management |
| **EDF** | European Development Fund |
| **EEZ** | Exclusive Economic Zone |
| **EGS** | Ecosystem Goods and Services |
| **EPA** | Environmental Protection Authority (Guyana) |
| **EU** | European Union |
| **FAO** | Food and Agriculture Organization |
| **GCCA+** | Global Climate Change Alliance Program ($10^{th}$ EU EDF) |
| **GEF** | Global Environment Facility |
| **GFC** | Guyana Forestry Commission |
| **GHFS** | Green Heritage Fund Suriname |
| **GIS** | Geographic Information System |
| **GIZ** | German Federal Enterprise for International Cooperation |
| **GMCS** | Guyana Marine Conservation Society |
| **GMRP** | Guyana Mangrove Restoration Program |
| **IA** | Implementing Agency |
| **ICZM** | Integrated Coastal Zone Management |
| **IPCC** | Intergovernmental Panel on Climate Change |
| **IUCN** | International Union for the Conservation of Nature |
| **KabPres** | Presidential cabinet office, Suriname |
| **LECZ** | Low Elevation Coastal Zone |
| **MAFOSUR** | Mangrove Forum Suriname |
| **MMAs** | Marine Managed Areas |
| **MPAs** | Marine Protected Areas |
| **MRV** | REDD+ Measurement, Reporting and Verification Program |
| **MSP** | Marine Spatial Planning |
| **MUMA** | Multiple Use Management Area |
| **NAREI** | National Agricultural Research & Extension Institute (Guyana) |

| | |
|---|---|
| **NBAP** | National Biodiversity Action Plan |
| **NBS-LME** | North Brazil Shelf Large Marine Ecosystem |
| **NCAS** | National Capacity Assessment Strategy |
| **NCD** | Nature Conservation Division of the Suriname Forest Service |
| **NGO** | Non-Government Organization |
| **NFP** | National Focal Point |
| **NFMS** | National Forest Monitoring System |
| **NGO** | Non-Governmental Organization |
| **NIMOS** | National Institute for Environment and Development of Suriname |
| **NMRP** | The National Mangrove Reforestation Program |
| **MSP** | Marine Spatial Planning |
| **PAC** | Protected Areas Commission (Guyana) |
| **RAMSAR** | RAMSAR Convention on Wetlands of International Importance |
| **REDD+** | Reducing Emissions from Deforestation and Forest Degradation Program |
| **ROGB** | Ministry of Physical Planning, Land and Forest Management (Suriname) |
| **RPP** | Readiness Preparation Proposal (Suriname) |
| **SAP** | Strategic Action Plan |
| **SBB** | Foundation for Forest Management and Production Control (Suriname) |
| **SCPAM** | Suriname Coastal Protected Area Management Project |
| **SLR** | Sea Level Rise |
| **SORTS** | Radio and Television Suriname Foundation |
| **SST** | Sea Surface Temperature |
| **TNC** | The Nature Conservancy |
| **UNEP** | United Nations Environment Program |
| **UNESCO** | United Nations Educational, Scientific and Cultural Organization |
| **UNFCCC** | United Nations Framework Convention on Climate Change |
| **US-AID** | United States Agency for International Development |
| **WG** | Working group |
| **WWF** | World Wildlife Fund |