Annex H: Child Project Information

5. SURINAME - GEF-8 CHILD PROJECT CONCEPT

GENERAL CHILD PROJECT INFORMATION

Child Project Title:	Preserving Suriname's Immense Marine and Coastal Biodiversity through Greening Infrastructure Development		
Country(ies):	Suriname	GEF Child Project ID:	TBD
		Type of Child Project	FULL-SIZED PROJECT
GEF Agency(ies):	WWF-US	GEF Agency Child Project ID:	0051
Anticipated Executing Entity(s) and Type:	Ministry of Spatial Planning and Environment	GOVERNMENT	
GEF Focal Area(s):	BD, CCM	Submission Date:	TBD
Type of Trust Fund:	GEF TF	Child Project Duration (Months)	48 months
GEF Child Project Grant: *(a)*	2,346,478	GEF Child Project Non-Grant *(b)*	0
Agency Fee(s) Grant: *(c)*	211,182	Agency Fee(s) Non-Grant: *(d)*	0
Total GEF Financing: *(a+b+c+d)*	2,557,660	Total Co-financing:	6,570,000
PPG Amount *(e):*	100,000	PPG Agency Fee(s) *(f)*:	9,000
Total GEF Resources (a+b+c+d+e+f)	2,666,660		
Project Sector (CCM only)			
Program	GREENING TRANSPORTATION INFRASTRUCTURE DEVELOPMENT		

CHILD PROJECT FINANCING TABLES

GEF Financing Table

Indicative Trust Fund Resources Requested by Agency(ies), Country(ies), Focal Area and the Programming of Funds

GEF Agency	Trust Fund	Country/ Regional/ Global	Focal Area	Programming of Funds	(in $)		
					GEF Project Financing	Agency Fee	Total GEF Financing
WWF-US	GEF TF	Suriname	Biodiversity	BD STAR Allocation: IPs	1,231,904	110,871	1,342,775
WWF-US	GEF TF	Suriname	Climate Change	CC STAR Allocation: IPs	527,959	47,516	575,475
WWF-US	GEF TF	Suriname	Biodiversity	BD IP Matching Incentive	410,630	36,957	447,587
WWF-US	GEF TF	Suriname	Climate Change	CC IP Matching Incentive	175,985	15,838	191,823
Total GEF Resources					2,346,478	211,182	2,557,660

Project Preparation Grant (PPG)

Is Project Preparation Grant requested? ☒ Yes ☐ No
If yes: fill in PPG table (incl. PPG fee)

GEF Agency	Trust Fund	Country/ Regional/ Global	Focal Area	Programming of Funds	(in $)		
					PPG	Agency Fee	Total PPG Funding
WWF-US	GEF TF	Suriname	Biodiversity	BD STAR Allocation: IPs	52,500	4,725	57,225
WWF-US	GEF TF	Suriname	Climate Change	CC STAR Allocation: IPs	22,500	2,025	24,525
WWF-US	GEF TF	Suriname	Biodiversity	BD IP Matching Incentive	17,500	1,575	19,075
WWF-US	GEF TF	Suriname	Climate Change	CC IP Matching Incentive	7,500	675	8,175
Total PPG Amount					100,000	9,000	109,000

Sources of Funds for Country STAR Allocation

GEF Agency	Trust Fund	Country/ Regional/Global	Focal Area	Source of Funds	Total
WWF-US	GEF TF	Suriname	Biodiversity	BD STAR Allocation	1,400,000
WWF-US	GEF TF	Suriname	Climate Change	CC STAR Allocation	600,000
Total GEF Resources					2,000,000

Indicative Focal Area Elements

Programming Directions	Trust Fund	(in $)	
		GEF Project Financing	Co-financing
Infrastructure IP	GEFTF	2,346,478	6,570,000
Total Project Cost		2,346,478	6,570,000

Indicative Co-financing

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Investment Mobilized	Amount ($)
Recipient Country Government	Ministry of Spatial Planning and Environment	In-kind	Recurrent Expenditure	2,500,000
Recipient Country Government	Ministry of Public Works	In-kind	Recurrent Expenditure	1,750,000
Recipient Country Government	Planning Office	In-kind	Recurrent Expenditure	2,000,000
GEF Agency	World Wildlife Fund (WWF)	In-kind	Recurrent Expenditure	320,000
Total Co-financing				6,570,000

TABLE ON CORE INDICATORS

Core Indicators

Project Core Indicators		Expected at PFD
1	**Terrestrial protected areas** created or under improved management (hectare)	
2	**Marine protected areas** created or under improved management (hectare)	
3	Area of **land and ecosystems under restoration**(hectare)	
4	Area of **landscapes under improved practices** (hectare)	2,500
5	Area of **marine habitat under improved practices** (hectare)	60,000
6	**Greenhouse Gas Emissions Mitigated** (metric ton of CO_2e)	Total: 732,159 Direct: 8,320 Indirect: 723,839
7	**Shared water ecosystems** under new or improved cooperative management (count)	
8	Globally over-exploited **marine fisheries** moved to more sustainable levels (metric ton)	
9	Chemicals of global concern and their waste reduced (metric ton of toxic chemicals reduced)	
10	Persistent organic pollutants to air reduced (gram of toxic equivalent gTEQ)	
11	People benefiting from GEF-financed investments **disaggregated by sex** (count)	300 (150 male and 150 female)

Explain the methodological approach and underlying logic to justify target levels for Core and Sub-Indicators *(max. 250 words, approximately 1/2 page)*

CI 4 (4.1): Access roads to the 6 ports are expected to be built in the coming years. While some of the road portions will be upgrades to existing roads within already developed areas, the ports to the east of the Suriname River (see Annex 1, Figure 1) will require new road infrastructure in a landscape currently covered by ecologically important mangrove and forest habitats. The project expects to improve practices in approximately 2,500 ha of this landscape by informing road placement and supporting integrated planning to guide and manage additional development, ensuring avoidance of environmentally sensitive areas.

CI 5: The Child Project aims to improve practices across approximately 60,000 hectares of marine habitat. The targeted area encompasses critically important mangrove ecosystems and tidal zones surrounding anticipated port development, as well as Suriname's EEZ zone within the Caribbean Sea, where shipping traffic is expected to accelerate.

The project will improve practices by supporting the integration of transportation infrastructure into marine spatial planning processes and establishing stronger regulations to mitigate or prevent impacts on Suriname's coastal ecosystems, including in Multiple Use Management Area (MUMA's). Benefitting biodiversity includes mangrove habitat, which serves as a home to turtles, fish, and birds. Furthermore, it is expected to safeguard the migratory paths of turtles and dolphins, which intersect the planned shipping lanes.

CI 6: FAO's EX-Ante Carbon-balance Tool (ExAct) was used to estimate the greenhouse gas emissions mitigated or avoided from the Child Project.

A 20-year time period was used for the calculation, assuming capitalization for the project will last 16 years and the project will be implemented for 4 years. The project expects to reduce degradation in 2,500 hectares of rainforest and mangrove habitats surrounding the planned ports and associated access roads, sequestering an estimated 8,320 direct metric tons CO_2e Year 3-Year 4 of the project and an additional 321,723 indirect metric tons CO_2e over 20 years. These figures will be validated during the Project Preparation phase.

A better enabling environment (e.g. implementation of policies, guidelines supported by the project) will also contribute to (indirect) carbon mitigation. 70km of roads are expected to be built in the tropical forests of interior Suriname in about 5 years' time (2029-2030). The improved enabling environment will support better placement and management along these roads, reducing degradation in approximately 5,600 hectares[1] and contributing to the mitigation of approximately 402,116 indirect metric tons of CO_2e (over 20-year capitalization period).

Overall, the total greenhouse gas emissions currently expected to be mitigated during the implementation and capitalization period is 723,839 indirect metric tons CO_2e and 8,320 direct tCO_2e. These figures are indicative, and will need to be validated during Project Preparation phase.

CI 11: Roughly 300 people are expected (based on past similarly sized projects) to directly benefit from this project via training, workshops, etc. Many additional people will benefit from a stronger regulatory environment and integrated planning process resulting from this project because of better protection of ecosystem services, such as flood management by mangroves, on which the majority of the Surinamese population depends.

PROJECT DESCRIPTION

1. Country Context (*maximum 500 words*)

Describe the country's relevant environmental challenges and strategic positioning relative to the systems transformation proposed for the program, including relevant existing policies, commitments, and investment frameworks. How are these aligned with the proposed approach to foster impactful outcomes with global environmental benefits?

Suriname is part of the Amazon Biome, 93 percent of the country is covered in vast, intact primary tropical forest, which hosts significant biodiversity. The coast houses a complex mangrove ecosystem, which is an important breeding, feeding and nursery area for marine and brackish-water fish, marine invertebrates, sea turtles and enormous numbers of migratory birds, waterfowl, including a number of red-listed species. Ninety percent of Suriname's population and economic activities are concentrated along the low-lying and heavily urbanized coastal zone.

Suriname wants to become a major transshipment hub. The construction, expansion, and completion of six deep water riverine ports on the Suriname River are expected in the coming years, bringing the impacts of access roads and traffic of offshore supply vessels and container ships. This threatens the country's mangrove ecosystems, exacerbating habitat and biodiversity loss as evidenced in academic literature.

The Government of Suriname has put in place a number of policies and commitments to support sustainable economic development. The government's second Nationally Determined Contribution (NDC) for the period 2020-2030 outlines a cost-effective pathway to the de-carbonization of sustainable economic development, maintaining the integrity of the natural forest to act as a carbon sink, and strengthening resilience to enable adaptation and mitigation action. The NBSAP recognizes the threat of infrastructure on the environment, noting that "the expansion of infrastructure, agriculture and mining has led to a push-back of the natural forest and to the disappearance of wildlife" and emphasizes the importance of land use planning for biodiversity.

Suriname's Multi-Annual Development Plan (Meerjaren Ontwikkelingsplan or MOP) 2022-2026 defines a vision to uphold the green (High Forest Cover Low Deforestation) and carbon negative status of the country, including through the development and deployment of green (low carbon and sustainable) infrastructure. Suriname aims to avoid poorly planned transportation infrastructure through integrated spatial planning and requisit policy development and is in the process of updating its spatial planning policy and regulatory framework. Additionally, it must take into account sea level rise, which is expected to rise one meter by 2030 and will impact coastal communities, the bulk of its population.

Proposed Approach

Suriname's significant marine and coastal biodiversity and the government's environmental commitments, coupled with upcoming transportation infrastructure and a steady increase in transportation service use[37], requires an upstream systems approach so that infrastructure planning considers the environment and avoids ecosystem and biodiversity losses. A transition towards this achievement for biodiversity requires changes in scoping, planning, designing, constructing and financing for/of transportation infrastructure projects. This will enable relevant ministries, institutes, and private sector parties to cooperate, such that major infrastructure projects are part of the solution to achieving integrated and balanced transportation development (e.g., through utilizing multiple interconnected transportation modalities) to optimize domestic and regional trade and facilitate movement within the country without exacerbating habitat loss or undermining forest cover.

2. Project Overview and Approach (maximum 1250 words)

a) Provide a brief description of the geographical target(s), including details of systemic challenges, and the specific environmental threats and associated drivers that must be addressed;

This project will focus on port infrastructure along the Suriname River, situated at the mouth of the Caribbean Sea. There are plans in place to both expand the existing port facilities and establish new ones in this area (see Annex 1, Figures 1 and 2). These port development and expansion initiatives are responding to demand from two different supply chains. The first is related to cargo transport (primarily from container ships). This requires specialized ports and container terminals to effectively handle the increased shipping traffic. The second supply chain pertains to the provisioning of offshore oil production facilities. Planning of the first set of ports has already commenced and it is anticipated that oil production facilities will be constructed in 5-10 years time. Concurrently, as part of this port development effort,

[37] Between 2010 and 2019, the increase in trucks, passenger cars, and buses has averaged 4.9%. The estimated population within the Paramaribo metropolitan area is 360,000, with a population of people owning vehicles of approximately 170,000. The 6 major access roads have to handle 120,000 vehicles daily; the estimated total length of roads that this traffic has to handle is about 80 km, so an average of 1,500 vehicles per km per day in 1 peak period are handled.

there is expected to be an increase in shipping traffic and road infrastructure development to connect these ports to the existing transportation network.

These port development plans are positioned within Suriname's ecologically significant coastal and marine ecosystems, including vital mangrove habitat. These mangroves make the highest contribution to the natural capital of Suriname.[38] The construction of these ports and upgrading of connecting roads can result in the fragmentation and degradation of this important ecosystem. In addition, the increased shipping traffic is expected to intersect the habitats and migratory routes of turtles, dolphins, etc.

The Suriname GRID Child Project will capture this full 'area-of-influence' – the Suriname River and mangroves where the ports will be placed, the adjacent landscape where connecting roads will be built and upgraded, and marine waters trafficked by ocean going vessels including container ships, fishing boats, and service vessels for the oil production facilities (located as much as 200km offshore).

In a business-as-usual scenario, there is not sufficient data, planning frameworks and policies to ensure that this upcoming transportation infrastructure –and increased river use and marine transport - will avoid biodiversity and ecosystem loss.

Key barriers include:

- Reluctance to adopt green standards by stakeholders
- Insufficient coordination between ministries involved in transportation, planning, and environment to integrate biodiversity into transportation policies
- Lack of planning frameworks, capacity, knowledge and data to incorporate biodiversity and ecosystem protection into infrastructure development
- Perceived high cost of biodiversity and ecosystems protection.

While the Suriname GRID Child Project will have a focus on this coastal/marine landscape due to the more imminent infrastructure development being planned with the ports, it is important to note that there are other mid-term and long-term transportation infrastructure projects being planned in other landscapes of Suriname. This includes the updating of the southern East-West Road and various secondary access roads, through the Amazon biome. New developments for bauxite and agriculture (the Ministry of Agriculture is seeking investors in agriculture for an area of 300,000 hectares) are expected to drive service roads and additional infrastructure needs (e.g., hydroelectric dam with an access road to the bauxite mining area, Annex 1, Figure 3). In a business-as-usual scenario, this is likely to have impacts on Suriname's globally significant intact forest ecosystems and the biodiversity that resides within these habitats. This project will work to ensure that upstream measures – including policies, planning processes, and guidelines – are applicable to both the port infrastructure and terrestrial needs, so that all upcoming transportation infrastructure in Suriname is done in a way that maintains or even enhances the natural environment. Given that port infrastructure is taking place first, lessons and best practice from these interventions will be applied and integrated into the more national-level components of the project (see strategy section below).

[38] World Bank. 2021. The Changing Wealth of Nations 2021: Managing Assets for the Future. Washington, DC: World Bank. Creative Commons Attribution CC BY 3.0 IGO.

b) Describe the existing or planned baseline investments, including current institutional framework and processes for stakeholder engagement and gender integration;

- The MOP is being enforced and elaborates a vision and a roadmap (to 2050) with respect to upholding the green and carbon negative status of Suriname, including development and deployment of green infrastructure: minimize deforestation (and uphold 93% forest cover) and impacts on biodiversity, increase resilience against climate change and increase transportation efficiency while simultaneously lowering the carbon footprint. Infrastructure requires better and more integrated planning.
- The Ministry of Spatial Planning and Environment has been established in 2020 and is drafting the Spatial Planning Act (expected mid-2024).
- The National Mangrove Strategy was developed in 2019, and subsequently the National Mangrove Biodiversity Monitoring System along the coast and the National Mangrove Forest cover map (as part of the National Forest Inventory) has been established. Also, three Management Plans of Coastal Multiple Use Management (MUMA) and three Nationally Appropriate Mitigation Actions (NAMAs) for specific sectors have been completed/updated. These documents mention the impact of infrastructure development on these ecosystems.
- A Co-Investment Fund Act is being finalized that earmarks revenues from extractive industries for specific sectors, including green infrastructure.
- The MOP articulates a vision for sustainable multimodal transportation development that aims to balance traditional road development (which can cause significant environmental degradation) with still underexploited inland waterway development and fluvial transport (currently, waterways are barely used for transportation, thus placing excessive emphasis on road expansion).
- Stakeholder engagement, particularly Local Communities and Indigenous People (through Free Prior and Informed Consent – FPIC, which is a requirement), and gender integration will be incorporated in the project in each phase of the integrated approach, and through the development of communication products.
- There exists an Environmental and Social Impact Assessments (ESIA) approach mandated by the National Environment Authority

c. Describe how the integrated approach proposed for the child project responds to and reflects the Program's Theory of Change, and as such is an appropriate and suitable option for tackling the systemic challenges, and to achieve the desired transformation with multiple global environmental benefits; and

The project will be working in marine areas and coastal habitats (including rivers) impacted by road development and shipping. By working at the upstream level in spatial planning and policy development, transportation infrastructure (including for ports, shipping, and roads) can be guided in a way that minimizes damage to Suriname's biodiversity. The project will target key public and private stakeholders in all phases of infrastructure development, focusing on the conceptual stages, and will measure benefits for all stakeholders over time. The transition required encompasses behaviors, attitudes, viewpoints, designs, codes, policy, legislation, etc.

<u>Component 1: Enabling Conditions</u>

While the marine/coastal landscape being targeted under this project will be a key focus, the Child Project will put in place the enabling conditions necessary to ensure that terrestrial, marine, riverine, and coastal infrastructure incorporates environmental considerations from the onset. Outcomes under this component will include:

- Policies and regulatory frameworks to support green transportation infrastructure, incorporating lessons and best practices from experiences in Suriname to date (e.g., coastal development). This could include the preparation of any necessary legislation (beyond the draft Coastal Protection Act) that prohibits the cutting of mangrove and parwa forests and to restore them to prevent damage to the natural coastal strip and estuarine zones.
- Integration of biodiversity positive approaches to transportation planning as an integrated component of the national infrastructure plan (currently undeveloped).
- Capacities (software, hardware, knowledge, skills, etc.) to bring these broad stipulations to detailed landscape planning.
- Planning, design and engineering guidelines embedded in a national framework.

Component 2: Integrated Planning and Design - implement conditions to protect ecosystems into design and engineering through the following:

- Assessments of marine and coastal environments in target landscapes and how transportation infrastructure should be sited to ensure low environmental impact.
- Integration of transportation infrastructure into marine spatial planning processes depicted in Annex 1, Figures 1 and 2 (to be determined in the project development stages), integrating biodiversity, productive needs, transportation infrastructure needs, including protocols/processes for transportation infrastructure.
- Development of protocols/processes for sustainable transportation infrastructure development.

Component 3: Financing and De-Risking

- Strategies under this component will be further assessed during project preparation, with the goals of (1) incorporating environmental and social sustainability into legal and financial structures of projects, and (2) facilitating/attracting sufficient and quality capital for the full project development cycle. A strong enabling environment should make projects more attractive for different sources of financing (e.g. concessional, blended or private), regardless of the project size. Potential strategies to be explored under this Component include:
    a. Financial mechanisms and incentive development for ecosystem and biodiversity supporting schemes and designs.
    b. Development of environmental and social guidelines to be incorporated into budgeting/financial tools (such as cost benefit analysis) that reduce risks to the ecosystems and better manage sprawl and urban development.
    c. Revisions to procurement policies to better ensure sustainability measures are incorporated into tender design and contractor awards.

Component 4: Communications, Program participation, and M&E

- Utilization of the Spatial Monitoring and Reporting Tool (SMART) to quantify global environmental benefits progress along the project life cycle. This application may be used by citizens to measure biodiversity and ecosystem health alongside infrastructure.
- Communications plan and communications products.
- Knowledge management plan, knowledge products from the project to share nationally and with the Global IP.
- Global program participation (attendance at annual conference, any in-person meetings, other) FPIC utilization.

d. Describe the project's incremental reasoning for GEF financing under the program, including the results framework and components.

In a business-as-usual scenario, there is insufficient policies and planning processes to ensure that upcoming transportation infrastructure – access roads to connect to new ports – and increased river use and marine transport will avoid biodiversity and ecosystem loss.

By incorporating necessary upstream measures to guide transportation infrastructure development (through the components listed above), this project will result in:

- Area of landscapes under improved practices
- Area of marine habitat under improved practices
- People benefiting from GEF-financed investments

3. Engagement with the Global / Regional Framework (maximum 500 words)

Describe how the project will align with the global / regional framework for the program to foster knowledge sharing, learning, and synthesis of experiences. How will the proposed approach scale-up from the local and national level to maximize engagement by all relevant stakeholders and/or actors?

Inherent to the project is an extensive amount of information on impacts rules, behaviors, standards, codes, viewpoints, physical artifacts, methodologies, etc., without which further infrastructure development and construction will negatively impact biodiversity, wildlife, water flows, etc. This information not only needs to be obtained, tailored and implemented, but can also create impetus within the region and beyond to embark on a similar trajectory and making use of the lessons learned in the Surinamese context. To this end, the following will be a crucial part of the project:

- Implement a knowledge management plan and communication strategy, including developing communication products to share knowledge, learnings, and experiences (in particular the active participation in communication and knowledge sharing platforms hosted by the global coordination child project).
- Participation in and hosting webinars, seminars, knowledge exchanges, etc.
- Attendance at the annual conference hosted by the global coordination child project.
- Participation in any communities of practice within the IP.

Annexes:

Annex 01: Project Component and Budget Overview

Component	Provisional Budget (USD)	Co-financing (USD)
Component 1: Enabling Conditions	550,000	1,539,964
Component 2: Integrated Planning and Design	950,000	2,659,938
Component 3: Financing and De-Risking	423,004	1,184,398
Component 4: Communications, Program participation	200,000	559,987
M&E	111,737	312,856
Subtotal	2,234,746	6,257,143
Program Management Cost (PMC)	111,737	312,857
Total Project Cost	**2,346,478**	**6,570,000**

Annex 2: Project Location and Maps

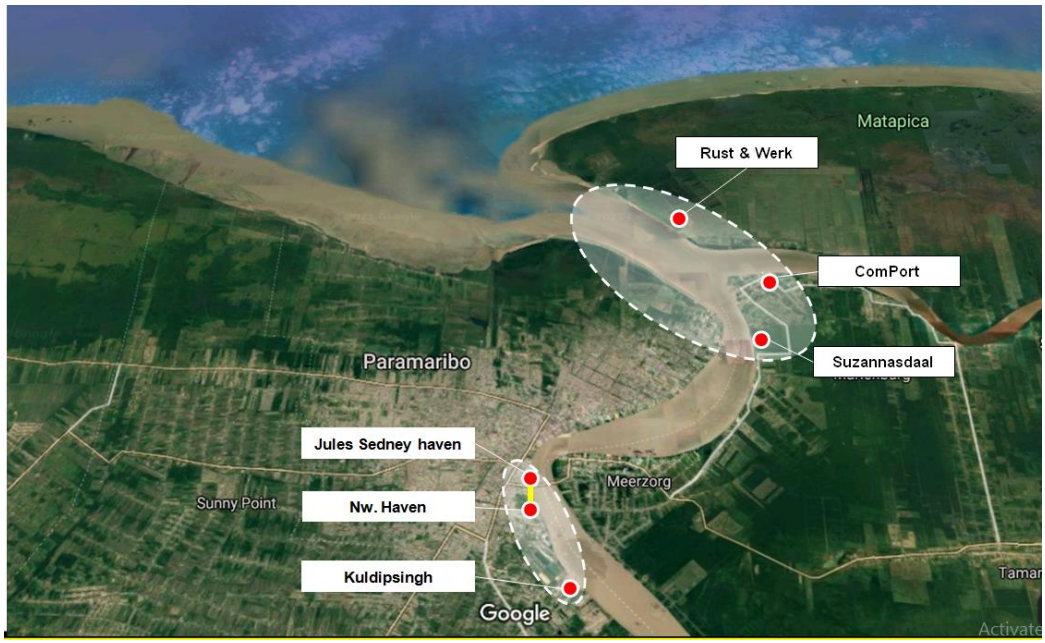

Figure 1. Location of six deep water riverine ports in various stages of construction along the Suriname River, to the east of Paramaribo.

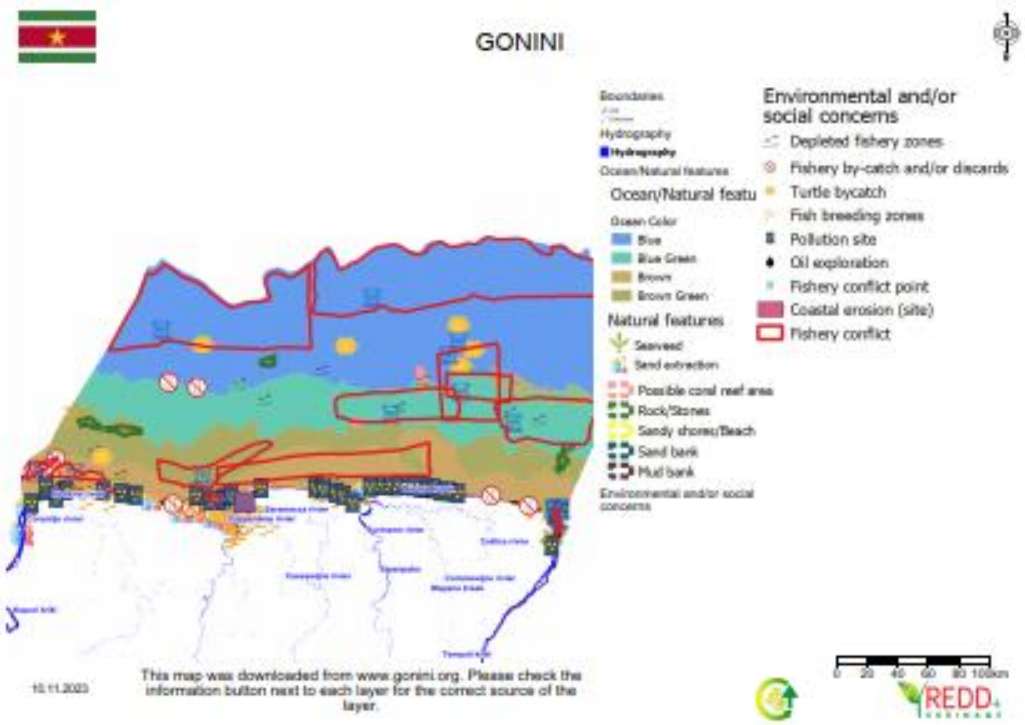

Figure 2. Offshore areas of social and environmental concern.

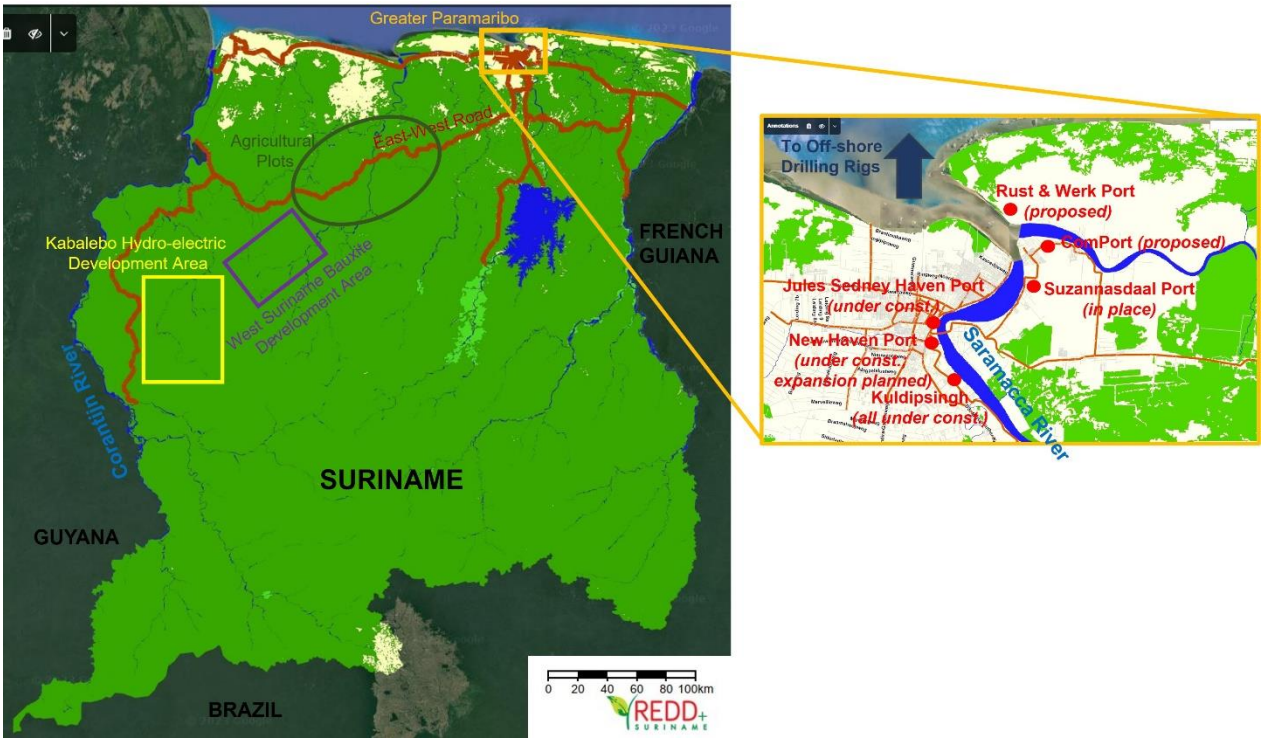

Figure 3. Focal area of the proposed GRID project (right inset, same area as Figure 1) and developments that will be indirectly impacted by the project (map of Suriname to the left). While the focus is on this specific area shown on the right, the scope of policy engagement will inform the way in which the big-picture of transportation

infrastructure development planned in the interior will occur, and therefore shape the future planning for infrastructure development in the interior/nationally.

Inset map (right): The current infrastructure development plans are shown in the inset map which shows location of construction, expansion, and completion of six deep water riverine ports on the Suriname River, bringing the impacts of access roads and traffic of ships to offshore drilling rigs and beyond with container ships. Map on the left identifies three areas that will be indirectly impacted and better designed as a result of the project. (1) the East-West Road due to be paved which would increase traffic, speed, and wildlife vehicle collisions and ecosystem fragmentation. Along with this would be the (2) expected agriculture development including farm to market roads; (2) the West Suriname Bauxite Development Area where expansion is planned and for which an access road will be built to the Corantijn River, bringing road impacts and impacts of bauxite shipping on the River; and (3) the Kabalebo Hydro-electric development Area, which will have an access road and affect downstream communities and river transport on the Lucie and Corantijn Rivers.

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