

Technical Cooperation Abstract

I. Basic Project Data

▪ Country/Region:	SURINAME/CCB - Caribbean Group
▪ TC Name:	Blue Carbon Restoration in the Bigi Pan MUMA, Suriname
▪ TC Number:	SU-T1132
▪ Team Leader/Members:	ALLENG, GERARD P. (CSD/CCS) Team Leader; WATSON, GREGORY (CSD/CSD) Alternate Team Leader; GANGADIN, RAIJANT AMARNATH (CCB/CSU); COLLINS, MICHAEL I. (CSD/RND); GOMEZ, JUAN CARLOS (CSD/CCS); FRANCINE VAUROF (CSD/CCS)
▪ Taxonomy:	Client Support
▪ Number and name of operation supported by the TC:	N/A
▪ Date of TC Abstract:	28 Sep 2022
▪ Beneficiary:	Suriname
▪ Executing Agency:	MINISTERIO DE PLANIFICACIÓN Y COOPERACIÓN PARA EL DESARROLLO
▪ IDB funding requested:	US\$1,520,000.00
▪ Local counterpart funding:	US\$185,000.00 (In Kind)
▪ Disbursement period:	48 months
▪ Types of consultants:	Individual Consultants and Firms
▪ Prepared by Unit:	CSD/CCS - Climate Change
▪ Unit of Disbursement Responsibility:	CCB/CSU - Country Office Suriname
▪ TC included in Country Strategy:	Yes
▪ TC included in CPD:	No
▪ Alignment to the Update to the Institutional Strategy 2010-2020:	Productivity and innovation; Environmental sustainability; Gender equality

II. Objective and Justification

- 2.1 The main objective of the project is to improve mangrove management in Suriname by applying an evidence-based approach, which will guide future conservation/restoration efforts, enhance the governance of these ecosystems, and promote sustainable livelihoods.
- 2.2 Mangrove ecosystems provide a wide range of ecological and economic goods and services, such as raw materials and food, coastal protection, erosion control, water purification, maintenance of fisheries, carbon sequestration, tourism, recreation, education, and research. They are considered some of the most carbon-dense ecosystems globally. Recent estimates of carbon stored (i.e., 6.4 billion metric tonnes) indicate a greater storage capacity than previously estimated (i.e., 4.19 billion metric tonnes). These forests have suffered from the pressure exerted by drivers such as anthropogenic pressure, climate change and other natural processes. As a result, severe losses of their original total cover and hence interrupting the provision of its ecosystem services, have occurred. Suriname has an extensive coastal mangrove fringe area as part of the coastal wetland system found along the Guianas coast. Estimates of Suriname coverage range between 89,000-100,00 hectares, around 2% of the world's total. Despite the vast mangrove area and considering that more than two-thirds of the mangroves are protected, parts of the system have experienced a measure of degradation. The National Mangrove Strategy Suriname (NMS)

identifies two significant drivers of mangrove degradation: unsustainable human development and climate change impacts. Impacts from unsustainable human activities related to agriculture, fishing, tourism, infrastructure, and urbanization have resulted in physical losses and the interruption of these systems' ecological functions. Climate change-related stressors, e.g., sea-level rise (SLR), have disrupted sedimentation rates and altered these forests' hydrological balance, resulting in increased rates of coastal erosion and physical degradation. The Government of Suriname has implemented efforts to improve the protection and management of these systems, including establishing the Multiple Use Management Areas (MUMAS) as part of the Planning Law (Planwet) 1973. Additionally, mangrove restoration and conservation have also been acknowledged as critical elements of sustainable development policy. Instruments such as the National Climate Change Policy, Strategy and Action Plan for Suriname (2015), the Nationally Determined Contributions (NDC), and the National Adaptation Plan (NAP) have raised the attention towards acting upon the main drivers of mangrove degradation. Despite these efforts to improve the protection of mangrove ecosystems management, systemic barriers impact conservation and sustainable use efforts. There are issues surrounding weak governance arrangements, with institutional arrangements reflect a dispersion of roles and responsibilities among ministries and public institutions mainly caused by the change in the mandate to manage these ecosystems with every new Government and unclear legal frameworks. Also, mangrove management is perceived as a purely environmental issue, and the linkages with other sectors is disregarded. The situation translates into a dispersed institutionality and a lack of sectoral complementarity and coordination to address mangrove degradation as part of broader landscape dynamics. Secondly, there is a limited understanding of the socio-ecological dynamics surrounding the drivers of change. There is a persistent need to understand better the linkages between unsustainable livelihoods and mangrove degradation and the increasing effect of climate change in these ecosystems.

III. Description of Activities and Outputs

- 3.1 **Component 1. Site characterization and impacts assessment.** The objective of this component is to assess site characteristics (i.e., social and ecological), including a detailed analysis of the drivers of degradation. Complementarily, an impact analysis of the proposed restoration areas is intended to determine which measures could effectively address the drivers
- 3.2 **Component 2. Addressing the drivers of mangrove degradation in the Bigi Pan MUMA.** The main objective of this component is to employ restoration and conservation activities at the site following the results of the assessment undertaken in Component 1.
- 3.3 **Component 3. Monitoring and evaluation.** This component aims to establish the measures to address mangrove degradation and determine the parameters and tools to monitor their effectiveness.
- 3.4 **Component 4. Strengthening mangrove governance and local engagement.** This component aims to support the stakeholders' engagement (national and local governmental and non-governmental) in the restoration and conservation of mangroves.
- 3.5 **Component 5. Project administration.** Establishment of a project management unit

IV. Budget

Indicative Budget (US\$)

Activity/Component	IDB/Fund	Counterpart	Total
Site characterization and impacts assessment	170,000	15,000	185,000
Addressing the drivers of mangrove degradation in the Bigi Pan MUMA	1,000,000	125,000	1,125,000
Monitoring and evaluation	100,000	25,000	125,000
Strengthening mangrove governance and local engagement	150,000	15,000	165,000
Project administration	100,000	5,000	105,000
Total	1,520,000	185,000	1,705,000

V. Executing Agency and Execution Structure

- 5.1 The project will be executed by Anton de Kom University of Suriname (AdeKUS), specifically by the Hydraulic Laboratory of the Department of Infrastructure (IS) of the Faculty of Technological Sciences (FTeW) (AdeKUS-FTeW-IS).
- 5.2 The Anton De Kom University has been involved in the implementation of mangrove restoration utilizing a nature-based approach to rehabilitation efforts. The lessons learned from the application of the sediment trapping units (STUs) is a model that can be applied to the project site and replicated in other parts of the region where appropriate. Additionally, the University has the financial and accounting capacity that will be required to help manage a project of this type.

VI. Project Risks and Issues

- 6.1 The main risk anticipated for the project is that changes in ocean hydrodynamics will negatively impact the mangrove rehabilitation efforts. Stormy weather associated with high swells and strong waves may damage the permeable wooden fences. To mitigate this risk, regular monitoring and repair will be required. The local community will play an essential role in this effort, especially with the restoration of the wooden fences.
- 6.2 Another significant risk is associated with the sustainability of the proposed interventions and activities. Mangrove restoration/conservation and the promotion of sustainable livelihoods are directly dependent on partners' active involvement and the availability of financial and technical resources. The project seeks to ensure local partners' engagement and strengthen governance frameworks around protecting mangrove ecosystems to address this risk.

VII. Environmental and Social Classification

- 7.1 The ESG classification for this operation is "undefined".