

Suriname

IDB Lab¹ Delegation of Authority to Country Offices²

Community Conservation of Mangroves

SU-T1135

Plan of Operations

1. GENERAL INFORMATION

A.	Project Title	Community Conservation of Mangroves
B.	Project No. (TC#)	SU-T1135
C.	Executing Agency	Green Heritage Fund Suriname
D.	Target Beneficiaries	Direct beneficiaries include at least 150 students at the primary and secondary level participating in school based and extra curricula training events; 100 adults participating in community engagement events and 60 community members participating in livelihood training sessions.
E.	Sources of Funding	Total Cost: US\$302,548 IDB Lab Contribution: US \$150,000 (49%) Counterpart Resources: US \$152,548 (51%)
	Objectives	The objective of this project is to engage, train and empower rural communities in conservation and sustainable management of mangrove ecosystems in Suriname.
G.	Execution Timetable	The project will be executed in 21 months The period for disbursement will be 24 months
H.	Environment and Social Impact Review	The project was categorized as C based on application of the Safeguard Policy Screening and Classification Tools on October 15, 2020

2. BACKGROUND AND JUSTIFICATION

- 2.1** This project seeks to contribute to preservation and protection of mangrove ecosystems in Suriname by piloting a model of Community Based Mangrove Management (CBMM) in the rural Nickerie and Coronie districts of Suriname. CBMM can be defined as community driven management and conservation of mangrove

¹ The Multilateral Investment Fund (MIF) which remains the legal name of IDB Lab

² Delegation of authority pursuant to MIF-GN-123

forests involving resource users in the management process directly. The key objective is to ensure the generation of a sustainable livelihoods for the coastal communities via their engagement and active support in the sustainable management of mangrove forest resources and biodiversity ecosystem, while simultaneously protecting and conserving the mangrove ecosystems.

- 2.2** According to a 2016 study by the World Wildlife Fund (WWF), mangroves in Suriname cover an estimated 100,000 hectares, which is about 1.6-2% of the world's mangroves³. In addition to their role in building the Young Coastal Plain in Suriname, mangroves provide several major ecological functions and services in Suriname. These include, notably, protection of the shoreline from erosion, provision of spawning zones and nurseries for coastal fisheries, and a habitat for millions of migratory shorebirds, breeding water birds and other wildlife (notably, the Mangrove ecoregion in Suriname is an important habitat migrating shorebirds from Nearctic regions⁴).
- 2.3** Globally, the intricate links between local livelihoods and ecosystem health are now widely recognized. With coastal communities constantly evolving and diversification of their needs and occupations, there is a greater urgency to equate socio-economic and livelihood concerns with ecosystem health. In this regard the project will focus on promoting involvement and training of coastal communities in Nickerie and Coronie bordering Suriname's mangrove ecosystem, so that their livelihood activities be sustainable, and health of the mangrove ecosystem preserved. Both areas rely primarily on agriculture for their income and food supply. Mangrove ecosystems are critical to mitigate flooding of these coastal zones which can have a catastrophic effect in crop and property damage to small scale subsistence farmers in these communities. In addition, mangroves support coastal fisheries, stabilize, and protect shorelines, enhance water quality in coastal streams and estuaries, provide a habitat for fish, shellfish, and bees all of which provide livelihoods.
- 2.4** The livelihoods of smaller coastal communities (especially in the targeted rural coastal communities of the Nickerie and Coronie districts) are heavily dependent on resources and services provided by coastal ecosystems, like the mangroves. From basic necessities including food, water, and shelter to intrinsic services like tourism and recreation, coastal ecosystems cater to a multitude of human needs. In terms of livelihoods, mangroves in the targeted regions support a range of activities including (i) coastal fishing, (ii) honey production as the Parwa species (black mangrove) is a source for nectar for honeybees, and (iii) production of homeopathic medicine as some

³ Burke, L. and Ding, H. (2016) Valuation of Coastal Protection near Paramaribo, World Wildlife Fund Guianas

⁴ In Suriname and Venezuela alone, there are more than 118 species of birds, including more than 70 species of waterfowl and as many as 5 million birds inhabit these countries. The South American endemic, scarlet ibis (*Eudocimus ruber*) breeds in this ecoregion along the coast of Suriname. Notable species of birds also found in this ecoregion are black skimmer (*Rhynchops niger*), gull-billed tern (*Sterna nilotica*), shot-billed dowitcher (*Limnodromus griseus*), lesser and greater yellowlegs (*Tringa flavipes* and *T. melanoleuca*), black-bellied whistling duck (*Dendrocygna autumnalis*) and tricolored egret (*Egretta tricolor*) just to name a few from the list of species named as internationally important for the Suriname coastal area (see <https://worldwildlife.org>).

- parts of the mangrove plants are even used by the local communities in natural remedies. The quality of these services and ecosystem health are in turn dependent on their judicious utilization by communities. Local communities are not just recipients of these services but also exert direct influence on the health of ecosystems.
- 2.5** The project seeks to provide training in sustainable livelihoods for users of the mangrove ecosystem services and also to create greater awareness and influence positive behavioral change in youth and older members of the community so that this important ecosystem can sustainably support environmental and economic service delivery
- 2.6** In terms of the project's fit with the thematic focus of IDB Lab, the proposed solution has been categorized within IDB Lab's focus area Climate-Smart agriculture (CSA). Two challenges relevant to the project are highlighted in the IDB Lab's thematic paper on CSA. The first is the need to increase incomes, sustainability, and climate resilience of smallholders, and the second is to regenerate the environment and mitigate climate change which are both challenges addressed by the intervention. Additionally, climate change and environment sustainability issues addressed in the project are key cross cutting issues prioritized by IDB Lab. **By targeting micro and small business as a key beneficiary group in project, it is the intention to help increase the income and sustainability of these business by more effective and sustainable use of the mangrove ecosystems.**
- 2.7** Within IDB Lab portfolio there are synergies with the operation SU-T1111 Green Wings Precision Farming which seeks to reduce deposits and use of toxic pesticides by rice farmers in the coastal area of Nickerie a practice that will also support mangrove health. Additionally there are knowledge sharing opportunities with EC-T1370 in Ecuador, which supports improvements in sustainability and the competitiveness of the associations of brown shell and red crab collectors, while preserving the Mangrove ecosystems on which their livelihoods and resilience to climate change depend, as well as with DR-M1051 in the Dominican Republic which provides support for small fishermen and rice farmers to adopt better production practices that will improve their competitiveness while reducing their environmental footprint, which is currently affecting the quality of the coastal ecosystem on which they depend.
- 2.8** Additionally, the project has synergies with and complements to work of IDB in Suriname. In recognition of the importance of Mangrove preservation and conservation, the IDB's Climate and Sustainable Development division (CSD), is currently preparing a mangrove technical co-operation project with the government of Suriname (Ministry of Finance) and the local university that will focus on restoration and conservation of blue carbon with a possible emphasis on comparing and monitoring of biodiversity. As the CSD project focusses specifically on the mangrove ecosystems and not the behavioral changes needed in coastal communities, there is

clear additionality for an IDB Lab project that focuses on community education, awareness building and sustainable practices to preserve the health and viability of mangroves, particularly in rural communities that live in proximity to Suriname's coastline and mangrove ecosystems.

- 2.9** Another synergy with the CSU portfolio is with the SU-T1117 operation 'Mainstreaming Climate Change in Sustainable Decision-Making Tools'. The objective of this TC is to support the mainstreaming of climate change in the National Development Plan of Suriname in order to enable evidenced-based decision-making that is inclusive and transparent, and that takes into consideration the impacts of climate variability in multiple sectors. Specifically, the proposed IDB Lab data will increase awareness, support, and data to add value in these operations.

3. EXECUTING AGENCY AND BENEFICIARIES

- 3.1** The Green Heritage Fund Suriname (GHFS), established in October 2005, is a nonprofit organization based in Paramaribo, Suriname and will be the executing agency for this project. GHFS' mission is to **empower Surinamese citizens to make wise decisions for the sustainable use of natural resources through education, engagement, data collection and knowledge sharing**. GHFS currently runs four programs, which seek to ensure sustainable development of Suriname's natural resources and biodiversity through education, training, citizen science and stakeholder and community engagement. For example, GHFS runs a citizen science dolphin monitoring and education program active since 2006, which has led to sustainable community-based dolphin tourism in the Suriname River Estuary. U.S. National Aeronautics and Space Administration (NASA) and National Oceanic and Atmospheric Administration (NOAA) supported scientific protocols from the Global Learning and Observations to Benefit the Environment (GLOBE) program, are used for gathering environmental data and teaching others to replicate this intervention. GHFS also provides technical leadership to support to the World Wildlife Fund (WWF) in its marine spatial planning efforts, coordinating implementation of activities in both Suriname and Guyana.
- 3.2** GHFS will also include GLOBE Program as one of their partners in this project. GFHS Suriname is currently a member of the GLOBE Program which is an international science and education program that provides students and the public worldwide with the opportunity to participate in data collection and the scientific process and contribute meaningfully to our understanding of the Earth system and global environment. Launched in 1995, GLOBE provides grade level-appropriate, interdisciplinary activities and investigations about the atmosphere, biosphere, hydrosphere, and soil/pedosphere, which have been developed by the scientific community and validated by teachers. The GLOBE Network which currently connects 121 countries and over 25.000 schools worldwide. Within the GLOBE network, representatives from

8 countries (Bahamas, Bermuda, Brazil, Chile, Colombia, Dominican Republic, Panama, and Peru) have expressed interest in participating in the knowledge exchange activities from this project.

- 3.3** **The direct beneficiaries targeted for this project include at least 150 students on primary and secondary level participating in school based and extra curricula training events: 100 adults participating in community engagement events and 60 community members participating in livelihood training sessions. The livelihood training will focus on micro entrepreneurs that utilize the mangrove resources to generate income specifically in fishing and honey production and will also provide some insights into ecotourism opportunities given the rich biodiversity and especially the bird population hosted by this ecosystem. Engaging multiple stakeholders, from well-established local institutes to local government and a cross section of the community, will help to ensure the activities are suited to local conditions and that consensus is reached at all stages of project implementation. The engagement of local government could be particularly important to share experiences from the project so that decision makers could consider how to replicate the activities in other nearby coastal communities.**
- 3.4** The project will be piloted in the Nickerie and Coronie districts of Suriname. According to the IDB poverty index, the overall poverty rate in Nickerie is 30% and for Coronie it is 23.6%. Coronie also has the highest unemployment rate of any district in Suriname at 30%.

4. PROJECT OBJECTIVES AND DESCRIPTION

- 4.1** The objective of this project is to pilot a community support model to safeguard and protect mangrove forests in coastal areas of Suriname through community engagement in citizen science education and conservation as well as training in sustainable livelihood practices. This pilot project seeks to implement a model of Community Based Mangrove Management (CBMM) for preservation and protection of mangrove ecosystems. CBMM can be defined as community driven management and rehabilitation of mangrove forests involving resource users in the management process directly. The aim of the CBMM model is to ensure the generation of sustainable livelihoods for the coastal communities via their engagement and active support in the sustainable management of mangrove forest resources and biodiversity ecosystem, while simultaneously protecting and conserving the mangrove ecosystems.
- 4.2** Based on the project intervention logic and expected impacts 100% of the total IDB Lab funding for this project is invested in climate change mitigation and adaptation activities according to the joint MDB approach on climate finance tracking. This contributes to the IDB Group's goal of increasing the financing of projects related to climate change to 30% of total approvals by the end of 2020.

4.3 To achieve the project objectives, the intervention is structured to include three key components as outlined below.

4.4 **Component I Community & Stakeholder Engagement (US \$50,840.00: IDB Lab US \$36,482.50, Counterpart US \$14,357.50)** The Executing Agency will develop content and execute activities that will build community and stakeholder awareness and active engagement in conservation of mangrove ecosystems. A special target for community awareness and engagement will be local schools where school-based training events will be organized for 150 primary and secondary level students as well as extra curricula events and activities. Due to current Covid-19 restrictions and requirements for social distancing, students will initially be engaged through distribution of activity boxes that will allow them to learn about mangrove conservation at home. This component will also focus on capturing the voices of the students/youth population in targeted communities on the importance of mangrove protection and will provide training in using social media for advancement of conservation practices. To support this element of the intervention, the Executing Agency may enter into a collaboration with The Back Lot, the Executing Agency for the IDB Lab operation SU-T1095 Employment in the Creative Industries, an organization that has extensive capacity in multimedia content development and youth training in this area. Additionally, the Executing Agency will develop engagement materials and content to target and engage other key stakeholder organizations involved in mangrove conservation, such as the Anton de Kom University, Stichting Mangrove Forum Suriname, and relevant government agencies. These stakeholders will be engaged through presentations (virtual & in person), debate events and thematic dialogue.

4.5 The expected outputs of this component will include: (i) 150 students participating in school based and extra curricula training events and (ii) 100 Adults participating in Community engagement events.

Component II: Training to strengthen Livelihoods (US \$100,440.00 : IDB Lab US \$47,540.00, Counterpart US \$52,900.00) The Executing Agency will develop relevant curriculum and to deliver training in targeted communities of Nikerie and Coronie to support sustainable practices and livelihoods of microentrepreneurs and microenterprises that rely on the mangrove ecosystem. During prior consultations that the Executing Agency had with the targeted communities, priority training areas have been identified as follows: eco-tourism, honey production, sustainable fishing, and digital business skills. In the area of fishing, a study will be conducted to identify relevant best practices for sustainable fishing which will inform training for fisherfolk. To address overfishing for example there may be a need to introduce seasonal fishing, in parallel with training of fishermen in other skills, so that they have an income in the off season. Similarly, in the area of honey production for example the project will finance the development of a marketing structure for local honey production including: a market study, promotion and branding strategies, production protocols, supply chain management and testing and standards.

- 4.6 The expected outputs of this component will include: (i) 60 community members participating in livelihood training; (ii) a paper on recommendations for sustainable fishing practices drawn from consultations with the community and experts and (iii) a marketing plan for honey production (including a market study, promotion and branding strategies, production protocols, supply chain management guidelines and testing /standards guidelines/protocols).
- 4.7 **Component III: Knowledge Exchange for coordination and sustainability (US \$92,028.00: IDB Lab US \$40,837.50, Counterpart US \$51,190.50)** The Executing Agency will facilitate knowledge exchange between various stakeholders in community centered interventions for conservation of mangroves. The knowledge exchange has various dimensions and targets a broad range of stakeholders, partners and also the wider national and international community. This component will, for example, facilitate the piloting of a collective impact group approach for mangrove conservation in Suriname and a design thinking event to develop a model for behavioral change. In addition to this a knowledge product will be produced on the importance of community behavioral change importance to effective and sustained conservation of mangrove ecosystems. Data collection, analysis and exchange of information and knowledge on mangrove health and conservation with other countries in the region through the GLOBE Network will also be financed through this component. Together with GLOBE, the Executing Agency will work on adapting existing GLOBE protocols for the protection and sustainable management of mangrove ecosystem. The knowledge exchange also includes local mini expos on mangrove conservation to sensitize the broader local population (and youth in particular) as well as participation in relevant international forums. To target younger children a knowledge product in the form of a comic book on the importance of mangroves as a seasonal or permanent habitat for bird species in Suriname will be produced and disseminated.
- 4.8 The key expected outputs of this component will include: (i) 4 Outreach events on mangrove conservation; (ii) a knowledge product on community behavioral change as a key factor in mangrove conservation; (iii) the development of a GLOBE mangrove monitoring protocol and (iv) an action plan for national mangrove conservation supported by key stakeholder organizations.
- 4.9 **Innovation:** An important aspect of the project will be empowerment of important stakeholders (schools, micro and small businesses, and local NGO's) within the identified coastal communities. Empowerment will be achieved through civil society engagement, building capacity via appropriate training that will include tools and methods supporting diversified and sustainable livelihoods related to mangrove ecosystems, and addressing gender specific issues in the coastal resource management context. Empowerment also entails building the capacity of communities (and local government) to effectively manage their resources. Building capacity and

empowering communities and government decision makers, increases the potential for successful coastal conservation and sustainable development, resulting in positive social, economic, and ecological impacts, with increased equity and benefit sharing for the coastal populations. Knowledge, for example, helps to strengthen empowerment, which in turn can make an important contribution to improving governance, which is why it will be necessary to get the communities involved in training, education and knowledge exchange activities focused on sustainable use of mangrove ecosystems and resources. Research and experience from around the world have increasingly shown that when communities are empowered and granted rights and authority to manage their own terrestrial ecology (for example forests), the community, the government, and the local ecology benefit in numerous ways. This could also be extrapolated to coastal communities and mangrove management. Coastal communities can play an indispensable role in safeguarding their own environment and becoming agents for protection. By enhancing their role in advocating the benefits and value of mangroves and the need to protect them, a valuable support base can be created for the sustainable management, through the creation of a pool of local human capital and capacity, giving the locals means to help protect and rehabilitate affected areas. Apart from local community empowerment the proposed solution will also facilitate data collection, data analysis and exchange of information and knowledge with other countries in the region through the GLOBE (Global Learning and Observations to Benefit the Environment) Network, which will also facilitate the knowledge dissemination activities of the complementary IDB mangrove project led by IDB's CSD division.

- 4.10** **Impact:** Impacts can be expected on the level of: **(a) Sustainable livelihoods for the coastal communities in Nickerie and Coronie:** with proactive and sustainable management of the ecosystems through education, training and capacity building activities, the local microbusinesses that depend on the mangroves ecosystem for their livelihood will be able to better benefit from the added economic value that the mangroves provide (fish, shellfish, honey, etc.), over a longer time horizon. **(b) Contribution to preservation of Mangrove ecosystems:** the proposed intervention will support improved management of the mangrove ecosystems within coastal communities. **(c) Raising awareness:** the proposed solution also facilitates knowledge dissemination on mangroves in Suriname and by also targeting the schools within the local communities which will be connected to GLOBE's network for science education, a new generation can be empowered within these communities, equipped with the knowledge and interest to be more involved in climate change activism and discussions. **(d) Contribution to research on Community Based Mangrove Management:** by measuring behavioral change within the communities and the impact of that change on the mangrove ecosystems this project can also contribute to international data and research on Community Based Mangrove Management. **(e) Contribution to achieving UN Sustainable Development Goals:** due to the prevalence of mangroves in developing countries and the range of ecosystem services they provide, projects focused on mangrove protection and conservation align with

several of the UN Sustainable Development Goals—specifically Goals 13, 14, and 15—which concern adaptation to climate change and the sustainable management of forest and coastal resources.

- 4.11** In all aspects of program delivery, the Executing Agency will work with beneficiary groups and stakeholders to ensure equitable access on the basis of gender, taking into consideration the need to structure such approaches in the context of community culture and norms. To support these efforts, the Executing Agency will maintain gender disaggregated information on project beneficiaries to monitor gender participation and introduce changes that may be required to achieve gender balance.

5. SUMMARY BUDGET FOR PROJECT FINANCING

- 5.1** The budgeted cost of the project is presented in the following summary table, the detailed budget is included as Annex II:

Cost Elements	IDB Lab	Counterpart	Total
Component I Community & Stakeholder Engagement	\$36,482.50	\$14,357.50	\$50,840.00
Component II Training to strengthen Livelihoods	\$47,540.00	\$52,900.00	\$100,440.00
Component III Knowledge Exchange for coordination and sustainability	\$40,837.50	\$51,190.50	\$92,028.00
Project Administration	\$11,640.00	\$26,600.00	\$38,240.00
Evaluation	\$7,500.00	\$2,500.00	\$10,000.00
Contingencies	\$6,000.00	\$5,000.00	\$11,000.00
Total	\$150,000.00	\$152,548.00	\$302,548.00

- 5.2 Sources of Funding:** The total cost of the project is budgeted at US\$302,548 of which IDB Lab will contribute US\$150,000 (49%) in non-reimbursable technical co-operation funds. The Executing Agency commits to make the remaining funds, US\$152,548 (51%), available as counterpart resources, of which US\$84,426.48 will be provided in cash, and US\$68,121.52 will be provided in kind. The Executing Agency commits to provide all counterpart resources either directly and/or by mobilizing other stakeholder/partner agency contributions.
- 5.3 Disbursements:** Disbursements will be reviewed on an ex-post basis as outlined in the following section.

6. MONITORING AND EVALUATION

- 6.1** Operational supervision and disbursement responsibility will reside with the IDB's Country Office in Suriname and the appointed IDB Lab team leader.

- 6.2 Execution and Disbursement Periods:** The Project will be executed in 21 months and disbursed in 24 months.
- 6.3 Disbursement by Results:** The Executing Agency will adhere to the standard IDB Lab disbursement by results, and financial management⁵ arrangements. Project disbursements will be contingent upon verification of the achievement of milestones. Verification of milestones will be based on achievement of specific indicators and results, which will be agreed upon between the Executing Agency and the IDB Lab. Achievement of milestones does not exempt the Executing Agency from the responsibility of reaching the Results Matrix indicators and project's objectives (as presented in Annex I). According to the IDB Lab's Performance and Risk-based Project Management approach, project disbursement amounts will be based on the project's liquidity needs for a maximum period of 6 months. These needs must be agreed upon between the IDB Lab and the Executing Agency and will reflect the activities and costs scheduled in the project's annual planning exercise. The first disbursement will be contingent on the Executing Agency reaching Milestone 0 (fulfillment of conditions prior to first disbursement). Subsequent disbursements will be issued if the following two conditions are met: i) IDB Lab has verified that all milestones due as at the time of disbursements have been achieved; and ii) that the Executing Agency has justified 80% of all cumulative advances. Initial milestones defined for the project are included in Annex IV.
- 6.1 Procurement and contracting:** The Assessment of Integrity and Institutional Capacity (DICI) generated **medium level of need/risk** classification. In this regard, the Executing Agency will adhere to the standard IDB procurement policies⁶. Before project procurement and contracting begins, the Executing Agency must submit the project Procurement Plan for the IDB/IDB Lab's approval. This procurement plan must be updated annually / when there are changes in the methods or goods or services to be procured. The current procurement plan for the project is included as Annex III.
- 6.2 Project Status Reports:** The Executing Agency will be responsible for presenting Project Status Reports (PSRs) to the IDB Lab within thirty (30) days after the end of each semester, or more frequently as determined by the IDB Lab, by providing at least sixty (60) days' notice to the Executing Agency. The PSR will contain information on the progress of project execution, achievement of milestones, and completion of project objectives, as stated in the project's Results Matrix (Annex I) and other operational planning tools. The PSR will also monitor the mitigation of identified/new project risks (external and internal). Within sixty (60) days after the end of the execution period, the Executing Agency will submit to the IDB Lab a Final Project Status Report which will: (i) briefly describe project implementation; (ii) update the results matrix and document final project results and impacts; (iii) identify early evidence of replication and scaling by other actors; and (iv) identify project lessons learned. This Final Project Status Report will be

⁵ Link to the document [Operational Guidelines for Management of Milestones and Financial Supervision for IDB LAB and SEP Technical Cooperation Projects](#)

⁶ [Link to IDB Project Procurement Policies](#)

prepared by the executing agency, or another party, as may be decided on by the IDB Lab team leader.

- 6.3 Fiduciary Management and Supervision:** The Executing Agency will establish and will be responsible for maintaining adequate accounts of its finances, internal controls, and project files according to the financial management policy of the IDB/IDB Lab. A mobilization workshop to review all fiduciary requirements will be convened prior to project start for the Technical Coordinator for the project and any assigned financial support staff of the Green Heritage Fund. Additional training and support may be provided during project execution as required.

7. KNOWLEDGE-SHARING AND DISSEMINATION STRATEGY

- 7.1** Activities relevant to knowledge sharing and dissemination are captured under Component I and III of the project.

8. APPROVAL

- 8.1** This project is recommended and approved for financing under the IDB Lab Program of Delegation of Authority (MIF /GN-62-7).