Strengthening participatory natural resource management processes for sustainable economic development, conservation of biodiversity and maintenance of carbon stocks in Amazon Wetlands.

Part I: Project Information

GEF ID
10706

Project Type
FSP

Type of Trust Fund
GET

CBIT/NGI
CBIT **No**
NGI **No**

Project Title
Strengthening participatory natural resource management processes for sustainable economic development, conservation of biodiversity and maintenance of carbon stocks in Amazon Wetlands.

Countries
Brazil

Agency(ies)
FAO

Other Executing Partner(s)
Ministry of Science, Technology and Innovations; Mamiraua Sustainable Development Institute

Executing Partner Type
CSO

GEF Focal Area
Biodiversity

Taxonomy

Focal Areas, Protected Areas and Landscapes, Biodiversity, Biomes, Influencing models, Civil Society, Type of Engagement, Stakeholders, Communications, Private Sector, Gender Mainstreaming, Gender Equality, Gender results areas, Capacity, Knowledge and Research, Knowledge Exchange, Productive Landscapes, Community Based Natural Resource Mngt, Terrestrial Protected Areas, Wetlands, Strengthen institutional capacity and decision-making, Demonstrate innovative approache, Convene multi-stakeholder alliances, Individuals/Entrepreneurs, Behavior change, Awareness Raising, Beneficiaries, Community Based Organization, Local Communities, Indigenous Peoples, Participation, Participation and leadership, Access and control over natural resources, Women groups, Sex-disaggregated indicators, Gender-sensitive indicators, Peer-to-Peer, Capacity Development, Knowledge Generation

Sector
AFOLU

Rio Markers
Climate Change Mitigation
Climate Change Mitigation 0

Climate Change Adaptation
Climate Change Adaptation 1

Submission Date
9/28/2020

Expected Implementation Start
8/1/2022

Expected Completion Date
7/31/2026

Duration
48In Months

Agency Fee($)
324,106.00

A. FOCAL/NON-FOCAL AREA ELEMENTS

Objectives/Programs	Focal Area Outcomes	Trust Fund	GEF Amount($)	Co-Fin Amount($)
BD-1-1	Mainstream biodiversity across sectors as well as landscapes and seascapes through biodiversity mainstreaming in priority sectors	GET	1,689,185.00	19,722,276.00
BD-2-7	Address direct drivers to protect habitats and species and improve financial sustainability, effective management, and ecosystem coverage of the global protected area estate	GET	1,722,459.00	11,582,385.00
		Total Project Cost($)	**3,411,644.00**	**31,304,661.00**

B. Project description summary

Project Objective

Strengthening participatory natural resource management processes for sustainable economic development, conservation of biodiversity and maintenance of carbon stocks in Amazon Wetlands

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing($)	Confirmed Co-Financing($)

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing($)	Confirmed Co-Financing($)
1. Strengthening the enabling environment to sustainably manage varzea floodplain forests and mangrove wetlands.	Technical Assistance	1.1. Improved enabling environment enhances the effectiveness of natural resources management	1.1.1. Capacity building program for community leaders developed and implemented 1.1.2. Local organizations created or strengthened to engage in the sustainable management of natural resources. 1.1.3. Community-based management protocols (linked to Protected Area management plans) developed for target resources (i.e. fisheries, caiman, swamp ghost crab, agroecology, forestry, and community based tourism)	GET	1,196,319.00	10,989,647.00

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing($)	Confirmed Co-Financing($)
2. Participatory management and sustainable use of protected areas and productive landscapes	Investment	2.1. Pressure on natural resources is reduced and resilience increased, leading to improved conservation of natural resources and ecosystem functions	2.1.1 Implementation of the participatory management plans (Output 1.1.3) including agroforestry, wood and non-wood forest products, pirarucu management, caiman and swamp ghost crab management, and community-based tourism in 17 protected areas and 4 productive landscapes	GET	1,715,567.00	15,721,514.00
			2.1.2 Improved livelihood opportunities for local communities arising from the adoption of sustainable technologies to strengthen target biodiversity value chains (pirarucu, agroforestry, swamp ghost crab)			
			2.1.3			

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing($)	Confirmed Co-Financing($)
3. Monitoring and evaluation (M&E) of the impact of knowledge transfer and good practices	Technical Assistance	3.1. Project implementation is supported by a gender sensitive M&E strategy based on measurable results, on adaptive management principles, and enhanced by access to information including status of biodiversity and its ecosystem benefits to society.	3.1.1. Monitoring and evaluation system developed with relevant project partners and key stakeholders, with clearly defined and verifiable indicators. 3.1.2. Mid-term and annual reviews for project evaluation and alignment of processes carried out. 3.1.3. Lessons learned and best practices disseminated to key stakeholders and the general public	GET	342,971.00	3,077,694.00
				Sub Total ($)	**3,254,857.00**	**29,788,855.00**
Project Management Cost (PMC)						
				GET	156,787.00	1,515,806.00

Project Management Cost (PMC)		
Sub Total($)	**156,787.00**	**1,515,806.00**
Total Project Cost($)	**3,411,644.00**	**31,304,661.00**

Please provide justification

C. Sources of Co-financing for the Project by name and by type

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Investment Mobilized	Amount($)
Recipient Country Government	Federal Ministry of Science, Technology and Innovation (MCTI	In-kind	Recurrent expenditures	12,895,276.00
Recipient Country Government	Federal Ministry of Science, Technology and Innovation (MCTI)	Public Investment	Investment mobilized	15,748,031.00
Civil Society Organization	Mamiraua Institute for Sustainable Development (IDSM)	Public Investment	Investment mobilized	2,561,354.00
GEF Agency	FAO	In-kind	Recurrent expenditures	100,000.00
			Total Co-Financing($)	**31,304,661.00**

Describe how any "Investment Mobilized" was identified

MCTI, the federal ministry responsible for steering Science, Technology, and Innovation policy and investment in Brazil, will provide financial resources to the Institute of Sustainable Development ?Mamirau?? (IDSM in Portuguese) to address critical research on the ecology and management of natural resources highly relevant for the life and social reproduction of traditional and indigenous communities in the specialty area of intervention of the latter, namely flooded plains and mangrove ecosystem in the Amazon biome. These resources have been leveraged to constitute a typical co-financing as financial baseline for a GEF intervention. Moreover, MCTI has recently assigned a share of the project ?Amazonian System of Satellite Laboratories? (SALAS), in an effort to flank with basic and applied research the application of the outcome of past Science and Technology results in the field, in coordination with the proposed project. Hence, it can be considered that SALAS is a natural synergic intervention with public funding running in parallel to this GEF initiative (i.e. $15.7m), and that the share of resources assigned by MCTI to ISDM can be considered in kind co-financing (i.e. $12.9m). ISDM has also enjoyed in the past and at present direct support from the National Research Council (CNPq), under the control of MCTI, in the modalities of research fellowships and research grants. Confirmed cofinancing from CNPq through IDSM equals $2.5m..

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

Agency	Trust Fund	Country	Focal Area	Programming of Funds	Amount($)	Fee($)	Total($)
FAO	GET	Brazil	Biodiversity	BD STAR Allocation	3,411,644	324,106	3,735,750.00
				Total Grant Resources($)	**3,411,644.00**	**324,106.00**	**3,735,750.00**

E. Non Grant Instrument

NON-GRANT INSTRUMENT at CEO Endorsement

Includes Non grant instruments? **No**

Includes reflow to GEF? **No**

F. Project Preparation Grant (PPG)

PPG Required **true**

PPG Amount ($)

150,000

PPG Agency Fee ($)

14,250

Agency	Trust Fund	Country	Focal Area	Programming of Funds	Amount($)	Fee($)	Total($)
FAO	GET	Brazil	Biodiversity	BD STAR Allocation	150,000	14,250	**164,250.00**
				Total Project Costs($)	**150,000.00**	**14,250.00**	**164,250.00**

Core Indicators

Indicator 1 Terrestrial protected areas created or under improved management for conservation and sustainable use

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
510,764.36	510,764.00	0.00	0.00

Indicator 1.1 Terrestrial Protected Areas Newly created

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Total Ha (Achieved at MTR)	Total Ha (Achieved at TE)
0.00	0.00	0.00	0.00

Name of the Protected Area	WDPA ID	IUCN Category	Total Ha (Expected at PIF)	Total Ha (Expected at CEO Endorsement)	Total Ha (Achieved at MTR)	Total Ha (Achieved at TE)

Indicator 1.2 Terrestrial Protected Areas Under improved Management effectiveness

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Total Ha (Achieved at MTR)	Total Ha (Achieved at TE)
510,764.36	510,764.36	0.00	0.00

Name of the Protected Area	WDPA ID	IUCN Category	Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Total Ha (Achieved at MTR)	Total Ha (Achieved at TE)	METT score (Baseline at CEO Endorsement)	METT score (Achieved at MTR)	METT score (Achieved at TE)
Akula National Park Reserva de Desenvolvimento Sustent?vel Piaga?u-Purus	**125689352136**	**Select** Protected area with sustainable use of natural resources	504,083.50	504,083.50					

Name of the Protected Area	WDPA ID	IUCN Category	Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Total Ha (Achieved at MTR)	Total Ha (Achieved at TE)	METT score (Baseline at CEO Endorsement)	METT score (Achieved at MTR)	METT score (Achieved at TE)
Akula National Park Reserva Extrativista de S?o Jo?o da Ponta	**125689351780**	**Select** Protected area with sustainable use of natural resources	340.94	340.94			38.00		
Akula National Park Reserva Extrativista M?e Grande de Curu??	**125689351782**	**Select** Protected area with sustainable use of natural resources	5,061.60	5,061.60			45.00		
Akula National Park Reserva Extrativista Chocoar?-Mato Grosso	**125689351822**	**Select** Protected area with sustainable use of natural resources	278.32	278.32			45.00		
Akula National Park Terra Ind?gena Jaquiri	**12568933867**	**Select** Others	1,000.00	1,000.00			37.00		

Indicator 2 Marine protected areas created or under improved management for conservation and sustainable use

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
37,169.69	37,169.00	0.00	0.00

Indicator 2.1 Marine Protected Areas Newly created

Total Ha (Expected at PIF)	Total Ha (Expected at CEO Endorsement)	Total Ha (Achieved at MTR)	Total Ha (Achieved at TE)
0.00	0.00	0.00	0.00

Name of the Protected Area	WDPA ID	IUCN Category	Total Ha (Expected at PIF)	Total Ha (Expected at CEO Endorsement)	Total Ha (Achieved at MTR)	Total Ha (Achieved at TE)

Indicator 2.2 Marine Protected Areas Under improved management effectiveness

Total Ha (Expected at PIF)	Total Ha (Expected at CEO Endorsement)	Total Ha (Achieved at MTR)	Total Ha (Achieved at TE)
37,169.69	37,169.69	0.00	0.00

Name of the Protected Area	WDPA ID	IUCN Category	Total Ha (Expected at PIF)	Total Ha (Expected at CEO Endorsement)	Total Ha (Achieved at MTR)	Total Ha (Achieved at TE)	METT score (Baseline at CEO Endorsement)	METT score (Achieved at MTR)	METT score (Achieved at TE)

Name of the Protected Area	WDPA ID	IUCN Category	Total Ha (Expected at PIF)	Total Ha (Expected at CEO Endorsement)	Total Ha (Achieved at MTR)	Total Ha (Achieved at TE)	METT score (Baseline at CEO Endorsement)	METT score (Achieved at MTR)	METT score (Achieved at TE)
Akula National Park Reserva Extrativista Marinha Cuinarana	**125689** 555600266	**Select** Protected area with sustainable use of natural resources	1,126.82	1,126.82			40.00		
Akula National Park Reserva Extrativista Marinha de Ara?-Peroba	**125689** 351798	**Select** Protected area with sustainable use of natural resources	1,581.04	1,581.04			33.00		
Akula National Park Reserva Extrativista Marinha de Caet?-Tapera?u	**125689** 351796	**Select** Protected area with sustainable use of natural resources	5,681.23	5,681.23			46.00		

Name of the Protected Area	WDPA ID	IUCN Category	Total Ha (Expected at PIF)	Total Ha (Expected at CEO Endorsement)	Total Ha (Achieved at MTR)	Total Ha (Achieved at TE)	METT score (Baseline at CEO Endorsement)	METT score (Achieved at MTR)	METT score (Achieved at TE)
Akula National Park Reserva Extrativista Marinha de Gurupi-Piri?	**125689** 351799	**Select** Protected area with sustainable use of natural resources	10,571.47	10,571.47			40.00		
Akula National Park Reserva Extrativista Marinha de Soure	**125689** 351783	**Select** Protected area with sustainable use of natural resources	4,732.61	4,732.61			53.00		
Akula National Park Reserva Extrativista Marinha de Tracuateua	**125689** 351797	**Select** Protected area with sustainable use of natural resources	3,666.36	3,666.36			48.00		

Name of the Protected Area	WDPA ID	IUCN Category	Total Ha (Expected at PIF)	Total Ha (Expected at CEO Endorsement)	Total Ha (Achieved at MTR)	Total Ha (Achieved at TE)	METT score (Baseline at CEO Endorsement)	METT score (Achieved at MTR)	METT score (Achieved at TE)
Akula National Park Reserva Extrativista Marinha do Maracan?	**125689** 351781	**Select** Protected area with sustainable use of natural resources	4,013.83	4,013.83			45.00		
Akula National Park Reserva Extrativista Marinha Mestre Lucindo	**125689** 555600255	**Select** Protected area with sustainable use of natural resources	3,485.16	3,485.16			45.00		
Akula National Park Reserva Extrativista Marinha Mocapajuba	**125689** 555600245	**Select** Protected area with sustainable use of natural resources	2,311.17	2,311.17			39.00		

Indicator 4 Area of landscapes under improved practices (hectares; excluding protected areas)

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
33242.00	33242.00	0.00	0.00

Indicator 4.1 Area of landscapes under improved management to benefit biodiversity (hectares, qualitative assessment, non-certified)

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
33,242.00	33,242.00		

Indicator 4.2 Area of landscapes that meets national or international third party certification that incorporates biodiversity considerations (hectares)

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)

Type/Name of Third Party Certification

Indicator 4.3 Area of landscapes under sustainable land management in production systems

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)

Indicator 4.4 Area of High Conservation Value Forest (HCVF) loss avoided

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)

Documents (Please upload document(s) that justifies the HCVF)

Title	Submitted

Indicator 11 Number of direct beneficiaries disaggregated by gender as co-benefit of GEF investment

	Number (Expected at PIF)	Number (Expected at CEO Endorsement)	Number (Achieved at MTR)	Number (Achieved at TE)
Female	1,990	4,408		
Male	3,985	4,215		
Total	5975	8623	0	0

Provide additional explanation on targets, other methodologies used, and other focal area specifics (i.e., Aichi targets in BD) including justification where core indicator targets are not provided

Part II. Project Justification

1a. Project Description

1) Global environmental and/or adaptation problems, root causes and barriers that need to be addressed (systems description)

a. Context

National

1. Brazil is the largest country in South America covering nearly half of the entire continent. The total land area is approximately 8,514,215 km2. Brazil shares borders with the Atlantic Ocean, Argentina, Bolivia, Colombia, Guyana, Paraguay, Peru, Suriname, Uruguay, Venezuela, and French Guiana. The total population exceeds two-hundred million people. The highest human densities are in the country?s Southeastern part.[1][1]

2. Brazil is an upper middle-income country with the largest economy in South America and 12th largest in the world.[2][2] [3][3] From 2000 to 2012, Brazil?s economy had an average annual GDP growth rate of over 5%. The country entered a deep economic recession in 2014. Economic recovery has been slow. GDP growth was -9% in the second quarter of 2020.

3. Inequality is problematic and unemployment in 2021 reached 14.1%.[4][4] During the first quarter of 2021, the World Bank?s Gini coefficient reached a record 0.674. Brazil now ranks 84th on the Human Development Index and 64th on International Property Rights Index (IPRI). [5][5] [6][6]

4. The services sector accounts for 63% of the GDP. This includes government, defense, education and health. Industry contributes to 18% of GDP with manufacturing (11%) and construction (4%) accounting for the largest shares. The agriculture and livestock sector accounts for 5% of GDP.

The Amazon

5. The Amazon Forest is the world?s largest tropical forest. The Amazon holds 20% of the world's freshwater, stores over 100 billion tons of carbon, and is essential to the livelihood of more than 34 million people.[7][7] Over 60% of the Amazon Forest is within Brazilian borders.[8][8] The Brazilian Legal Amazon (AML) covers all or a portion of the territories of nine states with a total estimated population of approximately 19 million people.

6. The Amazon hosts 10% of the planet's biodiversity with new species still being discovered. For instance in 2014 and 2015, nearly 400 new species were discovered in the Amazon. Newly discovered species included: 216 plants, 93 fish, 32 amphibians, 19 reptiles, one bird and 20 mammals.[9][9]

7. A large amount of the Brazilian Amazon is designated as protected. The protected area (PA) regime consists of 329 protected Indigenous Lands and 289 non-indigenous protected areas each with varying management categories and management levels. [10][10] In total, these 618 individual protected areas cover approximately 54% of the Brazilian Amazon. [11][11]

8. The Amazonian Biome has high sociocultural diversity. The results of the 2010 Census indicate that around 818,000 Brazilians declared themselves indigenous with 305,873 residing in the northern region. More than 160 languages and dialects are spoken in the country with approximately 260 indigenous peoples groups.[12][12]

1. **The global environmental problem**: Given that the economy of the Amazon region is highly dependent on the use of natural resources, wetlands suffer high anthropogenic pressure that causes **loss of biodiversity and degradation of varzea floodplain forests along the Amazon river and mangroves in the Southeast coast of the Amazon Biome**.

2. The Amazon Forest hosts 10% of the planet's biodiversity, 20% of the world's freshwater, provides important ecosystem services, stores over 100 billion tons of carbon, and is essential to the livelihood of more than 34 million people[13][13]. Adequate management of this quintessential tropical forest and its biodiversity is critical for the maintenance of global climate and mitigation of impacts from human population growth on environmental sustainability and food security for peoples of the region[14][14].

3. While the government of Brazil has made significant efforts to protect the Amazon forest by harmonizing ecosystem protection, biodiversity conservation, forest and agriculture production, tensions still exist between growth of local communities and conservation goals. Brazil has made significant gains in establishing environmental legislation and policies[15][15] and setting aside areas that reconcile conservation, development and poverty reduction in order to reduce deforestation. While deforestation rates have reduced significantly,[16][16] rates have shown an increasing tendency since 2010. During 2019, PRODES data showed an estimated deforestation rate close 10,000 square kilometers, boosted by, among others, export markets for agricultural goods, forest goods, minerals and energy and the development of transport infrastructure.[17][17]

b. Project sites

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9. The project focuses on two globally significant ecosystems within the Amazonian Biome: (1) Varzea Floodplain Forests; and (2) Mangroves. These ecoregions are considered two of the Amazon?s most biologically valuable and threatened. [18][18] [19][19] The total project area will cover approximately 994,358 km?, both within and outside of designated protected areas. The project will target three distinct Varzea and Mangrove ecosystems. The three sites are within the territories of Amazonas, Amap?, and Par? States.

Table 1. Target state populations and area

Target Site State Populations and Area							
States	**Municipalities**	**Population 2010**	**Population (Est) 2020**	***HDI (2010)***	**Total Area (km2)**	***Project Area Pop. (2010)***	***Project Area*** **(km2)**
Amap?	16	669,526	861,773	0.708	142,471	108,729	**97,567**
Par?	144	7,581,051	8,690,745	0.646	1,245,871	784,932	**177,601**
Amazonas	62	3,483,985	4,207,714	0.674	1,559,168	384,648	**719,190**
Total	222	11,734,562	13,760,232	-	2,947,510	1,278,309	**994,358**

Source: IBGE, 2012; 2021.

10. The Varzea ecosystem represents one of the largest freshwater ecosystems in the world. The Varzea extends over approximately 300,000 km2 along the Amazon River and its main tributaries covering 4% of Amazonia. The Varzea is one of the most productive ecosystems of Amazonia and an important breeding ground for fish, birds, mammals, and reptiles. This is a dynamic ecosystem characterized by an annual flood pulse of 10m that may last up to 230 days each year. To survive in the Varzea, both plants and animals have evolved with a large range of morphological, anatomical, physiological and ethological adaptations.

11. Amazonian coastal mangrove ecosystems are located in and around the estuary of the Amazon River in eastern Brazil. Along the coast the states of Par? and Maranh?o, mangroves form a continuous belt of about 700000 ha, that is, nearly 85% of all Brazilian mangroves.[20][20] Tidal floods push large volumes of water onto the landscape, elevating water level by 2-3 m. Mangroves play a key ecological role in maintaining the coastal zone. The Maraj? archipelago is Amazon Estuary and Mangroves Ramsar Site no. 2337. The Maraj? is the largest fluvial-maritime archipelago on the planet with 890,000 ha of mangrove ecosystems stretching over 700 km.[21][21] Most of this area is within the boundaries of 23 protected areas covering over 3.8 million ha.

12. The globally significant varzea floodplain forests and mangrove ecosystems are critical to the survival of aquatic, terrestrial and avian biodiversity, and to hundreds of thousands of IPLCs that depend on these ecosystems and their biodiversity for subsistence. Within the target areas, several wildlife species are of particular high ecological, economic and cultural importance. These include Pirarucu (*Arapaima gigas*), (*Colossoma macropomum*), Caiman (*Caimen yacare),* and the Swamp ghost crab (*Ucides cordatus*).

Table 2. Notable Amazonian mangrove and varzea species

Notable Amazonian Mangrove and Varzea Species	
Fish	Gilded-catfish (*Brachyplatystoma rousseauxii*) Tiger-sorubim (*Pseudoplatystoma tigrinum*) Kumakuma (*Brachyplatystoma filamentosum*) Pirarucu (*Arapaima gigas*) Tambaqui (*Colossoma macropomum*)

Birds	Sunderling (*Calidris alba*) Yellow-billed tern (*Sternula superciliaris*) Seagulls (*Phaetusa simplex*) Black skimmer (*Rynchops niger*) Harpy-eagle (*Harpia harpyja*)
Crustaceans	Swamp ghost crab (*Ucides cordatus*)
Mammals	Jaguar (*Panthera onca)* Manattee (*Trichechus inunguis)*
Plants and Trees	Sama?ma (*Ceiba pentandra*) Ucu?ba (*Virola surinamensis*) Cedro (*Cedrela odorata*) Louro-inamu? (*Ocotea cymbarum*)

13. Varzea wetlands provide numerous ecosystem services including buffering of river and stream discharge, groundwater recharge, sediment retention, water storage, purification and provision for humans and livestock, microclimate regulation, carbon storage, timber production and the provision of non-timber products, medicinal plants, fish, game species, agricultural products, pastureland for animal husbandry, recreation and ecotourism. These wetland forests contribute to cultural safeguarding by guaranteeing the necessary means for the subsistence of IPLCs. Adequate management of this quintessential tropical forest and its biodiversity is critical for the maintenance of global climate and mitigation of impacts from human population growth on environmental sustainability and food security for peoples of the region.

Project Site 1: Par? State Mangrove Ecosystem

14. Project Site 1 encompasses mangrove ecosystems along the coast of Par?. The site is entirely composed of mangrove ecosystem. The project will target 13 of the 15 Terrestrial and Marine Extractive Reserves located in Par?. Par? is Brazil?s second largest State. The economy is based on mineral and plant extraction, agriculture, livestock, and tourism. The predominant climate is equatorial, with annual thermal averages between 24 and 26?C and high rainfall. Near the Amazon River, the rainfall index can reach 2,000 mm. The types of vegetation found are mangroves (located in the coastal region), fields, savannas, floodplains (varzea), and terra-firme forest.

Project Site 2 - Amap? and Par? States Varzea Flood Plain Forests

15. Project Site 2 will focus upon V?rzea Floodplain Forests in the states of Amap? and Par?. Target areas in this project site are located in State Forests, National Forests, and a Terrestrial Extractive Reserve. The predominant vegetation is the Amazon Forest, with lowland and terra firme areas. In addition to swamps, fields, and savannas in the central region of the state. Amap??s tertiary sector is the most important for the state's economy with commerce being the activity that generates the most income. The state's climate is equatorial. The average temperatures that occur in the state vary from 36 to 20 ?C, with an average rainfall above 2,500 mm.

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Project Site 3 ? Amazonas State Varzea Flood Plain Forests

Project Site 3 will focus upon V?rzea Floodplain Forests in the state of Amazonas. This is Brazil?s largest state. Vegetable extraction and fishing are present throughout the state and are the basis for the maintenance of local communities. With an equatorial climate, the annual rainfall in this state exceeds 2,500 mm. The predominant vegetation is the Amazon Forest, with areas of floodplain (varzea), terra-firme and igap?. Zone 3 contains the two Indigenous Lands, one of the Sustainable Development Reserves and one of the Terrestrial Extractive Reserves covered by the project, along with the four Productive Territories in the Stae of Amazonas.

Conservation Areas within the Project Sites

16. The project will target a mosaic of landscapes both within and beyond conservation area boundaries. Approximately 20% of the total project area is within the boundaries of conservation areas covering 4,856,226 ha. These 24 individual conservation areas represent a variety of conservation and management mandates.

17. Each of targeted conservation areas is populated. In Amap?, human occupation within the protected areas is low and estimated to be approximately 2,900 people. In Amazonas, human occupation within protected areas is relatively high particularly along river courses with several indigenous groups present. In Par?, the marine PAs have significant internal occupation.

Table 3. List of conservation areas included in the project

Project Included Conservation Areas

Sustainable Development Reserves

Total Area: 1,008,167 Ha

Conserved to facilitate traditional populations to continue sustainable use adapted to local ecological conditions

Reserve	Level	County	State	Pop.	M/F	Total hectares
Piaga?u-Purus SDR	State	Anori, Beruri, Tapau? and Coari	Amazonas	3,763	1,960 1,803	1,008,167

National and State Forests

Total Area: 3,271,041 ha

Managed to maintain sustainable use of native forest resources and support scientific research.

Forest	Level	County	State	Pop.	M/F	Hectares
Aman? National Forest	Federal	Ferreira Gomes, Pracu?ba, Amap?	Amap?	2	M: 2	460,359
Amap? State Forest	State	Amap?, Cal?oene, Ferreira Gomes, Mazag?o, Oiapoque, Porto Grande, Pracu?ba, Serra do Navio and Tartarugalzinho	Amap?	2,826	1,627 1,199	2,369,400
Sarac?-Taquera National Forest	Federal	Faro, Oriximin? and Terra Santa	Par?	1,720	909 811	441,282

Indigenous Lands

Total Area: 6,769 Ha

Indigenous people hold original right and exclusive use. Territories have approved land processes and legal records.[22][22]

Name/Decree	Level	County	State	Pop.	M/F	Hectares

Jaquiri IL Decreto 264 ? 30/10/1991	Federal	Uarini	Amazonas	45	22 23	2,000
Porto Praia IL Decreto SN ? 20/04/2004	Federal	Uarini	Amazonas	284	143 141	4,769

Terrestrial and Marine Extractive Reserves

Total Hectares 534,628 Ha

Managed to support livelihood and culture of traditional populations including sustainable use of natural resources

Reserve	Level	County	State	Pop.	M/F	Hectares
Catu?-Ipixuna ER	State	Coari, Tef?	Amazonas	1,158	618 540	217,486
S?o Jo?o da Ponta ER	Federal	Curu??, S?o Caetano de Odivelas, S?o Jo?o da Ponta	Par?	1,773	947 826	3,409
Chocoar?- Mato Grosso ER	Federal	Santar?m Novo	Par?	242	124 118	2,783
Soure MER	Federal	Soure	Par?	672	346 326	29,578
M?e Grande de Curu?? MER	Federal	Curu??	Par?	15,122	7,801 7,321	36,678
Mocapajuba MER	Federal	S?o Caetano de Odivelas	Par?	7,390	3,877 3,513	21,027
Cuinarana MER	Federal	Magalh?es Barata	Par?	2,240	1,178 1,062	11,036
Mestre Lucindo MER	Federal	Marapanin	Par?	7,687	4,081 3,606	26,464
Maracan? MER	Federal	Maracan?	Par?	8,043	4,224 3,819	30,179

Tracuateua MER	Federal	Bragan?a and Tracuateua	Par?	1,082	587 495	27,864
Caet?-Tapera?u MER	Federal	Bragan?a	Par?	12,418	6,449 5,969	42,489
Ara?-Peroba MER	Federal	Augusto Corr?a	Par?	7,447	3,976 3,471	11,549
Gurupi-Piri? MER	Federal	Viseu	Par?	3,246	1,746 1,500	74,081
Sustainable Production Territories Total Area: 33, 242 ha						
Reserve	**Level**	**County**	**State**	**Pop.**	**M/F**	**Hectares**
Complexo de Lagos Jurupari Grande	Estado	Alvar?es; Mara?	Amazonas	43	26 17	12501,74
Complexo de Lagos do Paran? do Jacar? (Capivara)	Estado	Tef?; Alvar?es; Mara?	Amazonas	95	50 45	16284,54
Complexo de Seringa (Joacaca)	Estado	Mara?	Amazonas	35	20 15	4455,72
Complexo de Lagos Jurupari Grande	Estado	Alvar?es; Mara?	Amazonas	43	26 17	12501,74
Totals						
Conservation Areas	**Federal State**	**Counties**	**States**	**Pop.**	**M/F**	**Hectares**
20	Federal: 16 State: 4	41	3	78,963 HH: 16,964	Male: 40,631 Female: 36,539	4,934,347

Source: IBGE, 2016

c. Climate

18. According to the K?ppen?s criteria for climate classification, Brazil encompasses diverse climatic zones which vary from tropical in the north-central western part of the region (covering 81.4% of the country) to dry in the central east (4.9%), and humid/sub-tropical in the southern zone (13.7%).[23][23] The tropical zone is the widest and majorly spread alongside the Amazon River; this is due to the country?s favorable latitude along the Equator and the overall absence of anomalies and barriers in altitude, rainfall patterns and temperature change. A large part (25-50%) of the total Amazonian precipitation occurs by the vegetation-atmosphere feedback mechanism, for which local evapotranspiration causes atmospheric moisture and precipitation recycling.[24][24]

19. The Brazilian mean annual precipitation is 1741.79mm (1901-2016). Since 1990, the mean annual precipitation in the Amazon tropical zone has increased 5%, mainly due to the El Ni?o-Southern Oscillation (ENSO) (Reference). This has resulted in several extreme droughts (2005, 2010, 2015/16) (Reference). Increasing equatorial sea surface temperature is likely to intensify ENSO episodes and a displacement of the inter-tropical convergence zone continue to impact precipitation patterns in Amazonia.[25][25]

20. Amazonas State has a predominantly humid tropical climate without a dry season, with precipitation at the driest month equal or below 60 mm (Af) (Kottek et al., 2006). A smaller area is characterized by a tropical monsoonal climate in the south of the region. Par? state has a tropical climate with the presence of monsoons (Am) along the coast, combined with Af zones in the central-east area (with an annual rainfall from 2,200 to 2,700 mm), as well as around Maraj? Island and the city of Bel?m (3,000-4,000 mm) (Reference?). The rest of the coastal region is primarily covered by an Am climate, also transitioning to a tropical zone with dry winters in the south-east.[26][26]

21. Brazil?s historical mean annual temperature is 24.96?C (1901-2016). In the targeted project areas, the Amazon rainforest dominates the territory with a mean temperature between 27.9?C in the dry season and 25.8?C in the rainy season (World Bank Group, 2020). Temperature has increased by 0.5?C since 1980 overall, particularly in the dry season.

22. Within the project area, extreme temperature change (TXx) is expected, with temperature variation of 2-3?C (RCP4.5) to 4-6?C (RCP8.5) by 2081-2100, relative to the 1981-2000 reference period (Sillmann et al., 2012). Climate projections result from an ensemble of global circulation models from the Coupled Model Intercomparison Project 3 (CMIP3) and 5 (CMIP5) (World Bank Group, 2020; Sillmann et al., 2012).

d. Threats: Root causes and drivers of degradation

23. The economy of the Amazon region is highly dependent on the use of natural resources. Wetlands suffer high anthropogenic pressure that causes loss of biodiversity and degradation of varzea floodplain forests along the Amazon river and mangroves in the Southeast coast of the Amazon Biome.

Threat 1: Unsustainable Deforestation

24. Varzea and mangrove ecosystems are among the most imperiled ecosystems of Amazonia. These ecosystems endure high anthropogenic pressure. The ecosystems are fragile and once altered are difficult to recover. V?rzea Floodplain Forests in all regions both inside and outside protected areas suffer significant forest loss due to anthropogenic pressure. Mangrove ecosystems inside protected areas are relatively well conserved. However, mangroves beyond protected area boundaries are quickly disappearing. The rate of wetland forest loss has increased since 2010. [27][27] During 2019, PRODES data showed an estimated deforestation rate close 10,000 square kilometers in 2019. This was boosted by export markets for agricultural goods, forest goods, minerals and energy and the development of transport infrastructure.[28][28]

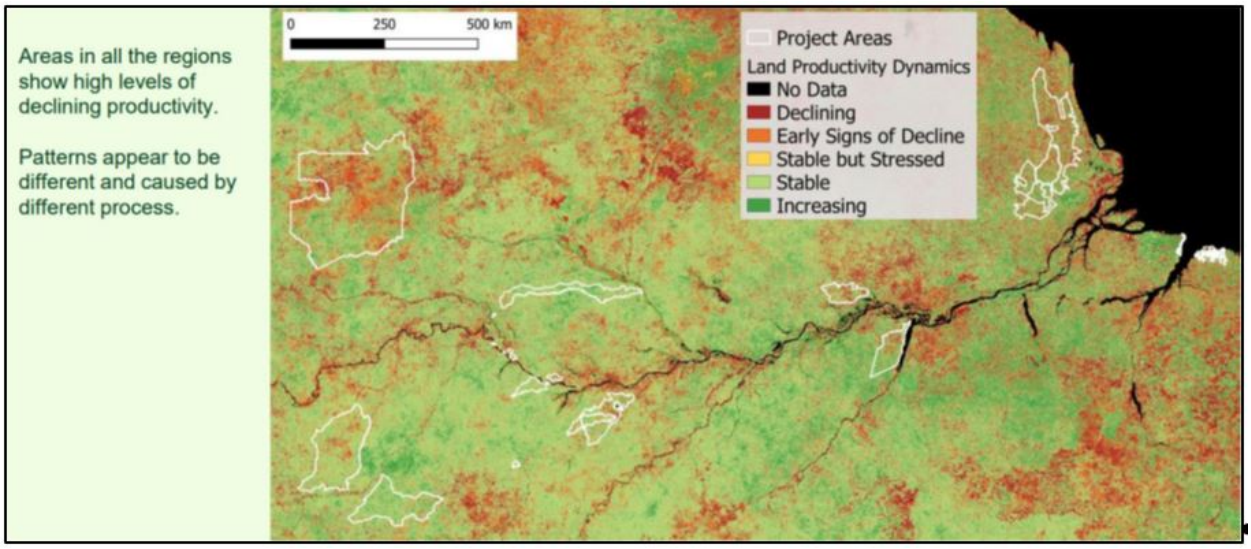

Figure 1. Land Productivity Dynamics (2000-2019) in target sites

25. FAO and Mamirau? conducted temporal analysis of forest loss using the Hansen Global Forest Cover Product (v 1.7)7 between 2000 and 2019 including a 20 km buffer zone delineated to compare state and pressures inside the area and its surroundings. Preliminary results show that approximately 138,193 ha of forest were lost inside the project sites since 2000, of which 54% were lost in the last 5 years (74,442 ha). In contrast to forest loss inside the study areas, the 20 km buffer areas show higher levels of forest loss. The study estimates that nearly 787,205 ha of forest were lost since 2000, of which 38% (297,460 ha) were lost in the last 5 years.

Fires

26. Fires are a major driver of deforestation, whereas flooded forest have demonstrated to be more prone to wildfires as compared to upland forest in the Amazon[29][29]. The project team carried out an assessment of land productivity dynamics and forest fires. Land productivity dynamics were analyzed using times series of MODIS NDVI (250m) from 2000 to 2019. Fire dynamics were analyzed using data from the Fire information for resource management (FIRMS - NASA) from 2000 to 2020. Results show that all target sites show areas with high levels of declining productivity, though patterns appear to be different and caused by different processes. Land use patterns from the inland side seem to be causing mangrove forest pressures due to high fire intensity. The reason for higher susceptibility of seasonally flooded forest to wildfire is that floodplain forests are naturally more flammable and typically have large masses of exposed root mats[30][30] that burn easily and may spread fire effectively in drier years. The combustion of this organic material by fire may plausibly facilitate subsequent floods to wash away nutrients and fine sediments, leaving behind relatively poor sandy soils. Overall, forest recovery upon fire in the floodplains may be hindered by a combination of recruitment limitations partly caused by lost soil fertility with seasonal inundation that restricts the time in which trees can grow.

27. It is estimated that a stock of 13 billion tons of CO_2 is stored there and the ability of indigenous lands to inhibit predatory activities or fires has been demonstrated by numerous studies. Storing a ton of CO_2 on indigenous lands represents an investment of only US$ 19 (taking into account the cost of control policies and social benefits) while offsetting the emission of this represents US$ 1,500 under current market conditions. The environmental service provided is therefore valuable.

28. Whereas the project will not directly address forest fire management and prevention of wildfire in the flooded plains, the improvements brought by its interventions on the livelihood of the traditional and indigenous people living there are supposed to have indirect positive effects on the avoidance of misuse of fire.

Unregulated Logging

29. Illegal logging drives deforestation and has major impacts to forest structure, altering local environmental dynamics and generating fuel that originates or intensifies possible fire outbreaks.[31][31] As large changes in the biome become a reality, mainly by the hands of agriculture and livestock pastures (Laurance et al., 2001) implementation of large infrastructure works such as hydroelectric dams (Tundisi et al., 2014) and highways, biodiversity and survival of local traditional communities become at risk (Paiva et al., 2020).

30. Logging is pervasive in the Varzea forests. Due to the low costs of log extraction, displacement and transportation during the flood period, the exploration is concentrated in Varzea wetlands [32][32] [33][33]. In Piaga?u-Purus Sustainable Development Reserve between April and July 2005, 6,805 trees from 67 different species removed.[34][34]

31. The main cause of illegal logging is the objective difficulty (very large districts to be patrolled by few, ill-equipped forest rangers) by governmental entities to enforce existing laws which regulate legal extraction of wood from the forest. The logistic difficulties are compounded by a weak awareness of local loggers on the values of standing forest, and their low capacity to comply with the administrative procedures that lead to environmental licensing of wood exploitation.

32. In Piaga?u-Purus Sustainable Development Reserve there are no official forestry management plans and all current logging is illegal, unplanned and unsustainable. Residents of this protected area and peripheral communities harvest wood throughout the year, with higher intensity during the flood period, when the logs can be transported by floatation, via the construction of rafts.

33. Mangroves are also susceptible to illegal logging. Mangrove loss from logging greatly outpaces regeneration rates. The Tracuateua Marine Extractive Reserve shows increasing levels of deforestation immediately adjacent to protected areas. The degradation of mangroves harms invertebrates such as the swamp ghost crab. This is one of the most important species for the subsistence of local people and a critical species in the maintenance of healthy mangroves. However, there are major information and data gaps, particularly for mangrove forests. Declining productivity on the mangroves is not well understood. There is currently no quantitative information measuring human activities to this species.

34. The white mangrove tree is intensely used to build traditional fishing traps (corrals) in the coast of Par?, where commercial and subsistence fishing is crucial for local livelihoods[35][35]. This

activity uses thousands of 2-4 cm thick poles cut from white mangrove per trap that need replacement every 6-24 months. Increased populations in these areas is creating greater demand.

35. Mangrove vegetation is fully protected as Permanent Protection Area (APP) under the Brazilian legislation (Law 12.651 of 2012). In spite of legally protected, the Mangrove ecosystems are impacted by a range of anthropogenic pressures, and the loss of this habitat can be attributed primarily to the human occupation of the coastal zone. Paved road network is one of the principal drivers of land use in the mangrove, whereas biophysical, economic, and political factors may also contribute to the reduction, stability, and development of mangrove stretched in the coastal amazon biome. Shrimp farming is one of the principal threats, through the degradation of the mangrove, as are deforestation and the over-exploitation of fishery resources.

Threat 2: Over-Exploitation of Wildlife

Swamp Ghost Crab

36. The swamp ghost crab is an endangered species in Brazil. The species is listed as ?Near Threatened? under IUCN red list methodology.[36][36] The swamp ghost crab is very important to the ecological functionality of mangrove ecosystems because: (i) they keep much of the energy within the forest by burying and consuming leaf litter[37][37] [38][38]; (ii) their feces may form the basis of a coprophagous food chain contributing to mangrove secondary production[39][39]; (iii) mangrove crab larvae are the major source of food for juvenile fish inhabiting the adjacent waterways, indicating that crabs also help nearshore fisheries[40][40]; (iv) their burrows alter the topography and sediment grain size of the mangrove[41][41] and help aerate the sediment[42][42]; (v) high crab population have been shown to control the development of anaerobic products such as sulfides and ammonium, which depress the productivity and reproductive output of the vegetation of mangrove species[43][43].

37. In addition, the swamp ghost crab is very important to local livelihoods. Over 60% of the people living within and near the coastal protected areas of Par? rely upon swamp ghost crab for subsistence and income generation.[44][44] The swamp ghost crab is primarily sold in the town of Bragan?a. The crabs are sold live or processed (e.g., paste and crab legs).

38. Swamp Ghost Crab exploitation is growing in intensity. Increased human occupation around mangrove areas has resulted in overexploitation the swamp ghost crab. Regulation and oversight is extremely limited. In addition, harvest methods are wasteful. Crab harvest and transport methodologies result in large losses and decreased value. The result is that over the last two decades swamp ghost crabs have continued to decline. This is indicated by a reduction of 15% in the number of Captures Per Unit of Effort (CPUE) and of average size of adult male individuals captured (D. Smith, unpublished data). [45][45]

39. Crab population are declining in mangrove stands close to human settlements due to over exploitation, which can be explained by the lack of alternative resources for the poor fishers? communities. Crab collection is a female and children?s occupation, does not require equipment and special skill unless basic knowledge on crabs? burrows prevail. Such resource poor collectors live far from cities and markets and are easy prey of intermediaries who pay few cents per basket and do not provide containers suitable for transportation of living crabs to the city.

Pirarucu

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40. Pirarucu is one of the world?s largest freshwater fish. They grow to over 3 meters and can weigh more than 200 kilograms. They occur throughout the Amazon basin. Pirarucu are a keystone species and strong indicator of overall ecosystem heath, although the scientific literature on the ecology of this very important species for the local economy is still limited.

41. Pirarucu are valued as both a sport fish and for consumption. They are an airbreathing species, making them relatively easy to find and target. Due to overharvest rates and plummeting populations, Brazil outlawed Pirarucu fishing until 1999. Since that time, harvest is allowed buy only in specified areas.

42. Community-based management of pirarucu was first implemented in 1999, after researchers and local people developed a method to count pirarucu[46][46], hence the possibility of estimating population size, determining annual harvest quotas and monitoring populations of pirarucu over time. The participatory and adaptive management model of this process allowed the appropriation of management actions by local people as well as increased their governance over natural resources15. It also allowed continuous evaluation of the management process.

43. As a result of training and technical support provided by the Mamirau? Institute for Sustainable Development (IDSM in Portuguese), nowadays more than 3,000 fisherman families are benefitting from community-based management of pirarucu in the State of Amazonas. This social technology developed by IDSM together with local fishermen, has already been replicated to other states of Amazonia Legal, including other countries such as Peru, Guiana and Bolivia. In the areas that

Mamirau? Institute provides direct technical support more than R$ 20,000,000 (~US$ of revenue have been generated in the last 20 years, with an average individual income over the last five years of R$ 2,000 per fisherman. Simultaneously, the natural stock of pirarucus increased by approximately 427% in areas managed with support from the Mamirau? Institute[47][47].

44. Despite the success of community-based management of pirarucu inside protected areas, pirarucu population continued to be pressured inside and outside protected areas, mainly because of the marginalized group of stakeholders that lost access to the booming resources from within protected areas. To try to mitigate this issue Mamirau? Institute has guided ?fishing accords? (agreements between fisherman from inside and outside protected areas) to allow fisherman from outside protected areas to participate in the community-based management of pirarucu inside protected areas. Using this community-based management of pirarucu has also worked outside protected areas[8].

45. The creation of protected areas and technical support from Mamirau? Sustainable Development Institute, hereafter Mamirau? Institute, have allowed adequate management of fisheries and caused the increase and maintenance of fisheries stocks in the varzea inside protected areas. In these areas, not only has biodiversity flourished but fisherman livelihoods have improved significantly. The pirarucu is a great example of this success with populations growing considerably after these interventions.

46. At the same time, the creation of protected areas has denied access to natural resources to a large number of stakeholders, mainly fisherman from peripheral communities and urban areas, that were, overnight, forbidden to use resources from inside protected areas and were left unassisted.

47. To survive, this large number of stakeholders have continued their activities as professional fisherman, using fisheries resources in open-access lakes without any technical support and planning. This has resulted in the swift depletion of stocks in these areas, threatening food security of these peripheral communities and putting pressure on biodiversity inside protected areas.

48. In the project areas, harvest of Pirarucu presents many challenges. Access is largely defined by unregulated, open access regimes. In open-access access lakes pirarucu populations can have densities over 100 times smaller than in protected lakes (open-access lakes: 0.002 ind. ha?[1]; protected lakes: 0.294 ind. ha?[1]) indicating severe overexploitation. [48][48] However, adequate data is lacking for the project areas.

49. The rate of exploitation is considered to be too high with many residents harvesting Pirarucu for subsistence and sale. Increasing numbers of fishing interests are competing for decreasing numbers of fish. This threatens the species and associated biodiversity.

50. Management is required to improve and regulate Pirarucu fishing. Local stakeholders currently do not have the tools required to improve fisheries regulation and monitoring. They also do not have access to processing facilities to reduce waste and increase valuation.

Caiman

51. The commercial ban on hunting of wildlife in Brazil since 1967, by the Fauna Law (Law No. 5,197), in association with the stricter international trade and the creation of conservation units, has promoted the recovery of some caiman populations previously at risk. However, large-scale illegal caiman hunting still occurs. Populations outside protected areas extremely reduced.[49][49] In some areas of Amazonia, uncontrolled harvest of caiman has caused local extinction.

52. In 2000, Brazilian legislation started to allow controlled harvesting of caiman in some categories protected area (Federal Law No. 9,985). Experimental harvesting carried out between 2004 and 2010 in Mamirau? Sustainable Development Reserve showed that sustainable management of the black caiman (*Melanosuchus niger*) was possible. Associated with research and monitoring, this experience served as a basis for the elaboration of specific state legislation for the management of caimans in protected areas of Amazonas state (Resolution CEMAAM n? 008/2011 and IN SEPROR / CODESAV n? 001 / 2011). Initiatives for the development of caiman management have been articulated during this period in other sectors of the RDS Mamirau?, as well as in other protected areas.

53. Caiman are top predators and play important ecological roles such as cycling nutrients, as species that connect the terrestrial and aquatic environments (preying on land animals and disposing of waste in the water), and in controlling other species through predation (Ross, 1998). Their role as opportunistic predators, allows them to control weak and sick animals, eliminating them from their populations in addition to controlling species of other predators that reproduce in greater numbers or faster (eg, large catfish and piranhas), and could cause imbalance and even harm local fishing (Barreto-Lima et al., 2021). They are also important as prey, with sub-adult and juvenile animals being some of the main prey for jaguars, anacondas and other caimans. Large fish and water birds also prey on young and their eggs are important in the diet of jaguars, monkeys, lizards and other species of small mammals and birds (Torravo et al., 2017; Silva et al., 2021). The decrease in the population of these animals can unbalance the entire environment where they occur, and cause indirect damage to traditional communities (Ross, 1998; Barreto-Lima et al., 2021).

54. Seizures by state and federal agencies indicate the existence of an extensive illegal trade of caiman in the Brazilian Amazon. Caiman are hunted for consumption and relied upon as bait for prized piracatinga catfish. In one year, over 2,300 black caiman (*Melanosuchus niger*) were harvested and used for bait in the Mamirau? Sustainable Development Reserve.[50][50] In the Piaga?u-Purus

Sustainable Development Reserve, an estimated 37 tons of caiman are illegally harvested every year.[51][51]

57. Caimans are one of the main species exploited in the Amazon, having a history of exploitation of more than 50 years, from the fur trade to the harvest of meat to be used as bait for fishing (Da Silveira & Thorbjarnarson, 1999; Franco et al., 2016). The great variety of demands, the ease with which caimans are found and captured, in association with the antagonistic relationship with riverine communities, who perceive them as a threat to people, animals and competitors for fishing resources, makes the pressure on these animals persist. Although there has been a reduction in the number of caimans hunted in the last 20 years, the exploitation that still exists shows signs of unsustainability, as there is no control over size, time of year/reproductive period, sex ratio or area of harvest (Mendon?a et al., 2016). The elaboration and application of a management protocol, inserts sustainability precepts in extractive process, directing the capture to a group of animals within the population (young males and sub-adults) whose removal of a percentage will not cause imbalance, as they do not have a significant reproductive role as well as prohibiting capture during the breeding season and in breeding areas, allowing the population to be able to recover (Franco et al., 2019).

Threat #3: Climate Change

55. There is a broad scientific consensus that climate change will result in higher mean temperatures, rising sea levels, and higher frequencies of extreme climatic phenomena such as extended droughts, floods and tropical xxx.[52][52]

56. According to USAID climate projections (2018), monthly precipitation in the Amazon is likely to decrease by up to 9.67mm (10th ? 90th percentile range: -68.02mm to 25.84mm) in the dry seasons which are expected to last longer, compared to the 1986-2005 reference period. Consecutive dry days (CDD) are projected to increase overall, with an uncertainty range of -5 to +19 CDD, combined with a severe drought probability of 36%, up to 80% in central-northern Amazon (Standardized Precipitation Evapotranspiration Index <-2), substantially caused by higher impacts of ENSO events by 2085 (World Bank Group, 2020). Forest loss is likely to amplify drought by reducing dry-season evapotranspiration rates and therefore reducing atmospheric moisture recycling capacity.[53][53]

57. At the same time, the percentage of very wet daily precipitation (R95p) could change from -5 to 30% for RCP2.6, from 5 to 40% for RCP4.5 and RCP8.5, by 2081-2100 relative to the reference period 1981-2000 in the project area, with some anomalies and higher levels of uncertainty in specific zones (Sillmann et al., 2012).

58. Sea level rise is likely to increase between 0.2 and 2 meters by the year 2100. Alert levels of coral bleaching are registered in the Par? coastal zone.[54][54]

59. The long-term changes in the Amazonian ecosystem of floodplains (V?rzeas) and mangrove wetlands are not easy to predict, taking into account the broad range of phenomena, which are expected to deviate from their previous course, such as solar radiation, pluviometry and spatial distribution of rain, mean temperatures, higher frequency of occurrence of extreme climatic events, and their combined effects. Signals of a decrease of surface water in Amazonian lowland and floodplains have been already published (see reference 50), while the highly likely elevation of sea level will not necessarily affect the mangrove formations since it will rise so slowly that they will be able to accompany it. Higher peak temperatures will probably increase the frequency and violence of wildfire in floodplain forest (see reference 24) but will on the contrary stimulate growth of mangroves (see ref. 50).

60. Since ?wetland habitat responses to climate change and the implications for restoration will be realized differently on a regional and mega-watershed level, making it important to recognize that specific restoration and management plans will require examination by habitat. Floodplains, mangroves, seagrasses, saltmarshes, arctic wetlands, peatlands, freshwater marshes and forests are very diverse habitats, with different stressors and hence different management and restoration techniques are needed?[55][55]. In general terms, the overall stressors acting at global and biome levels display different degrees of intensity within the sub-basins and sectors in the continental and coastal environments.

61. For Varzea Floodplain Forests, there is a trend toward the shrinkage of water surface in the last thirty years at biome level (starting from 1985), with an increase of the phenomenon in the period after the 2010, which have been the warmest years in this region since the post-industrial era in the Amazon.[56][56] [57][57] Another paper has suggested that the process of gradual transformation of forest into a savannah-like ecosystem.[58][58] [59][59] This increases fire opportunities with dense canopy formations drying. These new findings cannot be fully explained as a straightforward consequence of deforestation alone, whereas a combined effect of the former with the rising mean temperatures and more frequent drought events are postulated.

62. Mangrove forests lining the coastal shore and riversides are particularly vulnerable to global warming effects, especially the rise of sea level. However, the speed and extent of sea level rise (Church & Clark, 2013[60][60]) are only partially predictable over time and space, being consensus that it will be uneven throughout the continental coasts. The potential of resilience of mangrove ecosystems

will be lower at low relief islands and shores, and where sediment growth is slow. In contrast, mangrove ecosystems with ample sediment supplies and/or room to move inland are likely to survive projected rates of sea-level rise. Independently from the main drivers, mangrove species have demonstrated different tolerances to changes in sea level, salinity, and storms.

63. Rainfall: changes in precipitation patterns caused by climate change may have a profound effect on both the growth of mangroves and their extent. Decrease in precipitation is expected to result in a decrease in mangrove productivity, growth, and seedling survival, favoring more salt tolerant species. Increase in rainfall may result in increased mangrove area, diversity, and growth rates of some plant species (Field 1995). Higher frequency in extreme events such as hurricanes and storms: an increase in hurricane intensity over the next century is likely to result in a decrease in the average height of mangroves.[61][61]

64. The effects climate change on the productivity of mangrove ecosystems under the coverage of the project will determine the decrease in abundance and the capture potential of key species such as the swamp ghost crab which is the main target of coastal population depending on these resources for food and income generation.

65. Other phenomena associated with climate change also play a role in the potential resilience or vulnerability of mangrove ecosystems. Changes in temperature, generally toward hotter averages: higher mean temperatures are not expected to cause important negative impact because the rate of projected change is considerably less than the diurnal oscillations in temperature of mangrove (Field 1995[62][62]). However, temperatures above 35?C have led to thermal stress affecting mangrove root structures and establishment of mangrove seedlings (UNESCO 1992[63][63]). Changes in CO_2: Increased levels of CO_2 are expected to enhance photosynthesis and mangrove growth rates (UNEP 1994[64][64], Ball et al. 1997[65][65]).

e. Barriers

Barrier 1 Governance: Insufficient organizational capacity to sustainably manage and conserve biodiversity

66. There are several steps required to shift current open access and/or unsustainable resource use to well-managed resource use designed to deliver biodiversity conservation results. Protected areas require both general management plans and resource specific management plans. Many of the targeted protected areas have only general management plans and lack specific resource management plans.

Some of the targeted protected areas have neither management plans or resource specific management plans.

67. Outside of protected areas, most resources are under IPLC management. Resource use protocols are required to make certain resource use supports long-term biodiversity conservation objectives. The development of management protocols is a necessary initial step for adequate management of biodiversity. Protocols describe in detail all stages and correct procedures to manage specific natural resources sustainably, following law requirements and good practices. Management plans use these protocols as guidelines to formally propose a management plan to responsible government agencies that sanction the activity. Currently, IPLCs do not have the capacity to develop these protocols.

68. Significant capacity barriers currently inhibit the design, adoption, implementation and monitoring of management plans and protocols designed to promote sustainable practices and address biodiversity loss. While the government of Brazil has made significant efforts to protect the Amazon forest by harmonizing ecosystem protection, biodiversity conservation, forest and agriculture production, tensions still exist between growth of local communities and conservation goals.

IPLC Organizational and Management

69. There is limited organizational and technical capacity at the IPLC level to draft and implement necessary resource use protocols. Local people have extensive knowledge of their environment and its associated biodiversity, especially of resources that they have historically used for their subsistence (e.g. the pirarucu). However, they lack training in skills needed to successfully implement and maintain modern management technologies such as monitoring protocols, financial management and reporting. Additionally, independently of training of managers, management initiatives require technical support for some steps of the management process demanded by public agencies that regulate extraction activities.

70. Over the last 50 years there has been significant strengthening of organized civil groups associated with specific natural resource management processes. However, governance is still weak and dependent on continuous and intensive technical-political support from NGOs and government; these groups need continuous support to keep activities running properly. Without this, governance of local people over natural resources remains weak and production chains continue to be unfavorable to them.

71. Adequate management of this quintessential tropical forest and its biodiversity is critical for the maintenance of global climate and mitigation of impacts from human population growth on environmental sustainability and food security for peoples of the region[1].

72. During the project preparation phase a capacity assessment was conducted to determine the technical needs of IPLCs and other stakeholders related to management of the specific natural resources in which the project focuses its efforts. This assessment evaluated existing gaps in knowledge, skills, strengths, and other elements required for IPLCs to be successfully incorporate pro

biodiversity practices into their management initiatives. This assessment provides key information for the establishment of a knowledge baseline in target project areas and will be used for project monitoring evaluation. The baseline assessment will also help inform training approaches, materials, subject matters and content.

Protected Area Organizational, Management and Technical Capacity

73. Protected areas have limited organizational, management and technical capacity required to draft both general management plans and plans describing conservation parameters for the sustainable use of specific resources.

74. Brazil has established environmental legislation and policies to reduce deforestation, harmonize conservation, development and poverty reduction.[2] Brazil has made significant efforts to protect the Amazon Forest by harmonizing ecosystem protection, biodiversity conservation, forest and agriculture production. However, tensions still exist between growth of local communities and conservation goals. The Government of Brazil has a very comprehensive and broad set of laws and policies designed to promote sustainable management.

75. The Government has been challenged in some instances to effectively apply this policy framework, particularly in terms of addressing fundamental threats to address direct drivers of habitat and biodiversity loss, improve effective management of protected areas and ecosystem coverage.

76. Government of Brazil has institutions in place working towards achievement of the project objective. Despite limitations, these institutional structures, designed to support the creation, implementation and management of PAs (Conservation Units and Indigenous Lands) and the biodiversity contained in them, provide an important entry point for change. This includes poorly funded agencies at the national level and state level. Institutions are understaffed and under trained, with high staff rotation due to remoteness of PAs and a lot of difficulty in implementation and management of PA, as well as to enforce policies and legislation.These institutions do not have the manpower to monitor biodiversity effectively and also do not possess the means to provide training to IPLCs for adequate application of management protocols.

IPLC Resource Conservation and Use Capacity

77. There is a need to help build the capacity that IPLCs, governmental and non-governmental institutions to adequately develop, evaluate, implement and monitor biodiversity-positive management practices.

78. Over the last 50 years there has been significant strengthening of organized civil groups associated with specific natural resource management processes. However, governance is still weak and dependent on continuous and intensive technical-political support from NGOs and government. Community groups need continuous support to keep activities running properly. Without this,

governance of local people over natural resources remains weak and production chains continue to be unfavorable to them.

79. The capacities of Indigenous Peoples and Local Communities (IPLCs), including the private sector, to effectively engage in conservation oriented practices is limited. IPLCs do not have the tools and institutions required. Although IPLCs have extensive knowledge of their environment and its associated biodiversity, especially of natural resources that they have historically used for their subsistence, they lack training in skills needed to successfully implement and maintain modern management technologies such as management plans, monitoring protocols, financial management practices and reporting procedures.

80. IPLCs have little incentive and awareness to mainstream biodiversity conservation practices in their productive activities. National, state and municipal level agencies, as well as non-governmental institution require training to be able to adequately provide technical support to IPLCs in the effective management of natural resources, as well as knowledge to be able to effectively evaluate management proposals.

Pirarucu Management

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81. Despite the extensive effort of Mamirau? Institute to support the sustainable management of pirarucu in Amazonas State the government institution responsible for providing technical advice and training to managers, the Institute for Farming Development of the State of Amazonas (Instituto de Desenvolvimento Agropecu?rio do Estado do Amazonas ? IDAM), does not have qualified personnel to support IPLCs in the implementation of the pirarucu management protocol.

82. IPLCs do not have the necessary training to conduct all required activities on their own. This scenario compromises sustainability and effectiveness of management activities, as well as comparability of results over time and between management areas.

83. Capacity building is needed to make certain institutions have trained personnel, with harmonized interinstitutional application of good practices. There is a need to conduct training courses for professionals with higher and medium level education whose job is to give technical support for the implementation of participatory management plans of fisheries resources in Protected Areas and Sustainable Productive Territories (outside protected areas) of Amazonia. These include environmental analysts, protected area managers, technicians from NGOs, local organizations and city halls? staff.

84. In the case of IDAM, with technical subsidy to take over support fisherman in the Sustainable Productive Territories of Jurupari Grande, Parana do Jacar?, and Seringa.

Caiman

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85. Technical advisors from government agencies and IPLCs community-based organizations do not understand the framework required by law for the development and implementation of a caiman management plan in protected areas of Amazonas state. The environmental agencies have little experience in the activity of managing caimans, and, therefore, have limited ability to evaluate and authorize proposed management plans, making the evaluation and authorization process slow.

86. This scenario exists because the legislation that regulates the handling of caimans in both the Federal and State spheres is recent and has not yet been effectively tested as to its applicability. Community-based organizations and technical advisors from government agencies need a simple and clear guide, with adequate language, on how to develop a caiman management plan.

87. There is a need to assist these stakeholders to develop a Caiman Management Protocol containing the information required by law for authorization of a community-based caiman management in protected areas of Amazonas state and a description of the correct methods to generate biological and population information on caiman for the management area, and for monitoring the activity.

88. Caiman management plans submitted to regulatory agencies are usually denied due to faults in document preparation related to misinterpretation of the relevant legislation or inadequate application and monitoring of management process. Past estimates of population parameters of the caiman population in Piaga?u-Purus SDR suggest that there is potential for caiman management in the area but the Resident and User Association of Piaga?u-Purus SDR (AMEPP) do not have the necessary training to produce new estimates and prepare an adequate management plan.

89. There is a need to evaluate caiman stocks and develop in collaboration with AMEPP a caiman management plan for Piaga?u-Purus SDR with AMEPP. This includes the need for the caiman management plan to be approved by SEMA-AM and IBAMA.

90. Technical advisors from government agencies and IPLCs community-based organizations do not understand the framework required by law for the development of a caiman management plan. The environmental agencies also have little experience in the activity of managing caiman, and, therefore, have limited ability to evaluate and authorize proposed management plans, making the evaluation and authorization process slow. This scenario exists because the legislation that regulates the handling of caimans in both the Federal and State spheres is recent and has not yet been effectively tested as to its applicability.

91. The development of caiman management protocol will help to change this scenario by producing a technical document containing the information legally required for authorization of a community-based caiman management in Protected Areas of Amazonas State, as well as the relevant methodologies that will generate information to justify the activity and monitor it. There is a need to assist proposing entities and the technical advisors will have a simple and clear ?how to? guide to develop a caiman management plan.

Swamp Ghost Crab

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92. Capacity to generate protocols designed to conserve swamp ghost crabs are low. Two major issues in the swamp ghost crab value chain are the over-exploitation of the species and the unfair trade of animals that leaves local crab fishing communities of the Coast of Par? in very bad position to improve their income and quality of life.

93. There is a need to reduce crab mortality during transport, over 30%, and increased income to local fisherman. The Federal University of Par?, Bragan?a campus, Sedap, ICMBio and the Mamirau? Institute have advanced in the last nine years in studies and extension projects relating knowledge about the environment and the sustainable way to extract and transport crab from mangroves of the coast of Par? State. After initial actions with the managers, there was a reduction in crab mortality during transport from 66% to almost zero. In this project this process will be consolidated in pilot areas and expanded to new areas.

94. There is a need to conduct training courses to promote good practices in the management of the swamp ghost crab, with important focus on the use of technology to reduce mortality of animals during transport and aggregate value of this biodiversity resource to local fisherman.

Forest Management

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95. The territory of Piaga?u-Purus SDR presents a unique to address the conservation of both floodplain and upper terra firme forests through sustainable forest use practices. However, capacity to design and implement a management regime to achieve this is limited.

96. Forest management in Amazonia requires careful consideration of the type of ecosystem in which the activity will be conducted. The two major Amazonian ecosystems are the seasonally flooded varzea floodplain forests and the upper terra firme forests (which do not flood). The distinct flood regimes of these two forest types requires that species composition and biology is well understood to guarantee a sustainable harvest. So far there are no experiences of forest management plans for simultaneous harvest in both environments.

97. Removing this barrier requires building capacities for communities to conduct broad assessment of forest composition and wood stock in the varzea floodplain and terra firme forests of Piaga?u-Purus SDR to develop a timber management plan for the region. To fully developed timber management plan for Piaga?u-Purus, IPLCs must be trained and empowered IPLCs and organized community-based organizations to start management. Conducting all the necessary activities to develop, approve and implement a timber management plan is costly and requires a lot of technical knowledge not available to IPLCs and government agencies.

98. Before the introduction of management plans as the official tool to control logging, most harvest activities in the state of Amazonas occurred in the varzea. In 1978 the first forestry management plan was developed for the Tapaj?s River basin, using concepts introduced by

international institutions, such as FAO in the 50s, and EMBRAPA and INPA, in the 70s and 80s respectively[3].

99. In 1998, a regiment for the procedures related to Multiple Use Sustainable Forest Management activities in the Legal Amazon was established (Decree number 2,788). This decree also regulates Community Forest Management Plans, which could then be developed by associations or cooperatives, through a single Simplified Forest Management Plan. In 2010, the areas licensed for Forest Management Plans totaled approximately 3.5 million hectares.

Non-Timber Forest Products

100. The management of non-timber forest resources in Brazil does not require formal licensing or a management plan. As a result, there is usually no specific protocol for these activity. There is a need to promote training and develop a strong model protocol of good management practices for NTFPs.

101. The absence of management planning and resource use protocols makes it impossible to evaluate the sustainability of the activity. This is compounded by the general lack of qualification and information on good practices for the sustainable management of these natural resources. The scenario observed for the management of non-timber forest products is one of lack of qualification and information on good practices for the sustainable management of the chain.

102. In the state of Amap?, the Association of Women Extractivists Sementes do Araguari in the Amap? National Forest and Amap? State Forest would like to generate a NTFP management plan and an associated protocol. However, capacities to achieve this are low and demands support be provided to IPLCs design and implement protocols in partnership. This area has an abundance of natural resources, but little organization for their sustainable use. The members of the association have technical / organizational limitations to promote the sustainable use of these resources, a limiting factor for the development and application of protocols for the management of forest resources in these territories.

Agroecological Systems

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103. Agroecological systems management protocols guide agricultural production processes towards sustainable and regenerative traditional production practices. These practices are beneficial to local people, biodiversity and the environment. Agroecological protocols promote sustainable local traditional agricultural practices accessible and of low cost to farmers.

104. The municipality of Tef? (Tef? Region project area), Amazonas state would like to adopt such a protocol. However, they face significant capacity challenges.

105. Methodologies and practices disseminated by technicians from local institutions do not encourage local sustainable agroecological production and do not mainstream biodiversity. In addition,

this causes dependency of the region's farmers on conventional fertilizers, pesticides and seeds, since the use of these products makes the soil increasingly dependent on them to be productive. Most farmers do not have the resources to sustain this reality when they are not receiving some kind of financial assistance, which places them in a situation of vulnerability and food insecurity.

Eco-Tourism

106. The Tourism Protocol has the purpose of allowing indigenous communities to strategically value their territory, culture and biodiversity through tourism. It provides knowledge that will lay the foundation to a better understanding and protection of the indigenous land and the culture of its peoples. The Tourism Protocol describes the history of the territory associated with environmental management processes and governance strategies aimed at ensuring the quality of life of local indigenous communities, and contributing to the maintenance, recovery and protection of biodiversity in the area. The protocol also provides detailed information on key partners of the communities of the indigenous land, allowing a better dialogue with all parties.

107. Two documents are required by law for the realization of ecotourism activities in Indigenous Territories in Brazil: A Visitation Plan (Normative Instruction 003/15) and a Tourism Protocol (Decree 7,747/12).

108. The Visitation Plan, after approval by FUNAI, allows tourism to be conducted inside that indigenous land. The document gives detail on the type of tourism activities that will be carried out, identifies the group(s) responsible for executing each activity and how tourism will be managed.

109. As a result of the long work of Mamirau? Institute in partnership with the communities of Jaquiri IL the Visitation Plan for this indigenous land has already been developed and is currently in the process of being approved by FUNAI.

Biodiversity Monitoring

110. Biodiversity monitoring is critical to making certain the implementation of management plans and resource use protocols are on-track to deliver intended biodiversity conservation benefits. Current biodiversity monitoring capacities at both the protected area and IPLC levels are low.

111. Monitoring biodiversity entails conducting a set group of methodologies of survey that will allow evaluation of the response of biological populations and communities to external factors, usually related to anthropogenic activities such as degradation and loss of natural environments, over exploitation of species of fauna and flora and climate change.

112. The ecosystem services provided by biodiversity are essential for human survival. They provide pollination for crops, medicine, food, cycling of nutrients, maintain carbon storage and rain patterns, along with regulating other climatic patterns.

113. The Government has a national monitoring program to evaluate effectiveness of protected areas in the conservation of biodiversity, the Monitora Program. The National Biodiversity Monitoring Program (Monitora Program) was developed, implemented and is maintained by ICMBio, the national agency of the federal government responsible for the management of protected areas, and was formally instituted in 2017 by the Instructive Normative n? 03.[66][66]

114. However, protected area managers have a tough time implementing this protocol and often do not get access to results to make informed management decision about management of the protected areas under their responsibility. There is a need to validate a technological monitoring system to assist managers and give them better results at a much faster rate so that they can make informed decisions about the protected areas they manage.

Barrier 2 Technical Capacity: Limited ability to plan and implement biodiversity conservation initiatives.

Sustainable Resource Management Models

115. To conserve Amazonian wetlands environments through sustainable development practices one of the major challenges is how to aggregate value to sustainably produced biodiversity products and how to promote fair trade between IPLCs producers and final consumers.

116. One of the challenges of maintaining extrativist activities sustainable is aggregating value to biodiversity products so producers (i.e. local communities) can have higher income, improve their livelihoods and therefore have incentives to maintain the natural resources they depend on. Because of the specificity of the environment and incipiency of management systems for many natural resources of Amazonia, there is a general lack of adequate technology to improve participatory management practices and processes. There is also insufficient investment in research and development, on sanitary control protocols and aggregation of clean energy to production. These traits do not allow optimization of management, which would generate more effective use of natural resources.

117. There is a need for biodiversity values chains and laying ground for a long-lasting change in the scenario of IPLCs and biodiversity use in Amazonia wetlands, with focus on varzea and mangroves.

118. Local people have extensive knowledge of their environment and its associated biodiversity, especially of resources that they have historically used for their subsistence (e.g. the pirarucu). However, they lack training in skills needed to successfully implement and maintain modern management technologies such as monitoring protocols, financial management and reporting. Additionally, independently of training of managers, management initiatives require technical support

for some steps of the management process demanded by public agencies that regulate extractivist activities.

119. Despite legal and local advances, currently, many indigenous peoples in Brazil live in vulnerable land tenure conditions, with limited access to social, environmental, and political rights. Since 2015, the landscape of management and governance structures related to indigenous lands mentioned in the previous item has been affected by setbacks and targeted attacks on indigenous lands, multiplying in a general context of increasing violations of environmental laws and deforestation. While 16% of the country's population lives in extreme poverty, 38% of indigenous peoples find themselves in this situation due to several factors: insufficient access to resources, contact and violent processes of acculturation, growing link with monetary economies and dependence on relation to market goods and conflicts with invaders, miners, and agriculturalists.

120. The creation of protected areas and technical support from Mamirau? Sustainable Development Institute (Mamirau? Institute) has improved management of fisheries and caused the increase and maintenance of fisheries stocks in the varzea inside protected areas. In these areas, not only has biodiversity flourished but fisherman livelihoods have improved significantly. The pirarucu is a great example of this success with populations growing considerably after these interventions.

121. One of the challenges of maintaining extrativist activities sustainable is aggregating value to biodiversity products so producers (i.e. local communities) can have higher income, improve their livelihoods and therefore have incentives to maintain the natural resources they depend on. Because of the specificity of the environment and incipiency of management systems for many natural resources of Amazonia, there is a general lack of adequate technology to improve participatory management practices and processes. There is also insufficient investment in research and development, on sanitary control protocols and aggregation of clean energy to production. These traits do not allow optimization of management, which would generate more effective use of natural resources.

122. Brazil has an aggressive campaign to support local food production and acquisition. However, many local communities can not reach the food safey and certification requirements to access these programs. This includes the National Food Acquisition Program (PAA), the National Food Acquisition Policy for School Lunch (PNAE) and the minimum price guarantee policy of Companhia Nacional de Abastecimento (CONAB).

123. These existing projects and policies are aimed at supporting products with a sustainable extractive base, providing subsidies and adding socio-environmental value to access the markets; however, the regulations require hygienic-sanitary AFSety and the guarantee of the maintenance of biodiversity aspects that will be strengthened by this project.

124. Local stakeholders are not trained to implement modern management protocols and are forced to use resources outside regulations and without optimizing extractivist activities. This project will train IPLCs to implement these protocols.

Financial Management Capacities

125. IPLCs have difficulty in managing local community-based organizations, especially when it comes to managing financial resources from the commercialization of biodiversity products. In the current scenario, some of some of the critical challenges faced by IPLCs in managing their organizations are: difficulty of finding good leaders and exercising leadership within the organization, developing internal regulations, maintaining up to date registration, licensing and taxes with responsible governing agencies, managing financial resources, access to subsidies from public resources and other non-reimbursable financial support for investment in production chains, difficulty in marketing and distribution of production.

126. Most organizations are currently formalized as associations carrying out commercial exchanges mainly with the informal market and middlemen with low prices who often do not pay even the cost of production and in some cases in the formal market offering better prices, but in most cases through supporting institutions, with the associations still lacking autonomy in accessing this type of market.

Pirarucu Management

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127. The pirarucu is one of the most valuable fisheries resources of Amazonia. This species was overexploited in the recent past, but the experience of community-based management initiated in Mamirau? Reserve, in a partnership between Mamirau? Institute and local communities, allowed the sustainable harvest of this species to be replicated throughout Amazonia benefiting thousands of IPLCs and increasing pirarucu populations throughout the region inside and outside protected areas.

128. The sustainable management of pirarucu is a conservation model adopted throughout the Amazon basin. Although the management protocol is consolidated, aggregating value to this biodiversity product to benefit IPLCs has been a major difficulty due to legal hygienic-sanitary quality requirements that are unattainable in existing pirarucu processing facilities. Currently, evisceration and cleaning of pirarucu is carried out in floating wooden sheds, using water directly from the rivers.

129. With the consolidation of management, new market opportunities were sought, aiming to increase the economic return of the activity to equalize the costs of fishing and of the entire environmental protection system involved. Access to new markets, however, requires investments in improving the hygienic-sanitary quality of the product for its entry into the national sanitary inspection system. Currently, the evisceration and cleaning of pirarucu shortly after its extraction from the lakes is carried out in floating wooden sheds, using water directly from the rivers and in uncomfortable working conditions.

130. There is a need to support IPLCs with technological innovations designed to provide an adequate production flow. Managers require training on the use and maintenance of the structures, as well as guidance on good production practices. There is a need to help managers to reach new markets and aggregate value to their production.

131. In the State of Amazonas there is high demand for technical assistance to support the numerous pirarucu management initiatives that are initiating or in progress. However, there is a deficit of

institutions and/or self-employed professionals willing and/or with the necessary knowledge to support these management initiatives. This has hindered the implementation of many IPLCs? pirarucu management initiatives.

Swamp Ghost Crab Management

132. Participatory analysis of the costs and benefits of implementing these good practices and basket technology will be carried out. This analysis will provide the necessary subsidy to adapt the processes involved in fishing for the swamp ghost crab and to make it more efficient and sustainable (potentially generating greater profit for communities and traders, and a smaller impact to crab populations). In the second year of the project, the assistance will be expanded to more crabs and middlemen.

Caiman Management Plans

133. The baseline situation in the State of Amazonas is one in which caiman management plans submitted to regulatory agencies are usually denied due to faults in document preparation related to misinterpretation of the relevant legislation or inadequate application and monitoring of management process.

134. Community-based organizations and technical advisors have little or no training to implement and effectively monitor caiman management plans. Additionally, environmental agencies have little experience in caiman management and limited staff number, making inspection of management activities prohibitive.

135. This scenario exists because the management of caimans is a relatively new activity and almost all stakeholders still have little or no experience in the development of management plans and their implementation.

136. The management plan needs to be evaluated and approved by SEMA and IBAMA, in order it to be approved and a management authorization emitted. The monitoring of the activity, when implemented in the future, must be carried out by AMEPP and the responsible technical advisor. SEMA and IBAMA must monitor the procurement and transport of slaughtered caimans, while Municipal Production Secretariats, ADAF or MAPA must monitor the destination and sanitary quality of the products.

Agroecological Systems

137. The Ministry of Agriculture, Livestock and Supply (MAPA) is responsible for authorizing organic produces. Farmers and local technicians require support to be able to cross the threshold required for organic certification.

138. Considering the current context, access to organic certification in the interior of Amazonas is still a long way off, since not even the local technical body has mastery of these processes, the idea is that this document will facilitate the base organization of the communities interested in this certification and help the local technical body in organizing these processes together with the groups that are advised. With the incorporation of this instrument, possibly, in the future, more organic producers will emerge, which favors the conservation of biodiversity (because these practices are sustainable, especially because they encourage clean production - without pesticides and synthetic fertilizers) and also promote greater access to healthy food and with that strengthen food security and sovereignty.

139. Fruit pulp processing activities from the productive areas of the Tef? region are carried out in the homes of riverside dwellers, where there is no basic infrastructure necessary for the processing, packaging and/or cooling of food for commercial purposes, meeting the requirements hygienic-sanitary facilities. Fruit pulps are extracted manually, using household kitchen utensils and there are difficulties with the storage of frozen products.

140. The production of manioc flour in the Tef? region is mainly a family activity, carried out by practically all the farmers in traditional flour houses, which have a simple wooden structure and use basic instruments for processing. Although this structure is widely used, the traditional house presents itself as a precarious environment for carrying out the cassava processing processes and with unhealthy working conditions for farmers (who during the process are constantly inhaling smoke from the ovens, subject to accidents in the roasting process, requiring high physical effort). In addition, the traditional flour house does not meet the requirements of the Foundation for Health Surveillance of the State of Amazonas - FVS/AM, which regulates the commercial production of flour.

141. The process of Geographical Indication (GI) of Farinha Uarini has been developed in the Tef? region to provide farmers with added value to the flour product, which is already renowned. In order for the region's farmers to remain in the GI process, in addition to producing organically, they are required to meet the minimum requirements agreed by the product group. However, many still cannot move forward and access this opportunity. Thus, the structuring of an appropriate space for production with minimal infrastructure for processing and quality of work has become essential in the region.

142. There is no adequate protocol for the management of agroecological systems in the municipality of Tef? Amazonas state (Tef? Region project area). Methodologies and practices disseminated by technicians from local institutions do not encourage local sustainable agroecological production and do not mainstream biodiversity. In addition, this causes dependency of the region's farmers on conventional fertilizers, pesticides and seeds, since the use of these products makes the soil increasingly dependent on them to be productive. Most farmers do not have the resources to sustain this reality when they are not receiving some kind of financial assistance, which places them in a situation of vulnerability and food insecurity.

143. There is a need to support an agroecological systems management protocol, adapted for the region, to guide agricultural production processes towards sustainable traditional production practices that are beneficial to local people, biodiversity and the environment. Local farmers and technical

advisory professionals from governmental institutions need support to adopt pro biodiversity management practices based on the protocol and will become less dependent conventional products that are unsustainable and inadequate for the region.

Protected Area Management Planning

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144. Although progress has been made with conservation area planning, many of the conservation areas within the project area still lack management plans. Many of these areas with management plans fail to effectively integrate sustainable use of natural resources. In addition, protected area management plans often do not take a landscape level approach that considers resource use both inside and beyond protected area boundaries. Harmonizing these practices is critical particularly as climate change alters the habitat use requirements for many species.

145. The creation of protected areas has denied access to natural resources to a large number of stakeholders, mainly fisherman from peripheral communities and urban areas, that were, overnight, forbidden to use resources from inside protected areas and were left unassisted.

146. Natural resource managements plans are one of the most important tools used in Brazil to guarantee the successful implementation and sustainability of activities that use biodiversity directly or indirectly. Management plans implicitly mainstream pro biodiversity practices into natural resource management, and take into consideration the rights and considerations of IPLCs. The preparation of management plans and submission of documents required by law to biodiversity regulating agencies, and implementation and monitoring of the management process, however, demands technical skills that are usually not available to community-based organizations (institutions who are generally the responsible entities for management activities, including development, implementation and monitoring of management plans). Consequently, technical support for the development, implementation and monitoring of management plans is a demand of IPLCs and biodiversity regulating government agencies throughout Amazonia.

Community-based tourism

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147. The community-based tourism activity is developed from river movements in the region of Pousada Uacari and between riverside communities involved and the cities of Tef? and Alvar?es. The Inn has seven of its own boats, five of them with engines from 15 to 30 HP, used for short trips and trips at low speed. The fuel used is gasoline and around one thousand liters are consumed per month, in times of full operation.

Forest management plan for non-timber products

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148. An association of producers already exists and its members carry out the management of forest resources, mainly those related to oilseed species. The Association of Women Extractivists of Araguari

? Sementeiras do Araguari is consolidated, however its members do not have an established protocol for the development of their activities. The use of good practices in the management and processing of non-timber resources is essential for maintaining the quality of products, ensuring their access to the market and generation of income.

149. The management of non-timber forest resources is relatively new in terms of regulations and protocols, proof of this is the inexistence of licensing systems for the management of most of these products. Existing protocols usually take into account local production techniques and capacities, which cannot always be generalized. Still, when it comes to products that must have high quality in order to reach the proper records and/or standards, several characteristics of the activity must be carefully monitored. Thus, the development of a management protocol that takes into account the reality of the territories in question is essential, taking into account traditional and scientific knowledge and the conformation of the forest in question.

Forest Management for Timber

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150. The management of timber forest resources has an extensive amount of reference material; however it is mainly aligned with management by companies. Community forest management has very different characteristics, specific to each environment and population, and for this reason, new Management Plans do not have adapted protocols. Thus, the possibility of errors in the construction of the Management Plan is real since community organizations don?t have the technical capacity to carry out the activity by themselves, and state public institutions that provide technical assistance are only prepared to carry out activities in the terra firme forest ecosystem.

151. Currently, the Amazonas state forest legislation establishes technical procedures for management plans in different categories and environments, however there are no procedures for management areas in which there are two types of predominant environments, as is the case of the Piaga?u-Purus SDR, which covers upland and floodplain areas.

152. IPAAM requires technical documents for environmental licensing including data on the proponent, owner, property, and technical person responsible for the plan. In the state of Amazonas there is no management plan with this characteristic. characterization of the PM, description of the management area, zoning, information about the methodological management system and environmental impact reduction.

153. There is a need to develop a forest management plan to address high frequency of illegal logging and reduce deforestation and disorderly exploitation. Establishing a legal timber market will ?force? the illegal buyer to become legal, considering that there will no longer be any availability of illegal timber from the reserve.

Barrier 3 Knowledge Management: Insufficient capacity to monitor, capture and amplify lessons learned and best practices

154. There is need to build capacities to monitor, capture, and amplify best practices. This includes making certain frameworks exist to support informed and adaptive decision-making. Removing this barrier requires the design and implementation of strategic approaches to effectively improve capacities to monitor approaches and impacts, capture lessons, and integrate these lessons and best practices within an effective policy and regulatory framework. There will be a need to provide critical financial and technical support at the user level to make certain negative impacts to communities and the ecosystems upon which they depend are not further harmed. This includes building experience with innovative regulatory approaches such as public-private partnerships based upon mutually agreement and/or contracts that support livelihood improvements, define resource access and use rights, and generate GEB?s. Removing the existing barrier, however, requires having the capacity to build upon this baseline and improve the regulatory and standardized planning frameworks to better mainstream conservation and adaptation concerns.

1) Baseline scenario and any associated baseline projects

This section seems to have been completely redone? There is no longer a description of Funai, etc.

a. National policies and plans

1. Brazil has put in place a strategic framework for ecosystem management conducive to sustainable growth and in line with international commitments including the signature of the Convention on Biological Diversity (CBD) and the United Nations Framework Convention on Climate Change (UNFCCC), both of them ratified by Congress in 1994. Since then, the Brazilian Federal Government, with the support of the Global Environment Facility (GEF) and other international organizations, has taken decisive steps to support CBD objectives by enhancing the country?s legal framework, building the institutional capacity of the Ministry of Environment, and establishing national policies, programs, and major projects as described below.

2. As part of Brazil?s commitment to the CBD, the government established in 2006 a National Policy for Biodiversity (Decree No. 4339) and a National Protected Areas Strategic Plan (PNAP) (Decree No. 5758). The latter provides for the establishment of a comprehensive system of terrestrial and marine protected areas that are ecologically representative and sets up the rules and procedures for their effective management. Within the SNAP, the GEF has been supporting the Government of Brazil establish and implement the Program of Protected Areas in the Amazon (ARPA). The current

programmatic approach is the scope of the GEF-7 Impact Programme Amazon Sustainable Landscapes ? Phase 2 (ASL-2).

1. In the current document of financial planning (PPA 2020-2023), under the Program 1041 ? Conservation and Sustainable use of biodiversity and natural resources (Guideline 13 - Promoting the improvement of environmental quality, conservation and sustainable use of natural resources, objective 1227 - Strengthen conservation, sustainable use and benefit-sharing of use of Biodiversity and Natural Resources, in order to combat and reverse their losses and the reduction of ecosystem services, through integrative public policies, considering the environmental costs and benefits), the federal resources available are of 32 M USD for 2021, and 110 M USD for the biennium 2022-23.

National Policy for Territorial and Environmental Management of Indigenous Lands (PNGATI)

1. At the national level, the National Policy for Territorial and Environmental Management of Indigenous Lands (PNGATI), established by Decree No 7747 of June 5, 2012 and by the Integrated Plan for Implementation of the National Policy for Territorial and Environmental Management of Lands Indigenous Peoples (PII-PNGATI), which proposes actions and goals to be carried out in an integrated manner by government institutions, indigenous organizations and civil society, in favor of quality of life and well-being in the country's Indigenous Lands[1].

2. The governance model proposed by PNGATI aims to reconcile the demands of indigenous peoples for a decent life with the requirements of environmental sustainability through the preparation, financing and implementation of Territorial and Environmental Management Plans for Indigenous Lands (PGTA) ? a local management tool, of a dynamic character, conceived to express the protagonism, autonomy and self-determination of indigenous peoples. The PGTA materializes the planning, agreed upon by the entire indigenous community involved, for the use of its territory for cultural, environmental, and economic purposes, for sustainable management of natural resources, landscape and Material and Intangible Heritage.

3. PNGATI operates as a public policy and at the same time as the main management instrument for indigenous peoples, and therefore assumes, in line with the IUCN and National Protected Areas Policy (PNAP/2006), the idea that indigenous lands are categories of protected areas, defined as those with limits recognized geographical and legal, whose purpose, management and management seek to achieve the conservation of nature, its ecosystem services and associated cultural values on a lasting basis, by legal instruments or other effective means. PNGATI encourages and legitimizes the local creation of management instruments developed between different levels of partnerships between local and governmental actors, associated with the establishment of protocols for territorial care and protection initiatives, as well as for actions to create and implement management plans.

4. Implementation of PNGATI has helped to move forward many indigenous peoples? issues. The policy has assisted with the accumulation and systematization of a large amount of information, reflections, and experiences on the theme of environmental management and sustainability of indigenous territories. PNGATI has helped establish and consolidate policy and governance structures with effective indigenous participation and organized at regional and national levels. Programs have helped develop tools that value indigenous knowledge and experiences in the management and management of natural resources and territories. Importantly PNGATI has promoted the valuation of indigenous contributions and knowledge to improve environmental quality and biodiversity.

[1] MITH, Maira; STIBICH, Graziela R. de; GRUPIONI, Luis Donisete Benzi. (Orgs.). PNGATI: Plano Integrado de Implementa??o da Pol?tica Nacional de Gest?o Territorial e Ambiental de Terras Ind?genas. ? Bras?lia: Projeto GATI/Funai, 2016; EIXAS, et. al. (2021). ?Estruturas de governanc?a?. In: CARNEIRO DA CUNHA, MAGALHA?ES E ADAMS (org.) (2021). Povos tradicionais e biodiversidade no Brasil: contribuic?o?es dos povos indi?genas, quilombolas e comunidades tradicionais para a biodiversidade, poli?ticas e ameac?as. Sa?o Paulo: SBPC, 2021.

3. **PA Management.** The Ministry of the Environment (Minist?rio do Meio Ambiente, MMA) coordinates the management of PAs at the federal level through its Executing Agencies. At the state and municipal levels, management is the responsibility of local environmental agencies. Once established, PA authorities must develop a management plan that covers the target PA and corridors connected to it, the integration of neighboring communities with its activities, and the management council that will facilitate the integration of surrounding communities with the PA activities. The following table summarizes the current management planning regimes for each of the project targeted conservation areas.

Table xx. Target Conservation Areas and their management plans

Target Conservation Area	**Existence of Management Plan (Y/N)**	**Approval Year**
Environmental Protection Area Algodoal-Maindeua	Y	2012
Floresta Estadual do Amap?	Y	2014
Floresta Nacional do Amap?	Y	2014
Floresta Nacional Sarac?-Taquera	Y	2001
Reserva de Desenvolvimento Sustent?vel Piaga?u-Purus	Y	2020
Reserva Extrativista Catu?-Ipixuna	Y	2010
Reserva Extrativista Chocoar?- Mato Grosso	N	-
Reserva Extrativista de S?o Jo?o da Ponta	N	-
Reserva Extrativista M?e Grande de Curu??	N	-
Reserva Extrativista Marinha Cuinarana	N	-

Reserva Extrativista Marinha de Ara?-Peroba	N	-
Reserva Extrativista Marinha de Caet?-Tapera?u	Y	2012
Reserva Extrativista Marinha de Gurupi-Piri?	N	-
Reserva Extrativista Marinha de Soure	Y	2008
Reserva Extrativista Marinha de Tracuateua	N	-
Reserva Extrativista Marinha do Maracan?	Y	2008
Reserva Extrativista Marinha Mestre Lucindo	N	-
Reserva Extrativista Marinha Mocapajuba	N	-

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Target Indigenous Lands Conservation and Resource Management Planning		
Area	Territorial and Environmental Management Plan (PGTA)[1]	Conditions
Jaquiri IL	N	Not implemented; technical advice and partnerships formed for community-based tourism
Porto Praia IL	N	Not implemented; recent interest to build and implement fisheries resource management under construction

Sector specific management considerations

4. **Forest Management.** Before the introduction of management plans as the official tool to control logging, most harvest activities in the state of Amazonas occurred in the varzea. In 1978 the first forestry management plan was developed for the Tapaj?s River basin, using concepts introduced by international institutions, such as FAO in the 50s, and EMBRAPA and INPA, in the 70s and 80s respectively[2]. In 1998, Decree No. 2,788 established the procedures related to Multiple Use Sustainable Forest Management activities in the Legal Amazon. This decree also regulates Community Forest Management Plans, which could then be developed by associations or cooperatives, through a single Simplified Forest Management Plan. In 2010, the areas licensed for Forest Management Plans totaled approximately 3.5 million hectares.

5. **Mangrove Management.** In 2002, the National Environment Council (CONAMA) established, through Resolution No. 303 (article 3, item X) mangroves as Permanent Preservation Area (PPA). PPAs are defined as a ?protected area, covered or not by native vegetation, with the environmental function of preserving water resources, the landscape, geological stability and biodiversity, facilitating the gene flow of fauna and flora, protecting the soil and ensuring the well-being of human populations?. The Federal University of Par?, Bragan?a campus, Sedap, ICMBio and

the Mamirau? Institute have advanced in the last nine years in studies and extension projects relating knowledge about the environment and the sustainable way to extract and transport crab from mangroves of the coast of Par? State. After initial actions with the managers, there was a reduction in crab mortality during transport from 66% to almost zero. The proposed project will help consolidate this process in pilot areas and expand it to new areas.

b. Special Programs and Projects

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6. **The Mangroves of Brazil Project (MoBP).** The MMA created the MoBP in 2017 with the objective to improve Brazil's capacity to promote the effective conservation and sustainable use of resources in mangrove ecosystems based on (i) the strengthening of the National System of Conservation Units (SNUC), and (ii) the designation of all mangroves in Brazil as areas of permanent preservation. The Chico Mendes Institute for Biodiversity Conservation implements the MoBP.

7. The MoBP seeks to develop a strategy for the management of protected areas for the effective conservation of a representative sample of mangrove ecosystems in Brazil. The project targets existing deficiencies that compromise effective management and promotes the conservation and sustainable use of mangrove ecosystems to ensure they provide environmental functions and services necessary for national development and for the well-being of coastal communities. The project will assist in the conservation of 568,000 ha of mangroves of world importance, in addition to generating positive impacts on the livelihoods of communities that depend on this ecosystem. The proposed GEF project will share experiences with MoBP to strengthen the replication of lessons learned and best practices to all Brazilian mangroves.

8. **Wildlife (Caiman) Management.** In 2000, Brazilian legislation allowed controlled harvesting of caiman in some categories protected area (Federal Law No. 9,985). Experimental harvesting carried out between 2004 and 2010 at the Mamirau? Sustainable Development Reserve showed that sustainable management of the black caiman (*Melanosuchus niger*) was possible. Associated with research and monitoring, this experience served as a basis for the elaboration of specific state legislation for the management of caimans in protected areas of the Amazonas state: Resolution CEMAAM n? 008/2011 and IN SEPROR / CODESAV n? 001 / 2011. Initiatives for the development of caiman management have been articulated during this period in other sectors of the RDS Mamirau?, as well as in other protected areas.

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9. **Monitora Program.** Despite being an important and bold initiative, the Monitora Program has run into continuous difficulties during implementation given the reduced number of staff available for analysis of data being collected, the need of constant training of new personnel, and the difficulty to implement of methodologies in the field. Additionally, the methodology used in the basic protocol for detection of medium and large sized mammals and birds (two focal groups in the Monitora Program methodology) yield very low number of records for many of the target species and make results less

useful for local protected area managers in their decision making. The main objectives of the Monitora Program are:

? To generate qualified information for the ongoing assessment of the effectiveness of federal PAs and the National System of Conservation Units in fulfilling their biodiversity conservation objectives;
? To subsidize, evaluate and monitor ?*in situ*? projections of alteration in the distribution and places of occurrence of species in response to climate change and other pressure and threat vectors, in order to update conservation measures, including management;
? To provide subsidies for planning the sustainable use of fauna and flora species in federal protected areas;
? To provide subsidies for the assessment of the conservation status of Brazilian fauna and flora and for the implementation of conservation strategies for species threatened with extinction and with insufficient data for the assessment (category DD); and
? To provide subsidies for the planning and evaluation of invasive alien species control programs, especially in federal protected areas.

10. **The National Landscape Connectivity Program (NLCP).** Launched in 2018, The NLCP promotes ecosystem connectivity and landscape management in the Brazilian territory through (i) the integration of public policies; (ii) providing training on sustainable development issues; (iii) stimulating synergy between nature conservation, maintenance of ecological processes and social, economic and cultural prosperity; and (iv) contributing to the reduction of the effects of climate change on the environment. The implementation of this ambitious program depends on the degree of involvement and cooperation of institutions and stakeholders from various sectors. In this way, raising the necessary resources to achieve effective results depends, to a large extent, on the capacity of the organizations involved in promoting integration between existing public policies, and the use of mechanisms available to work out an effective fund raising campaign. There are at the moment difficulties in the implementation of the program, possibly due to curbs in the MMA financial allocation and the changes in political priorities of the current government.

11. **Programme for the Conversion of Environmental Fines, (PCMA in Portuguese).** The PCMA startedin 2020 and has delivered a triennial planning document. Funding for the PCMA comes from fines paid by parties that infringe the rules in the National Environment system (SISNAMA). The program defines priority areas of investment and funds environmental projects. The fined party may opt to design and implement a remediation project or choose and implement one from a roster of pre-approved project proposals in the target priority areas. Remediation projects include the protection and management of native flora and fauna and the setup, management, and preservation of protected areas, among others. The proposed GEF project will seek to mobilize additional cofinancing resources from the PCMA.

12. **Innovative Practices Project (IPP).** ICMBio executes the IPP in partnership with the Ecological Research Institute (IP?, in Protuguese), the German Agency for International Cooperation (GIZ), and the Gordon and Betty Moore Foundation. The IPP defines an innovative practice as: (i) an initiative that promotes positive changes in the management of the conservation unit, and (ii) has the

potential to be replicated in the others conservation units. The IPP was created in response to demands for knowledge and exchange of experiences or innovative practices in the most varied themes that permeate the management of protected areas. ICMBio's intention is to consolidate the National System of Nature Conservation Units (SNUC) by encouraging dialogue through the dissemination of management practices that collaborate in an articulated and coordinated manner for the implementation of Conservation Units. The IPP is showcasing the sustainable management of Arapaima (Pirarucu) in the Extrativist Reserve of Medio Purus (PA).

13. **Fueling Bio economy by strengthening values chains of small farmers and their agroecological networks in the Amazonas State.** This recently started project, financed by GIZ, covers selected conservation units and indigenous lands in the medium Solim?es region and rural and urban areas in Tef? and neighboring municipalities where this project will operate, along with territories in the Manaus region and municipalities in the region.

14. **Adopt a Park.** Adopt a Park was instituted by decree N? 10.623, of February 2021. This program was created to attract resources with the objective of funding the conservation of national Protected Areas. National or foreign companies, as well as individuals, through this initiative, will concretely contribute to the environmental protection of Brazil. By adopting a Conservation Unit (UC), interested parties will be recognized as partners of the environment and will sign a Donation Term with ICMBio. ICMBio expects partners to invest about R$ 50 (or ? 10) per hectare per year when adopting an UC. The area of these UCs varies between 2,574 and 3,865,172 hectares, allowing for different levels of investment. The program has the potential to channel R$ 3.2 billion a year directly to the Conservation Units.

15. In the model program, the supporter invests resources in services such as monitoring, protection, prevention and combating forest fires, preventing and combating illegal deforestation, and recovering degraded areas. The donor sends donations directly to the Conservation Units, generating total transparency and ensuring that the donated services and products will reach the territory.

c. Baseline investments

16. The Ministry of Science, Technology and Innovations (MSTI), the National Center for Applied Technologies?Water (NCAT), the National Council for Scientific and Technological Development (CNPq) IDSM, and FAO will provide cofinancing for the proposed project as follows:

17. **Ministry of Science, Technology and Innovations (MSTI).** The MSTI is a government agency responsible for financing scientific studies on the biology and conservation of natural resources, assessment of participatory management and improvement of its value chains. The MSTI provides funding for capacity building and for the adoption of advanced technologies to improve efficiency in value chains and to enhance the use of renewable energies. Cofinancing from MSTI will support

activites under components 1 (capacity development) and 2 (implementation of the management plans and activities related to value chain development).

18. The **National Center for Applied Technologies ? Water (NCAT-Water)** is implementing a project financed by the MSTI related to water treatment and distribution for consumption and production activities in remote areas of the Amazon. Project activities implemented by NCAT-Water are well aligned and complementary to the proposed GEF projects as they are linked to the productive side of the management plans to be prepared and implemented under Components 1 and 2. Co-financing from the National Center for Applied Technologies - Water (NCAT-Water) refers to a project with the Ministry of Science, Technology and Innovations with an investment of R$14,000,000 (approximately US$ 2,800,000) in total for the next three years. The activities of this project in partnership with NCAT-Water are well aligned and are complementary to the GEF proposal, and are related to water treatment and distribution for consumption and production in remote areas of Amazonia

19. **National Council for Scientific and Technological Development (CNPq).** The CNPa is an organization of the federal government under the MSTI dedicated to the promotion of scientific and technological research and to the formation of human resources for research in the country

20. **Mamirau? Sustainable Development Institute (IDSM in Portuguese)** is a private, non-profit, research institute that has a contract with the Ministry of Science, Technology and Innovations. IDSM is classified as a Social Organization under Brazilian law 9.637 of May 15 1998. IDSM renewed its contract with the government at the end of 2020 for an annual financial support of R$12,000,000 (approximately U$ 2,740,000) for the next ten years. Considering the duration of this GEF project (48 months), co-financing from this government source will be approximately US$ 7,200,000.

21. Local governments (Dept. of Agricultural Development and Fishery for the State of Para, Chico Mendes Institute for Conservation of Biodiversity) are supporting capacity-building activities to conserve and use biodiversity sustainably.

d. Indigenous Peoples

The National Indian Foundation (FUNAI)

22. The National Indian Foundation (FUNAI) is the official indigenous body of the Brazilian State. Created through Law No 5371, of December 5, 1967, linked to the Ministry of Justice and Public Security, it is the coordinator and main executor of the Federal Government's indigenous policy. Its institutional mission is to protect and promote the rights of indigenous peoples in Brazil. Its main attributions aim to promote land title regularization and registration of lands traditionally occupied by indigenous peoples, in addition to monitoring and inspecting indigenous lands. Funai also coordinates and implements protection policies for isolated and newly contacted peoples. It is also its role to promote policies aimed at the sustainable development of indigenous populations.

23. In this field, Funai promotes ethnodevelopment, conservation and environmental recovery actions in indigenous lands, in addition to acting in the control and mitigation of possible environmental impacts arising from external interferences to indigenous lands. The body is also responsible for establishing inter-institutional articulation aimed at guaranteeing differentiated access to social and citizenship rights for indigenous peoples, by monitoring policies aimed at social security and indigenous school education, as well as promoting the promotion and support of educational processes traditional communities and participation and social control. FUNAI operates through Regional Technical Coordinations (CRs), which are linked to Local Technical Coordination?s, intermediary administrations that work closer to the territories.

24. The regularization of indigenous lands in Brazil consists of a multi-phase process coordinated by the National Foundation for Indigenous People (FUNAI), which includes the identification, delimitation, demarcation, registration and ratification of indigenous lands with the Secretary of Heritage of the Union (SPU). This process is regulated by Decree No 1755/1996 and Ordinance No. 80, of January 19, 2017, both from the Ministry of Justice and Citizenship [1].

25. Indigenous Lands are traditionally occupied areas in which indigenous people hold the original right and the exclusive use of these lands they occupy. Indigenous Lands currently cover 12.88% of the national territory, constituting an important part of the protection of this region threatened by the advance of the agrarian frontier. In the Legal Amazon they cover 108 million hectares and represent 21.2% of the area. These territories are public assets, belonging to the Union, inalienable and unavailable, and it is forbidden to remove indigenous peoples from their lands, but for exceptional and temporary cases.

26. The definition of lands traditionally occupied by indigenous peoples is found in the first paragraph of article 231 of the Federal Constitution: they are those "which they inhabit on a permanent basis, those used for their productive activities, those essential to the preservation of the environmental resources necessary for their good-being and those necessary for its physical and cultural reproduction, according to its uses, customs and traditions". In article 20 of the same document, it is established that these lands are property of the Union, being recognized "indigenous peoples the permanent possession and exclusive use of the riches of the soil, rivers and lakes existing in them". It is the legal obligation of the State to recognize territories.

27. In Brazil, the definition of this category of traditional territory is based on legal concepts embodied in the Federal Constitution of 1988 and in specific legislation including the Indian Statute (Law 6.001/73). Indigenous Lands were converted in 2006 by the National Protected Areas Policy into portions of territories legally established by the government to protect their natural resources.

28. The current management and governance structure for indigenous lands in Brazil benefits from international level oversight via the Convention 169 of the International Labor Organization (ILO) on Indigenous and Tribal Peoples in Independent Countries (1989), of the Convention on Biological Diversity (1992) and the United Nations Declaration on the Rights of Indigenous Peoples (2007).

29. Management is done according to a complex set of arrangements. The Committee (Art. 5, I of Decree No. 7747, of 2012) is assigned to coordinate policy execution. This includes a Management

Board with an Executive Secretariat. The composition is to be made up of government representatives and indigenous representatives. Members include the Ministry of Justice (in which Funai is located), Ministry of Environment and Indigenous Peoples; and Funai's Regional Committees.

30. There are seven primary areas of concern and oversight.

- Territorial and natural resource protection
- Indigenous governance and participation
- Protected areas, conservation units and indigenous lands
- Prevention and recovery of environmental damage
- Sustainable use of natural resources and indigenous productive initiatives
- Intellectual property and genetic heritage
- Training, exchange and environmental education

31. The objective of indigenous lands management is to ensure and promote the protection, recovery, conservation and sustainable use of natural resources of indigenous lands and territories, ensuring the integrity of indigenous heritage, improving the quality of life and full conditions for physical and cultural reproduction of current and future generations of indigenous peoples, respecting their sociocultural autonomy, under the terms of current legislation.

e. Community Based Organizations

32. Approximately 26 community-based organizations are working in the target areas. These organizations are very important to making certain natural resource management is directed toward conservation objectives.

33. The community-based organizations associated with the project provide political, social and productive representation of IPLCs, guaranteeing their right to use natural resources inside protected areas. Some of these organizations are responsible for the governance and for signing the Contract of Concess?o de Direito Real de Uso (CDRU, Concession of Real Right of Use)[1] of natural resources inside protected areas with the state or federal government. They also represent traditional populations in interactions with other institutions, such as those responsible for licensing management plans, and make political and social networking with other local stakeholders. Other organizations are responsible for activities to defend social rights, manage protocols or plans for the management of natural resources, and commercialize production. Despite their evident importance community-based organizations generally have limited skills for administrative, legal and accounting processes.

Community-based organization	Resource Managed	Target Project Area	Representation, needs, and importance of capacity building

Associa??o de Moradores e Entorno da RDS Piaga?u-Purus (AMEPP)	Timber forestry and caiman	Piaga?u-Purus SDR	Civil organization of legal entity and private law, created in 2012. It is responsible for governance and holds the real right of use of the territory concession contract, granted by the State Government. - It is located in S?o Sebasti?o community, Vila do Itapuru, in Piaga?u-Purus SDR, an area in the municipality of Beruri, Amazonas State. AMEPP's priority area of action is Piaga?u-Purus SDR and surrounding area, in the municipalities of Anori, Beruri, Tapau?, Codaj?s and Coari, all in the state of Amazonas. The association currently has 1,989 members, and was created to represent the residents and users of the Piaga?u-Purus SDR, to promote the elaboration, development and management of conservation and sustainable income generation projects. AMEPP will be responsible for the caiman management plan that will be developed during the project with the technical support of Mamirau? Institute. - For forest management of timber, the association will support the organizational actions for individual community management. It will also participate in the discussions for the formation of a cooperative that can commercialize the timber production. To take on the management of the natural resource management, its members will be trained in administrative process management, preparation of the management plan, good manufacturing practices to generate quality products, and means of commercialization that add value to the products.

Associa??o do Polo Madeireiro e e Moveleiro d de Manacapuru (APOMAM)	Timber forestry	Piaga?u-Purus SDR	Civil organization of legal entity of private law. With headquarters in the Center of the city of Manacapuru, in Amazonas. The Apomam has in its constitution the objective to organize the companies of primary sawmills and secondary sawmills, which integrate a total of 59 small and medium enterprises in Manacapuru. Previously, these companies were represented by a union located in Manaus, with little action to represent the sector in the city. Thus, with the creation of APOMAM new goals are established for the sector, such as regularizing the small companies that are still operating without environmental licensing and acting in unfair competition in the wood trade in the city. - In the project it will participate in activities related to the strengthening of the roundwood chain in the main consumer center of the state, establishing connections between wood processing companies, representing them in the company x community agreement for the commercialization of managed wood from the RDSM and RDSPP, and in the strengthening of the legalized wood industry via discussion with the state development agency (AFEAM).
Associa??o de Mulheres Extrativistas do Rio Araguari ? Sementeiras do Araguari	Non-Wood Forestry	Amap? National Forest and Amap? State Forest	Civil organization of legal entity of private law, created in 2019. It is headquartered in the municipality of Porto Grande, on the upper Araguari River in Amap?. The association's priority area of action is in and around the State (Flota) and Federal (Flona) Forests of Amap?. The association is currently composed of 30 women and was formed to represent them in their productive activities related mainly to the management of non-timber forest resources and the generation of income from this. In the project the association will be the focal point for the development of activities aimed at developing and implementing a protocol for the management of non-timber forest resources, especially for oil-bearing species such as Andiroba, Copa?ba, and Pracaxi. The women will be trained to manage the organization and in the good practices of management and production of these natural resources, they will participate in the forest inventory to identify the productive capacity of their forests, in monitoring the use of the resource and production and in exchanges with other producing communities.

Grupo de pescadoras da Col?nia Z-4 de Tef?	Pirarucu	Paran? do Jacar? (Capivara) Lake Complex	Informal group, represented by 15 women, created to discuss gender equality in the management of fishery resources, directly involving members of the Col?nia de Pescadores Z-4 Tef? and with the intention of expanding the discussion to other social representations in the region of M?dio Solim?es, Amazonas. The group will receive training on management and social mobilization, and will build an action plan to expand their activities to other groups of fishermen.
Col?nia de Pescadores Z-4 Tef?	Pirarucu	Paran? do Jacar? (Capivara) Lake Complex	Civil organization of legal entity of private law, created in 1977. Located in the city of Tef?, Amazonas. It represents fishermen from the city of Tef?, urban and rural areas, and fishermen from neighboring towns, in the rural area. The total number of members is 1345 people, but carrying out natural resource management activities is 130 people. It is currently encountering difficulties in the management of the organization and in the management of the management plans. It will receive training to improve the management of the organization, the management of the management plans, and implement strategies for profit sharing generated by the commercialization of sustainable production.
Col?nia de Pescadores Z-23 Alvar?es	Pirarucu	Paran? do Jacar? (Capivara) Lake Complex and Jurupari Grande Lake Complex	Civil organization of legal entity of private law., created in 2001. It is located in the city of Alvar?es, Amazonas. It is an organization with 475 members, but performing natural resource management activities there are 100 people. It is currently facing difficulties in managing the organization and the management plans. It will receive training to improve the management of the organization, the management of the management plans, and implement strategies for profit sharing generated by the commercialization of sustainable production.
Col?nia de Pescadores Z-32 Mara?	Pirarucu	Seringa Complex (Joacaca)	Civil organization of legal entity of private law, created in 2003. Located in the city of Mara?, Amazonas. It is an organization with 789 members, 653 of whom are involved in natural resource management activities. Currently it is facing difficulties in the management of the organization and in the management of the management plans. It will receive training to improve the management of the organization, the management of the management plans, and implement strategies for profit sharing generated by the commercialization of sustainable production.

Grupo de manejadores do Acordo de Pesca Paran? do Jacar? (Capivara)	Pirarucu	Paran? do Jacar? (Capivara) Lake Complex	It is a Fishing Agreement located in the Capivara Sector, municipality of Mara?, formed by 120 people (including women and youth) from six traditional communities. The SDS Normative Instruction N? 3 OF 26/06/2014 regulates the creation of the Agreement and establishes rules for management in the Paran? do Jacar? lake complex. Urban fishermen from the fishing colonies Z-4 of Tef? and Z-23 of Alvar?es participate in the group. They are currently looking for the formalization of the group into an association and strategies for commercialization. It will receive training to improve the management plan and implement strategies for marketing sustainable production and profit sharing among the managers.
Grupo de manejadores do Acordo de Pesca Jurupari Grande	Pirarucu	Jurupari Grande Lake Complex	It is a Fishing Agreement located on the Japur? River, municipality of Mara?, formed by 43 people from two traditional communities. SEMA Normative Instruction No. 04/2017 regulates the creation of the Agreement and establishes rules for management in the Jurupari Grande lake complex. Urban fishermen from the Fishermen Colony Z-23 of Alvar?es participate in the group. Currently they are encountering difficulties in making decisions about the management plan, especially about respecting the criteria for sharing income from fishing. It will receive training to improve management plan management and implement strategies for marketing sustainable production and profit sharing among the managers.
Grupo de manejadores do Acordo de Pesca de Seringa (Joacaca)	Pirarucu	Seringa Complex (Joacaca)	It is a Fishing Agreement located in the Joacaca Sector, Japur? River, municipality of Mara?, formed by 35 people (including women) from five communities. SEMA Normative Instruction No. 03/2017 regulates the creation of the Agreement and establishes rules for management in the Seringa lake complex. It currently encounters difficulties in engaging the participation of fishermen in the natural resource management activity, in the compliance with the internal regulations, and in the failure in the last negotiations for the sale of the production. It will receive training to improve the management plans and implement strategies for profit sharing generated by the commercialization of sustainable production.
Associa??o de pescadores de Mara? (ASPEM)	Pirarucu	Seringa Complex (Joacaca).	Civil organization of legal entity of private law, created in 2007. Located in the city of Mara?, Amazonas. It represents 379 associates, but performing natural resource management activities there are 200 people. Currently the organization encounters difficulties in its management and in the execution of its planning. It will receive training to improve the management of the organization and the management plans.

Federa??o de Manejadores e Manejadoras de Pirarucu de Mamirau? (FEMAPAM)	Pirarucu	Complex of Lakes of: Paran? do Jacar? (Capivara); Jurupari Grande and Seringa (Joacaca).	FEMAPAM was created in 2019, is responsible for managing the seal of Mamirau?'s pirarucu denomination of origin, registered with the National Institute of Industrial Property. The seal is a strategy for managers to access better markets and give visibility to sustainable production. The Federation includes nine municipalities: Tonantins, Japur?, Mara?, Alvar?es, Uarini, Fonte Boa, Juta? and Tef? and about 170 fishermen groups are distributed in these cities and could be members of the federation. Currently it is difficult to organize the activities of its board of directors and the functioning of the organization that is active in many municipalities, to make commercialization viable and to promote access and control for the use of the Seal. The trainings will help to strengthen the management of the board, in its technical performance for the good use of the seal by its members and in the articulation with partners and with companies, slaughterhouses, and intermediaries to add value and in the search for strategies to commercialize the sustainable production.
Associa??o de Produtores de Farinha de Mandioca da Regi?o de Uarini (APRU)	Agroecological systems	Rural areas of Tef?	Civil organization of legal entity of private law, located in the city of Tef? in Amazonas and created in 2017 to act in the management of the seal of Geographical Indication of Uarini Flour, which is in the process of registration at the National Institute of Industrial Property. The seal is a strategy for producers to access better markets and give visibility to sustainable production. The Association represents family farmers who produce manioc flour, including women and young people, from four municipalities in the region: Tef?, Alvar?es, Uarini and Mara?. It currently faces difficulties in organizing the activities of its board of directors and the functioning of the organization, which operates in several municipalities, making commercialization feasible, and promoting access and control for the use of the seal. The trainings will help to strengthen the management of the board, in its technical performance for the good use of the seal by its associates and in the articulation with partners and companies to add value and in the search for strategies for the commercialization of sustainable production.

Associa??o Comunit?ria da Miss?o	Agroecological systems	Rural areas of Tef?	Civil organization of legal entity of private law, created in 1991. Located in the rural area of the city of Tef?, Amazonas. It represents a group of riverine women and agroecological family farmers (with 35 women and 50 organic farmers). It is responsible for strengthening the actions of women and training for sustainable production (traditional practices of low impact, with forest conservation, food production without the use of pesticides and fertilizers). Currently it is facing difficulties in managing the organization and the Club, in improving organic and agroecological production practices, and in commercializing sustainable production. The trainings will help improve management of the organization and management protocols, and implement strategies for commercialization of sustainable production.
Associa??o dos Usu?rios da Reserva Extrativista de S?o Jo?o da Ponta	Mangrove crab	S?o Jo?o da Ponta Extractive Reserve	The Association was created after the decree that established the Conservation Unit. It is responsible for governance and holds the real right of use concession contract for the territory granted by the Federal Government. It is formed by fishermen and extractivists who are considered beneficiaries and guardians of the biodiversity in their territory. Approximately, there are 400 active artisanal crab fishermen, 30% of whom are women. The main productive activity is fishing in the mangrove ecosystem, with mangrove crab being one of the most extracted and commercialized resources. The association needs training mainly in the management of the organization and to improve commercialization.
Associa??o dos Usu?rios da Reserva Extrativista M?e Grande de Curu??	Mangrove crab	Extractive Reserve M?e Grande de Curu??	The Association was created after the decree that established the Conservation Unit. It is responsible for governance and holds the real right of use concession contract for the territory granted by the Federal Government. It is formed by fishermen and extractivists who are considered beneficiaries and guardians of the biodiversity in their territory. Approximately, there are 400 active artisanal crab fishermen, 40% of whom are women. The main productive activity is fishing in the mangrove ecosystem, with mangrove crab being one of the most extracted and commercialized resources. The association needs training mainly in the management of the organization and to improve commercialization.

Associa??o dos Usu?rios da Reserva Extrativista Chocoar?-Mato Grosso	Mangrove crab	Chocoar? Extractive Reserve-Mato Grosso	The Association was created after the decree that established the Conservation Unit. It is responsible for governance and holds the real right of use concession contract for the territory granted by the Federal Government. It is formed by fishermen and extractivists who are considered beneficiaries and guardians of the biodiversity in their territory. There are approximately 390 active artisanal crab fishermen, 25% of whom are women. The main productive activity is fishing in the mangrove ecosystem, with mangrove crab being one of the most extracted and commercialized resources. The association needs training mainly in the management of the organization and to improve commercialization.
Associa??o dos Usu?rios da Reserva Extrativista Marinha Cuinarana	Mangrove crab	Cuinarana Marine Extractive Reserve	The Association was created after the decree that established the UC. It is responsible for governance and holds the real right of use concession contract for the territory granted by the Federal Government. It is formed by fishermen and extractivists who are considered beneficiaries and guardians of the biodiversity in their territory. Approximately, there are 380 active artisanal crab fishermen, 25% of whom are women. The main productive activity is fishing in the mangrove ecosystem, with mangrove crab being one of the most extracted and commercialized resources. The association needs training mainly in the management of the organization and to improve commercialization.
Associa??o dos Usu?rios da Reserva Extrativista Marinha de Ara?-Peroba	Mangrove crab	Cuinarana Marine Extractive Reserve	The Association was created after the decree that established the UC. It is responsible for governance and holds the real right of use concession contract for the territory granted by the Federal Government. It is formed by fishermen and extractivists who are considered beneficiaries and guardians of the biodiversity in their territory. There are approximately 480 active artisanal crab fishermen, 30% of whom are women. The main productive activity is fishing in the mangrove ecosystem, with mangrove crab being one of the most extracted and commercialized resources. The association needs training mainly in the management of the organization and to improve commercialization. -

Associa??o dos Usu?rios da Reserva Extrativista Marinha de Caet?-Tapera?u	Mangrove crab	Caet?-Tapera?u Marine Extractive Reserve	The Association was created after the decree that established the UC. It is responsible for governance and holds the real right of use concession contract for the territory granted by the Federal Government. It is formed by fishermen and extractivists who are considered beneficiaries and guardians of the biodiversity in their territory. Approximately, there are 1200 active artisanal crab fishermen, 40% of whom are women. The main productive activity is fishing in the mangrove ecosystem, with mangrove crab being one of the most extracted and commercialized resources. The association needs training mainly in the management of the organization and to improve commercialization.
Associa??o dos Usu?rios da Reserva Extrativista Marinha de Soure	Mangrove crab	Soure Marine Extractive Reserve	The Association was created after the decree that established the UC. It is responsible for governance and holds the real right of use concession contract for the territory granted by the Federal Government. It is formed by fishermen and extractivists who are considered beneficiaries and guardians of the biodiversity in their territory. There are approximately 450 active artisanal crab fishermen, 40% of whom are women. The main productive activity is fishing in the mangrove ecosystem, with mangrove crab being one of the most extracted and commercialized resources. The association needs training mainly in the management of the organization and to improve commercialization.
Associa??o dos Usu?rios da Reserva Extrativista Marinha de Tracuateua	Mangrove crab	Tracuateua Marine Extractive Reserve	The Association was created after the decree that established the UC. It is responsible for governance and holds the real right of use concession contract for the territory granted by the Federal Government. It is formed by fishermen and extractivists who are considered beneficiaries and guardians of the biodiversity in their territory. There are approximately 350 active artisanal crab fishermen, 30% of whom are women. The main productive activity is fishing in the mangrove ecosystem, with mangrove crab being one of the most extracted and commercialized resources. The association needs training mainly in the management of the organization and to improve commercialization.

Associa??o dos Usu?rios da Reserva Extrativista Marinha do Maracan?	Mangrove crab	Maracan? Marine Extractive Reserve	The Association was created after the decree that established the UC. It is responsible for governance and holds the real right of use concession contract for the territory granted by the Federal Government. It is formed by fishermen and extractivists who are considered beneficiaries and guardians of the biodiversity in their territory. Approximately, there are 600 active artisanal crab fishermen, 40% of whom are women. The main productive activity is fishing in the mangrove ecosystem, with mangrove crab being one of the most extracted and commercialized resources. The association needs training mainly in the management of the organization and to improve commercialization.
Associa??o dos Usu?rios da Reserva Extrativista Marinha Gurupi - Piri? de Viseu	Mangrove crab	Marine Extractive Reserve Gurupi - Piri? de Viseu	The Association was created after the decree that established the Conservation Unit. It is responsible for governance and holds the real right of use concession contract for the territory granted by the Federal Government. It is formed by fishermen and extractivists who are considered beneficiaries and guardians of the biodiversity in their territory. Approximately, there are 1400 active artisanal crab fishermen, 30% of whom are women. The main productive activity is fishing in the mangrove ecosystem, with mangrove crab being one of the most extracted and commercialized resources. The association needs training mainly in the management of the organization and to improve commercialization.
Associa??o dos Usu?rios da Reserva Extrativista Marinha Mestre Lucindo	Mangrove crab	Marine Extractivist Mestre Lucindo	The Association was created after the decree that established the Conservation Unit. It is responsible for governance and holds the real right of use concession contract for the territory granted by the Federal Government. It is formed by fishermen and extractivists who are considered beneficiaries and guardians of the biodiversity in their territory. There are approximately 900 active artisanal crab fishermen, 30% of whom are women. The main productive activity is fishing in the mangrove ecosystem, with mangrove crab being one of the most extracted and commercialized resources. The association needs training mainly in the management of the organization and to improve commercialization.

Associa??o dos Usu?rios da Reserva Extrativista Marinha Mocapajuba	Mangrove crab	Mocapajuba Marine Extractive Reserve	The Association was created after the decree that established the Conservation Unit. It is responsible for governance and holds the real right of use concession contract for the territory granted by the Federal Government. It is formed by fishermen and extractivists who are considered beneficiaries and guardians of the biodiversity in their territory. There are approximately 1000 active artisanal crab fishermen, 30% of whom are women. The main productive activity is fishing in the mangrove ecosystem, with mangrove crab being one of the most extracted and commercialized resources. The association needs training mainly in the management of the organization and to improve commercialization.

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[1] Considering the Constitutional guarantees of self-government of indigenous peoples within their land, Environmental Management Plans are not subject to the same rules and regulations which do apply to the other Pas. The specific policy is called National Plan for the Environmental Management of Indigenous Lands

[2] SILVA. J.?.?. and WHITMORE, TC 1990. Prospects of Sustained Yield Management in the Brazilian Amazon. In: Proceedings of the "Atelier sur l'am?nagement et la conservation l'?cosysteme Jorestier tropical liumide." Cayena, French Guiana.

1) Proposed alternative scenario with a brief description of expected outcomes and components of the project and the project?s Theory of Change

a. General approach to project intervention and its theory of change

1. The project will help conserve two critically important wetland ecosystems: the Varzea Floodplain Forests and Amazonian Mangroves. As discussed above, both ecotypes hold globally significant species and provide vital ecosystem services. These ecosystems and associated biodiversity are under severe threat from exploitive practices such as deforestation and unsustainable wildlife use, driven primarily from ineffective management and oversight. Climate change compounds and

accelerates the impact of these threats. If these drivers are not addressed, the health of wetlands ecosystems will continue to diminish and result in further loss of globally significant biodiversity.

2. The project will build on the strong baseline currently in place: tools such as conservation management plans and resource use protocols exist. If properly implemented, these legal documents will help shift unstainable resource use to become more pro-conservation. Unfortunately, Indigenous Peoples and Local Communities (IPLC), government actors, and the private sector do not have the full capacity to design, adopt, and implement conservation-oriented management plans and associated resource-specific use-protocols. Replicable models clearly showing how to adopt and implement conservation-oriented approaches are limited.

3. The proposed project will build upon the existing baseline to successfully address threats, drivers and barriers. Skills will be developed to design, implement and monitor the execution of strategic natural resource management plans and protocols. The project will take a landscape level approach inclusive of protected areas and surrounding productive landscapes. Management protocols will address threats and harmonize conservation approaches inside and outside of protected area boundaries. The project will generate lessons and pathways to make certain results are enduring, transformative, and amplified both nationally and regionally. Stakeholders will build biodiversity conservation awareness and management skills.

4. Overly exploited resources targeted for project intervention will include: caiman, forestry, non-timber forest products, swamp ghost crab and pirarucu, along with capacity development in Agroecology and community agrotourism. The project will support the implementation of protocols to support agroecological systems and community-based tourism designed create greater incentives for the private sector and communities to engage in conservation-oriented practices.

5. Each protocol, associated management plan and capacity building activity will target specific biodiversity resources and make certain that the use of these resources supports conservation of varzea floodplain forest and mangrove ecosystems. Each targeted resource and additional revenue stream is critical to conserving these globally important wetland ecosystems. Resource use protocols will detail required conservation actions and form a legally binding agreement.

6. The project will directly address the existing barriers that currently inhibit the design, adoption, implementation and monitoring of management plans and protocols designed to promote sustainable practices and address biodiversity loss. The result will be comprehensive sustainable resource use system designed to conserve biodiversity, maintain critical ecosystem services and secure carbon stocks while avoiding GHG emission. The resource use systems will empower local communities to realize greater food security and income benefits based upon the application nature-based solutions. The project will encompass both productive and protected areas, harmonizing conservation approaches to facilitate achievement of landscape level conservation.

7. By removing these barriers, the project will generate a replicable and sustainable legacy of improved management regimes. Stakeholders will have the capacity and means to sustain project results beyond the project?s lifetime. The Mamirau? Institute will be responsible to carry forward the communications platform after project close to make certain the project emplaced success endures beyond close. These models will be captured for further amplification with the result being improved conservation of additional varzea and mangrove wetlands across the Amazon.

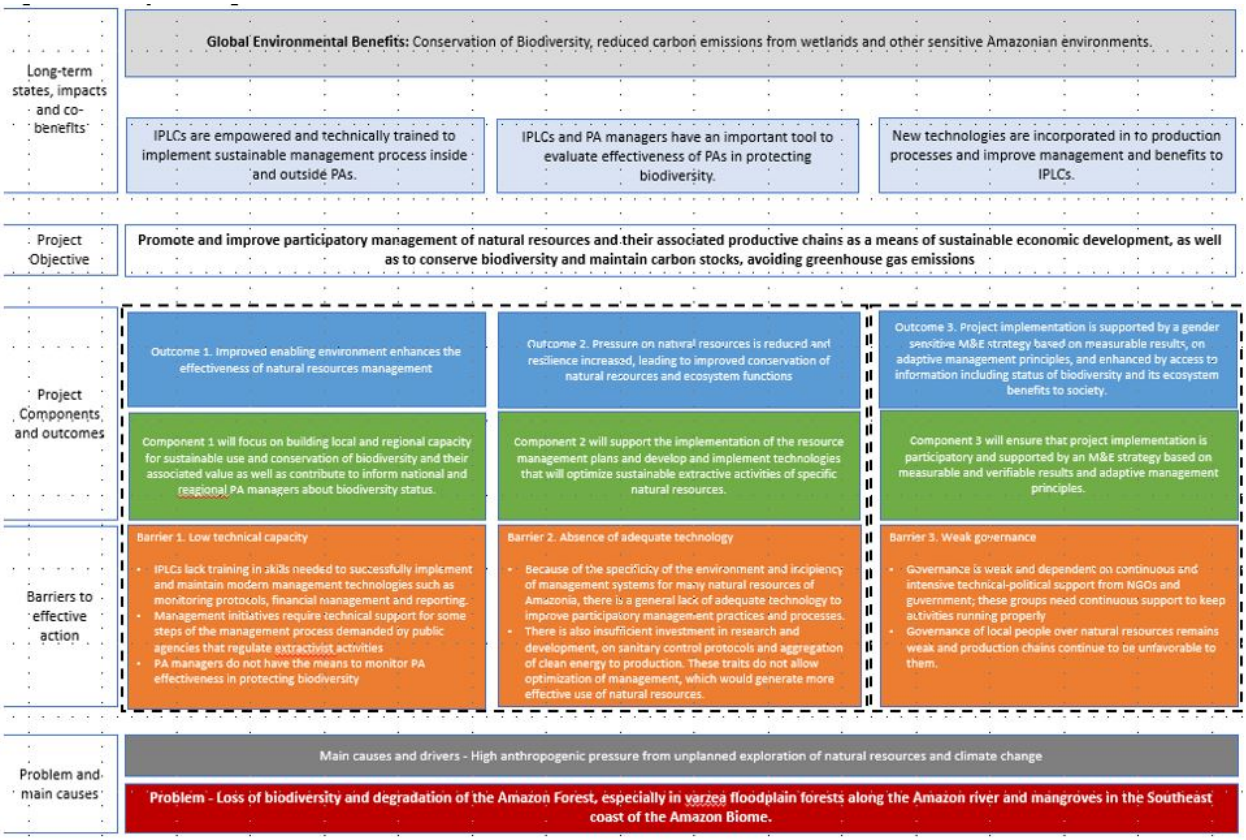

Figure 12: Theory of Change

b. Project objective, components, expected results, outputs and activities

8. The project objective is to strengthen participatory natural resource management processes for sustainable economic development, conservation of biodiversity and maintenance of carbon stocks in Amazon Wetlands.

9. Component 1 was designed to directly address Barriers 1 and 3, supporting IPLCs, governmental and non-governmental agencies to promote, develop and implement more sustainable practices in the use of biodiversity. Activities under this component provide a framework for the effective delivery of knowledge and skills required for adoption of improved practices, as well as raise awareness of the importance of biodiversity and the ecosystem services provided by wetlands and other important Amazonian environments.

10. Component 2 will assist stakeholders to implement improved resource management plans and protocols that support nature-based solutions and the conservation of targeted wetlands. The Mamirau? Institute will provide local communities and private sector stakeholders with the technical backstopping, equipment and training required. Each implemented action will focus upon addressing a specific resource under threat of over-exploitation and/or providing IPLCs and the private sector with opportunities to engage in alternative revenue generation activities designed to diminish pressure on biodiversity and deliver pro-conservation outcomes.

11. Component 3 will ensure effective monitoring, capturing and disseminating lessons learned, promoting adaptive management, and amplifying results. The project will support the design and implementation of a comprehensive M&E strategy. Project monitoring and evaluation will be linked to a strategic implementation work plan and annual work plans. The project will complete and implement a communications strategy. Built around a mult-lingual website and other outreach modalities, the project?s communication program will make certain all stakeholders are aware of project actions, progress, and lessons learned. The project?s communication platform will include annual meetings at the national, state and local levels to engage stakeholder engagement and the exchange of information and ideas to strengthen project performance.

Component 1. Strengthening the enabling environment to sustainably manage varzea floodplain forests and mangrove wetlands

12. Component 1 will strengthen the enabling environment to enhance the effectiveness of natural resource management in the target sites. Applying a large landscape approach inclusive of both protected areas and surrounding productive zones, the project will support protected areas and IPLC organizations to design, adopt, and monitor harmonized pro-conservation management plans and

resource specific use protocols. This will be achieved through the establishment of community leader conservation training programs; improved organizational management frameworks; resource specific management and conservation protocols; and, a rigorous biodiversity monitoring tool.

Output 1.1. Capacity building program for community leaders developed and implemented

13. The project will support the design and implementation of a capacity building program for community leaders. Mamirau? Institute will implement a series of capacity building workshops to assist IPLCs to improve management and organizational skills required to support conservation programming. This effort will address capacity barriers that currently inhibit communities from developing and implementing management protocols for over-exploited resources and opportunities to engage in pro-conservation development practices. Sectors to be addressed include agroecology, forestry, non-timber products, pirarucu, caiman, mangrove crab, and community-based tourism.

14. The project will implement a series of ?short? and ?long? courses (please see Annex N for a complete description of courses, course materials, timing, leaders and participants). Short courses will focus upon specific target resources and will build capacity to design (Output 1.3) and implement (Component 2) resource management protocols covering specific resources and pro-conservation development practices. The following short courses will be offered:

- ? Management of Pirarucu (Arapaima gigas) in Floodplain Environments
- ? Community-based Caiman Management in Amazonia
- ? Management of Agroecological Systems
- ? Community-based forest management of timber in Varzea Floodplain Forests of Amazonia
- ? Community-based forest management of non-timber Resources.
- ? Community-based tourism
- ? Good practices in swamp ghost crab storage, transport and management

15. The long course is holistic and will cover skills and knowledge that local leaders need to mainstream biodiversity and successfully execute tasks related to the good governance and conservation of biodiversity, as well as deal with the interaction with larger regional markets. These courses will include the basic principles of accounting, computer skills, Portuguese language reading and writing, math, grant/project/report writing, business, meeting moderation, public policies related to biodiversity use, solar energy technologies and institutional relations.

16. Training materials will be developed based on the capacity assessment conducted during project preparation. Materials will reflect best local and international principles and practices, consulting local knowledge and experience from IPLCs. Fifty percent of each class will be reserved for women. In addition, the project will conduct a workshop focused upon empowering women to more fully participate in biodiversity management.

17. The courses will build IPLC capacity to implement biodiversity-positive management practices and change current practices that are degrading to biodiversity and ineffective economically. Government agencies and non-governmental institutions will have the ability to evaluate management projects and monitor management processes to guarantee that biodiversity is mainstreamed and not degraded.

18. Each course will focus upon building capacity and knowledge regarding the target resource with specific attention to: biology and ecology; socio anthropological characteristics; egalitarian and equitable gender relations; technical-scientific knowledge associated with principles and directives of zoning in protected areas natural resource management and governance processes; tools and methodologies used in implementing management protocols and laws; and, mainstreaming biodiversity conservation practices inside and outside protected areas.

19. Better practices adopted and will create spaces where they can negotiate and trade their produce at better prices. The courses bring fundamental concepts of natural resource management and mainstreaming biodiversity necessary to reach GEB targets. All training materials will be captured for future use and reference. This will be linked to efforts under Component 3?s communication stratagey and program. For instance, the project website will contain videos and training materials.

20. Materials will be designed to engage a variety of stakeholders. Working in the Amazonia requires recognition of varying sociocultural norms and literacy levels. Books, primers and articles (printed or digital version) will be made available to all course participants, and, in some exercises, materials will be produced by the participants themselves during the course. Most of this material has already been developed by Mamirau? Institute and collaborators and is available in Mamirau??s website.[1] Course materials will be captured in the project web platform to guarantee amplification and upscaling of good practices in the management of pirarucus in Amazonia. Video with course contents will also be produced.

21. The project envisions more than 2,500 people participating in these courses. The project will strive for gender equity in participation. The courses will work to build capacity in young leaders to mainstream biodiversity in their communities and regions, as well as help local community-based organizations to improve their management practices and sustainability, mainstreaming biodiversity.
22.

23. All participants will have their transport stipend supported by the project. IPLCs from all project target areas will be included in the activities under this output.

24.

Output 1.2. Local community-based organizations created or strengthened to engage in the sustainable management of natural resources.

25. The project will provide training and technical support to IPLCs to improve local community-based organization management. These organizations need to build functional capacities in order to effectively design, implement and monitor resource management protocols that promote pro-wetlands conservation actions. The objective of this component is to ensure that these local organizations will have the skills necessary to successfully run the commercial aspects of the management process.

26. A number of activities will be help local associations build required capacities. Workshops will include topics such as finance and financial management, administration, accounting, management plan development, licitation (i.e. calls for proposals) procedures, and institutional relations.

27. Please see Annex N for a complete list of Output 1.2 workshop and training programs including target beneficiaries. Workshops will include topics such as finance and financial management, administration, accounting, management plan development, competitive bidding procedures, and institutional relations. The training will be presented through modules delivered through a series of multi-day workshops:

- Organizational Structure and Management (4 workshops)
- Financial Management and Market Access (3 workshops)
- Marketing Strategies and Commercializations (3 workshops)

28. The project will target approximately 26 individual community-based organizations each responsible for resource conservation and utilization actions. These community-based organizations are responsible for the implementation of natural resource management plans and for developing strategies for commercialization and access to markets to value their production. It is also expected that one cooperative will be developed with the support of the activities under this output. Please see the baseline analysis for a listing of these organizations and their key resource conservation concerns.

29. Of note, two of the targeted associations are exclusively composed of women. In order to create moments of exchange of experiences between the groups of women managers, an exchange will be carried out in this component to strengthen management between organizations of fisherwomen, indigenous women, riverside dwellers and family farmers.

Post Training Follow-Through

30. Post-training technical support will be provided under component 2 (output 2.1.1) to assure that organizations are applying knowledge learned. This work will assist to make certain CBOs have necessary functionalities in place, including updated legal documents. The communication support will be held in fact under this output:

31. *Communication:* A specialized consulting firm will be hired to develop all the communication pieces to be used by the productive collectives. To publicize the productive collectives and reach better markets that value the forest products, it is necessary to build a visual identity, packaging models, logo, professional photographs, and product portfolios to support the communication and social networks that will be created during the marketing workshops.

Output 1.3 Community-based management protocols developed for target resources.

Protected Area Management and Resource Use Plans

32. The development of the management plan is a necessary initial step for protected areas to properly manage biodiversity. The project will operate in and around 26 protected areas. Approximately 60% of these protected areas have management plans. The project will assist target protected areas that currently do not have a management plan to prepare management plans.

33. In addition, the project will support all 26 target protected areas to generate specific resource use management plans for resources of particular concern to that protected area and critical to conserving forest wetlands. For example, the Piaga?u-Purus Sustainable Development Reserve management plans does not currently include resource use plans for forestry and/or sustainable caiman harvest.

34. Targeted resources and activities to be covered will include: agroforestry, non-timber products, forestry, pirarucu, caiman and mangrove crab management, and community-based tourism.

Agroecological Systems Management Protocol

35. The project will support the creation of an agroecological systems management protocol. This will be developed using participatory workshops conducted by Mamirau? Institute with participation of IPLCs, technicians from local production agencies and young agroecology students from IFAM-Tef?. A higher-level agroecological and organic production technician will be hired by the project to assist. The protocol will be based on local knowledge and technical materials from the Ministry of Agriculture, Livestock and Supply (MAPA) for production in agroecological and organic systems, taking into consideration the socioenvironmental context of the region.

Agroecological Systems Protocol

The protocol will be divided into topics, considering the local context of the region and the information needed to support the IPCLs and technicians involved in the agroecological and organic production processes in the region. Content will include the following information: (1) proposing entities, groups of farmers or producers participating in agroecological and organic production processes; (2) Control mechanisms; (3) Regional and local identification; (4) community members involved; (5) Production areas and processing infrastructure; (6) Description of agricultural activities and production practices; (7) Information on technical follow-up; (8) Water and soil management; (9) Animal, vegetable and extractive production; (10) Management and disposal of waste from productive areas; (11) Product processing, registration, ownership and production control; (12) Flow and marketing; (13) Legislation for organic and agroecological production.	The beneficiaries of the protocols will be mainly the IPCLs, technicians from local government organizations (Municipal Secretariat for Production and Supply ? SEMPA/Tef?, Institute for Sustainable Agricultural and Forest Development of the State of Amazonas ? IDAM/Tef?; Amazonas Sustainable Development Agency ? ADS /Tef? and students in training or graduates of the Federal Institute of Amazonas (IFAM) / Tef?. Technical assistance and rural extension public and private entities that may arise in the region and the Maniva Agroecology Network that operates in the Amazon region, strengthening these processes in the capital and interior.

Caiman Management Protocol

36. The project will support the generation of a caiman management protocol. This will include information legally required for authorization of a community-based caiman management in Protected Areas of Amazonas State. These requirements include sustainability criteria linked to protection area objectives. The protocol will define harvest parameters, including size, qoutas, and no-take periods (e.g., breeding and rearing seasons). The protocol will include a rigorous monitoring platform. The protocol will provide simple and clear directions for the generation of a comprehensive caiman management plan. The protocol will be developed by Mamirau? Institute?s Fauna Management Program team, composed of technicians and researchers from the agricultural and biological sciences with extensive management planning experience including for caiman conservation.

Caiman management	
The protocol will be divided into topics, considering the information required to compose the management plan and the methods to obtain and analyze this information. Content will include: (1) Caiman management history in the state of Amazonas; (2) Environmental and animal product legislation for caimans; (3) Biological and ecological aspects of caimans and methodologies for data collection; (4) Slaughter and processing infrastructure, good product manufacturing practices and quality analysis methods; (5) Socio-economic and administrative aspects of the proponent entities; (6) Conservation Unit and technical assistance; (7) Production chain analysis and business plan production; (8) Model management plan based on Federal and State legislation	The beneficiaries of the protocols will be AMEPP managers, technicians from regulatory and inspection bodies for the activity (MAPA, IBAMA, SEMA, SEPROR), technical advisory, research and rural extension entities (UFAM, UEA, INPA, WCS, IDAM, INCRA, SEPLANCTI, SSEPA), and representatives of the management body (DEMUC), all members of the State WG on Caiman Management.

Community-Based Tourism Protocol

37. The project will support the generation of a model Ecotourism Protocol for Jaquiri IL. The protocol will be developed with the residents of Jaquiri IL. Mamirau? Institute has years of experience working if indigenous peoples and the Community-based Tourism Program. The protocol will contemplate indigenous heritages, social and cultural recovery, conservation and sustainable use of biodiversity, and improvement of quality of life of indigenous peoples., in specific meetings for this purpose. The governance model will follow the National Environmental and Territorial Management Policy of Indigenous Lands (PNGATI) which describes requirements for implementation of Indigenous Lands Territorial and Environmental Management Plans (PGTA).

Community-based tourism	
(1) General characteristics of the indigenous land: ethnicity, history, population, infrastructure, education and health access, etc. (2) Traditional subsistence activities of IPLCs (3) Seasonal calendar of the traditional activities (4) How is the area protected and what are the main threats (5) Who are the village partners and what is the role of each one in the relationship with the village (6) Planning and management of tourist activities and how tourism is involved with the other activities	Residents of Jaquiri IL

Timber Forest Management Protocol for V?rzea Floodplain Forests and Terra Firme Forests

38. A Protocol on Management of Forestry Forest Resources will consolidate activities in the territory, presented in a publication format the possibility of consultation by the qualified public on the other fronts of the project, in a simple and clear script format, ensuring a new scenario with the sustainability of the project. The project will conduct a broad assessment of forest composition and wood stock in the varzea floodplain and terra firme forests to facilitate selection of harvest areas.

39. The information gathered in the protocol format foresees the need for interaction with licensing and inspection bodies, and their participation in the development of the document will be considered, as well as that of partner institutions such as Imaflora and IDAM.

40. The protocol will be developed by Mamirau? Institute?s Community Forest Management Program and the Community Management Program. Both programs have experience in the development and publication of materials of this type and use information collected during their activities and accumulated experience as sources.

Forestry management - timber	
(1) Principles of community forest management (2) Community organization activities for management (3) Assessment of forest composition, wood stock and selection of production areas in varea floodplain forests and terra firme environments (4) Planning of activities (5) Reduced impact exploration techniques, evaluation of production and its flow (6) Commercialization of production and market possibilities (7) Role of technical support.	Piaga?u-Purus SDR The beneficiaries of the protocol will be the RDSPP forest managers and managers, technicians from Organs regulatory and supervisory bodies of the activity (IBAMA, SEMA, IPAAAM), technical advisors and rural extension and representatives of the management body (DEMUC)

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Non-timber Forest Products Protocol

41. The project will develop a protocol of good management practices for NTFPs used by the IPLCs of Amap? National Forest and Amap? State Forest, especially andiroba (*Carapa guianensis* Aubl.), pracaxi (*Pentaclethra macroloba* Willd Kuntze), copaiba (*Copa?fera* spp.), breu branco (*Protium* spp.), cip?-titica (*Heteropsis* spp.) The protocol will be developed by Mamirau? Institute?s Community Forest Management Program and the Community Management Program, with the participation of Icmbio, Iep?, Iepa, Sema Amap?, and Embrapa.

42. The publication of the Protocol on Management of Non-Timber Forest Resources will consolidate training and technical assistance activities in the territory, presenting, in a publication

format, consultation material for the project's target audience, helping to change the scenario and sustainability of the project after its completion.

43. Participatory mapping will be conducted to identify the main areas of resource collection by the group, for subsequent inventory and productivity monitoring. The evaluation of the productive potential will be carried out by Embrapa Amap?, which will use the methodology of permanent plots of the Kamukaia network (research network on NTFP). Combining the collected information, literature data and the capacity and technical experience of the partner institutions of this project, such as Icmbio, Iep?, Iepa, Sema Amap?, and Embrapa, we will build the management protocol with information on the main species used by the group, aligning even information on governance and management of the activity by community-based organizations; principles of community-based forest management of non-timber resources and its planning; training models, inventory of resources and their exploitation in a reduced impact model; good management practices, including collection, transport, processing and storage. This will also be the basis for the modular course, in which we will make use of the created material.

Forestry management ? non-timber products	
The protocol will be built from the experience of the Association of Women Extractivists Sementes do Araguari management group and will be divided into five series, considering the most important species for use by the group, namely: Breu-branco; Andiroba; Copaiba; Pracaxi and Cip?-titica. Each series will present the topics: Commercialization of production and market possibilities; Community organization for the management of forest resources; Local knowledge and ecology of the species; Resource management and collection; Processing and storage; Marketing	Amap? National Forest and Amap? State Forest The beneficiaries of the protocol will be the managers and managers of FLONA/FLOTA Amap?, technicians from state and municipal technical advisory bodies, rural extension and manager of the UCs

Component 2. Participatory management and sustainable use of protected areas and productive landscapes.

Outcome 2: Pressure on natural resources is reduced and resilience increased, leading to improved conservation of natural resources and ecosystem functions	
Impact Indicators	These need to be harmonized with results framework: 7 sustainable management plans that mainstream biodiversity are successfully developed or implemented (pirarucu, caiman, forestry-timber, forestry-non-timber, agroecology, swamp ghost crab and community-based tourism) Pirarucu population in the three Sustainable Productive Territories remain steady or increase. Mortality of swamp ghost crab during transport is reduced by 30% 4 technologies to improve natural resource management are implemented
Assumptions	Capacity enhanced efficiently and effectively by project Strong government and stakeholder engagement Improved practices adopted.
Lead Executing Agency	Mamirau? Institute
Anticipated Budget	GEF: US$ 1,560,000 Co-Financing: US$ 8,010,000

Output 2.1. Implementation and development of participatory natural resource management plans including agroforestry, wood and non-wood forest products, pirarucu, caiman and swamp

ghost crab management, and community-based tourism in 15 protected areas, one indigenous land and four productive landscapes

44. During the first year of the long course (output 1.1.1, Component 1), each student will develop an action plan that will be implemented with the community-based organization with which the student is associated. This action plan will provide a diagnosis of the main difficulties and weaknesses of the community-based organization and a plan for solving the issues identified. Each student will be tutored by Mamirau? Institute?s staff or institutional partners specialized in the areas focused by the student work.

45. The topics targeted in these recall and practicing modules are the following ones:

? *Commercial Negotiations:* Technical support will be provided in the promotion of spaces for commercialization and negotiation in order to provide a better flow of production and a fair price. The Business Rounds will take place, 1 in Uarini, 1 in Tef? and 2 in Manacapuru for the wood production chain and 4 business rounds for the pirarucu production chain; for this moment buyers and strategic partners will be invited to these meetings that have the purpose of promoting a safe and fair negotiation space.

? *Forestry Agreements:* New commercial arrangements and forestry public policy proposals in Amazonas will be themes worked on with the intention of providing dialogues between Company x Community and the government for investment purposes in the sector, in the creation of a credit line, via the state development association, so that the entrepreneurs have resources available for the purchase of legal wood and better payment conditions for the production.

? *Community Fairs:* Fairs involving the pirarucu chain will be promoted (2 in Tef?/Alvar?es and 2 in Manaus) and 48 crab fairs, 11 social gastronomic festivals throughout the 4 years of the project through a cycle of meetings between crab associations/fishing agreements and local partners that besides executing the fairs will elaborate a sustainability plan for the next 5 years of the crab and pirarucu fairs, using participative tools: tives in which each actor will be responsible for the execution, with the intention of envisioning the long term of the action and providing a space for fair commercialization.

? *Value Chain Mapping*: Mapping is necessary to know the market that the productive collectives can access. This includes bringing information about the formal and informal market, pointing out potential buyers as well as the quality adjustments that each market requires. This study will be done by means of specialized consulting to subsidize the actions for financial management and market access that will be worked on in the workshops.

46. The project will also support CBOs to implement resource and activity specific management plans. Mamirau? Institute will provide technical support with experienced staff. The management plan

implementation will benefit from capacities built through Component 1. Each implementation task will address specific drivers of biodiversity loss. Activities will generate models and lessons learned to promote replication, amplification, and sustained support post-project by CBOs and associated private sector actors. A detailed assessment of the target value chain of ghost crab will be carried out to identify critical issues impacting their performance.

47. In order to take full advantage of the natural resource management plans developed in Component 1 and implemented through Output 2.2, special emphasis will be placed on solving bottle necks in key value chains. In this context, Mamirau? Institute, with the support of the Ministry of Science, Technology and Innovations (MSTI), has developed innovative technologies for processing natural resources, covering sanitary regulations and improving weak links in the production chain of fisheries and agroforestry products in the varzea and low land terra firme forests of Amazonia, as well as extractivism of crabs in the mangroves of the coast of Par? state.

48. These technological solutions will help managers, local governments, the Brazilian Micro Support Service and Small Business to meet the regulations of Geographic Indication for the Pirarucu from Mamiraua Reserve and manioc flour from Uarini municipality. These technologies, coupled with activities under 1.1.3 and 2.1.1 will also allow local communities access new markets via public policies such as the National Food Acquisition Program (PAA), the National Food Acquisition Policy for School Lunch (PNAE) and the minimum price guarantee policy of Companhia Nacional de Abastecimento (CONAB). These existing projects and policies are aimed at supporting products with a sustainable extractive base, providing subsidies and adding socio-environmental value to access the markets, however the regulations require hygienic-sanitary safety and the guarantee of the maintenance of biodiversity aspects that will be strengthened by this project.

Pirarucu Management Plan Implementation

49. The pirarucu management protocols supported by the project will target Sustainable Productive Territories proximate to protected areas. The three territories targeted cover a total area of 33,242 ha.

50. Collective fishing agreements will be made for three Sustainable Productive Territories ? Jurupari, Capivara and Joacaca ? with Normative Instruction (Instru??o Normativa SDS 03/2014: Setor Capivara; Instru??o Normativa SEMA 04/2017: Jurupari Grande; Instru??o Normativa SEMA 03/2017: Seringa. Ver.[2] Four organizations will be targeted: Colony of Z-4 (Tef?), Colony of Z-23 (Alvar?es), Colony Z-32 (Mara?) and ASPEM (Mara?). Approximately 65 families are currently engaged in Pirarucu capture.

51. Each of these areas have published and approved management plans. However, as noted, these CBOs are challenged in terms of protocol supervision and compliance. These locations require fundamental management planning and implementation assistance. This includes technical-scientific actions based upon rigorous population monitoring. Particular challenges to be addressed include coordination and/or technicians of the Fishing Management Program accompany members of the board of directors of fishermen's organizations with management plans in force for the institutions involved in the licensing, monitoring and supervision of pirarucu fishing (IBAMA, SEMA and MAPA) and other species with closed or minimum size defined in regulations.

52. Part of this effort will include assisting CBOs to complete effective annual management reports. The project?s technical team will support institutions to deliver and present the reports. This includes technical transfer of management, oversight by responsible insitutional departments. Annual technical support will be provided in March when management report completion is required. The delegation will be composed of the Fisheries Management Program team and each responsible organization.

Swamp Ghost Crab Management

53. The project will support the adoption and implementation of improved swamp ghost crab management protocols along the Coast of Par? to reduce over-exploitation within protected areas. This will include raising awareness and capacitating crab collectors to adopt technologies designed to increase crab value and thereby offset the need for exploitive practices. As noted, current methodologies result in substantial waste and overexploitation.

54. The project will implement a ?best practices? outreach program targeting crab collectors and wholesalers. This work will be done in in partnership with SEDAP. The project will support the implementation of a series of outreach events, including market fairs, bringing together collectors, wholesalers, and end users to increase knowledge and adoption of improved practices. The project will support ?proof of concept? approaches with a monitoring program established to identify the economic, social, and ecological advantages of adopting improved practices.

55. One focus of this effort will be to improve transport to reduce mortalities. A cost-effective method of transporting of mangrove crab in baskets was developed by Embrapa Meio-Norte in the Delta of the Parna?ba river, in Piau? State. The method has been adapted for the Extractivist Reserves targeted by this project. This adapted technique and transport method is described in the protocol ?Management of u?? crab: the packaging method for sustainable transport?.

Caiman Management Plan Development and Approval

56. The Mamirau? Institute in collaboration with AMEPP will develop a caiman management protocol for Piaga?u-Purus SDR. The model plan will make certain future caiman harvest is sustainable and reduces negative impacts to wetlands ecosystems.

57. There will be no implementation of the plan during the project period. Multiple years of data collection are required to make certain caiman harvest is sustainable and promotes achievement of sound conservation targets. Management plan development will be conducted in a participatory fashion with local community engagement.

58. Socioeconomic information will be obtained through interviews with the AMEPP and management agency DEMUC. This will include socioeconomic information from the proponent community-based organization; e.g., number of partners participating in the management, personal data, activities they will carry out and health cards for food handlers.

59. The project will generate ecological information on caiman; e.g., abundance and relative density of caimans, reproduction areas and population size and structure. Ecological information will

be obtained through field expeditions conducted by Mamirau? Institutes Caiman Management Program staff. They will carry out population surveys and nest monitoring.

60. The approved management plan will enhance caiman conservation by establishing use and harvest parameters such as age and sex limitations (e.g., male capture only), spatial zones, temporal restrictions, and safe handling requirements. The management plan will integrate rigorous caiman monitoring and reporting protocols. The management plan will map critical habitats and ?no-take? zones. For instance, nesting sites will be fully protected with no allowed caiman harvest. In non-nesting sites caiman harvest may occur. Mapping will address historical use.

Implementation of the Community-Based Tourism

61. The project will support implementation of community-based tourism in Jaquiri IL. This will utilize capacities built under Component 1. Community-based tourism will be directed specifically to promote biodiversity conservation by off-setting and providing an alternative revenue source for current resource consumption practices that drive biodiversity loss.

62. *Visitation Plan:* During the project Y1, a visitation plan required for communities to engage in tourism will be finalized. Development of the visitation plan will involve a series of discussions at the village level with the support of Mamirau? Institute. This will be done with FUNAI and the General Coordination of Ethnodevelopment. Both parties will need to evaluate the proposed Visitation Plan. The plan will emphasize support for the associated Protected Areas and shared management.

63. The plan will be developed with indigenous people through the use of participatory tools recommended by PNGATI and with the technical advisory team. The content will bring aspects of sociocultural characterization of the territory, governance and management structures, tourism guidelines and perspectives for the future, signed agreements and proposed actions. The objective of the protocol is to generate an environmental and territorial management plan focused on indigenous tourism initiatives as an action that encompasses and composes local strategies for protection, inspection and management of resources and strengthening decision-making capacities, environmental policies of the leaders.

64. For this, it is intended to develop, together with the actors, spaces for meetings and exchanges of knowledge and experiences with other indigenous groups, providing opportunities for the generation of knowledge and potentializing its multiplying effect in the territory. Build for the establishment of monitoring actions aimed at following up on the implementation of the actions proposed in our protocol.

65. *Plan Approval:* During Project Y2, FUNAI will evaluates and approve the Visitation Plan, file supporting documentation. This will reference territorial and environmental management actions associated with sustainable development and income generation activities.

66. *Participatory guidelines:* These guidelines will direct tourism in line with the developed Indigenous Tourism Protocol.

67. *Technical Training:* Technical support will be provided by Project experts will assist communities to further develop tourism support skills. Training for the production of handicrafts based on ethno-mapping and ethnozoning workshops, identifying existing resources in the territory, potential use and marketing of material culture artifacts to visitors. Training for local community guides aimed to understand the village itself, its history, culture, ways of life and tourist attractions. Training with host families to accommodate visitors on day trips or overnight in the village. Training for proper treatment of solid waste, especially those produced by tourist visits.

68. *Information Exchange:* The project will facilitate exchanges with the Federation of Indigenous Organizations of Rio Negro to strengthen community-based tourism in the Jaquiri indigenous land and knowledge of new experiences in indigenous tourism.

Agroecological Systems Management Protocol Implementation

69. The project will support local producers to gain organic production certification from the The Ministry of Agriculture, Livestock and Supply (MAPA). Promotion of agroecological systems will be directed specifically to promote biodiversity conservation by off-setting and providing an alternative revenue source for current resource consumption practices that drive biodiversity loss.

70. This will be achieved by assisting local producers in the Tef? region to implement the model Agroecological Systems Management Protocol. The technical assistance activities will be developed with the IDSM team, and for this we are proposing the hiring of a junior-level technician, with experience in practical field activities to assist in the incorporation of agroecological and organic production practices. This will include young agroecology students from IFAM Tef? who will be be invited to monitor and practice application.

71. The project will apply FAO?s established Farmer Field School approaches. Field technicians from The Mamirau? Institute along with local community members will be responsible for implementation support. The project will target select groups of farmers and producers such as CNPJ and build their capacities for protocol implementation. By project close, these beneficiaries should have the capcity to apply to MAPA for certification.

Forest management plan for non-timber products

72. To support the implementation of the innovative NTFP protocol, NTFP management activities will be conducted in two Conservation Units in the state of Amap?. The project will complete monitoring of the activity developed by Associa??o Sementeiras do Araguari. Priority are andiroba and copaiba. Workshops will identify local species knowledge. A forest inventory will identify productive potential. Production monitoring will be carried out to collect additional data. Protocol implementation will standardize procedures related to the collection, storage and processing procedures. This will improve the quality of the product and potential fincancial return. Monitoring will reduce overexploitation and associated negative impact.

73. IDSM has experience in the elaboration, publication and implementation of management protocols for species similar to those used in the territory in question. Additional partners will include ICMBio, SEMA Amap?, IEP?, IEPA, and Embrapa Amap?.

Development of Forest Timber Management Plan

74. Community forest managers and technicians will be trained to implement protocols for commercial timber harvest at the Piaga?u-Purus SDR that encompass wetlands and proximate dry lands.

75. Emphasis will be placed on combatting illegal logging. As noted, this is an area with significant illegal logging due to the lack of an approved regulatory logging system. The project will help to normalize logging by establishing a legal and accountable timber market. Biodiversity monitoring established through a regulated system will help ensure conservation and reduce illegal logging activities.

76. IDSM will support this effort. IDSM has extensive experience with commercial Forest Management Planning and CBO adapted protocols. All ecological data, zoning and mapping will be collected by the IDSM technical team. IDSM will support zoning and preparation of maps is related to the delimitation of the management area in each predominant environment, and the legal reserve areas, forest production unit, permanent preservation, anthropic areas, infrastructure should be described. Field activities, such as sampling inventory, inventory survey and exploration in the first forest production unit will be taught by the IDSM team to managers associated with AMEPP, through a training program.

77. A community forestry cooperative will be created building upon Output 2.1 efforts. Technical discussions will be held with IPAAM, DEMUC and SEMA Amazonas to establish the procedures for the creation and development of a single Management Plan for the Piaga?u-Purus SDR. IDSM will support implementation working with AMEPP. Working with APOMAM, the project will support the development of ?company-community agreements? with consultation of state level timber industries in Manacapuru.

78. The Forest Management Plan will follow IPAAM licensing requirements.[3] The project will support generation of the required Exploration Operational Plan. This technical document specifies activities to be carried out in the forest production unit. The project will assist the CBO with review and approval by DEMUC/SEMA, the Management Council of the RDS, and IPAAM. This will include final inspection and approval by IPAAM and IBAMA.

79. As a positive effect of this scenario to encourage the timber chain in the Piaga?u-Purus region, the project will carry out an exchange of experiences in the region of the municipality of Uarini, involving ASSEMOVE (Association of Sawmakers and Furnituremakers of Uarini), IDAM and the Municipality of Uarini from the third year of the project, in order to replicate the experience in relation to the community and company agreements developed in the RDSPP territory.

Output 2.2 Improved livelihood opportunities for local communities arising from the adoption of sustainable technologies to strengthen target biodiversity value chains (pirarucu, agroecology, agro-tourism)

80. The project will strategically invest in hardware required to increase production value and incentivize CBO adoption of nature-based solutions that promote wetlands conservation.

81. In each case, government regulatory agencies responsible for licensing, certification, food safety, processing and packaging standards will be engaged. These technological solutions and certification process will local producers meet regulatory requirements to access markets. This includes government procurement programs designed to support procurement of locally produced goods. Engagement of the Brazilian Micro Support Service and Small Business will assist this process.

82. Each investment will be directed towards incentivizing delivery of biodiversity conservation benefits. Each investment will enhance operationalization of adopted conservation protocols and management planning. Only stakeholders who have sucessfully participated in capacity building training will have access to infrastructure investments. Participation will be limited to CBOs and private sector actors who sign and follow pro-conservation production practice agreements will have access to provided equipment. This includes relevant management plans and protocols.

83. Investments will help organize producers. Investments will serve as a data point for resource monitoring and oversight. Investments will be designed as a replicable model. All planning, investment, and capacity building will be recorded. Lessons learned will be distributed for replication.

84. The project will make certain all investments are economically and socially sustainable. Prior to PY3, a project drafted hand-over strategy will be adopted to make certain each CBO is fully capable of financing, managing, and maintaining provided equipment after project close.

Pirarucu Floating Processors

85. The project will invest in three Pirarucu processing units at Pirarucu Manejado. The processing units will be used by three community management organizations in the Middle Solim?es region: Jurupari, Capivara and Seringa.

86. The floating processing units are adapted to wetlands. They measure 154 m^2 and can be moved as needed. The unit is subdivided into eight areas: sanitary barrier, reception yard and fish washing; cleaning room; monitoring and dispatch room; kitchen; bathroom; deposit; water treatment station and power generator room. Each processing unit will be equipped with photovoltaic electricity, treated water and fish handling devices. Pirarucu can weigh up to 40 kgs.

87. Processing managers will be trained to use and maintain structures. Processing managers will be trained on best processing practices. This includes hygienic-sanitary fish processing, physical-chemical and microbiological meat analysis.

88. The floating processors and capacity training will allow communities to receive the State Inspection Seal. Support and engagement will include the Amazonas State Agricultural and Forestry

Defense Agency (ADAF), Amazonas Environmental Protection Institute (IPAAM) and Brazilian Navy. Each of these are licensing institutions. FEMAPAM will be the fishermen's representative entity that will help in the commercialization stage of the production that was processed in the productive units.

Electric Canoe Engines and Solar Chargers

89. The project will support the purchase of three canoes equipped with electric motors. This will be done to support the community-based tourism project in the process of regulation in the Jaquiri Indigenous Land.

90. Each vessel will have access to a photovoltaic charging station installed at Pousada Uacari. Electric motors will reduce the overhead incurred by communities from purchase of petrol. The electric motors will have additional climate and ecosystem impact reduction beneftis.

91. The benefited region is the Jaquiri Indigenous Land, located in the municipality of Uarin?. The AAGEMAM association, responsible for providing services to the Pousada and for the shared management of the enterprise with the Mamirau? Sustainable Development Institute (IDSM). The association will provide technical and logistical support to indigenous tourism, is an interested party in the project, as well as the Group for the Study and Development of Energy Alternatives at the Federal University of Par? (GEDAE/UFPA), responsible for the conceptual design and implementation of the technology. Project team proposes to adapt an electric engine for - critical instruments for transport of produce and people. This will expand the use of solar energy in central amazon and, potentially, in the coast, and help avoid greenhouse gas emissions. This technology will support the community-based tourism initiative, minimizing the impact of this activity on the environment by substituting current gas engines.

Food Processing Stations

92. The project will invest in a multifunctional kitchen for processing agroecological produce. The multifunctional kitchen will assist local communities to capture greater revenue from agroecological produce. This will include waste reduction and higher value processing.

93. The project will target organic producers from the Clube de M?es of the Miss?o. This CBO will be responsible for building a replicable model. The community CBOs will receive training on construction, use, maintanence, and best processing practices. This will include inputs from FAO experts.

94. The effort will engage the Ministry of Agriculture, Livestock and Supply (MAPA/Federal Government) and Sustainable Agricultural and Forestry Development Institute of the State of Amazonas (IDAM). These parties are responsible for food processing overight and certification, including health registration and food safety oversight.

95. The project will build two stations to improve fruit-pulp production from agroforestry initiatives. Fruit pulp production units will be equipped with a solar energy system, water treatment and sewage system, and necessary tools to meet required hygiene and certification standards.

Manioc Flour Processing

96. The project will invest in one manioc processing station, in support of the Association of Flour Producers of the Uarini region to meet required certification standards.

97. The manioc flour production unit is 91 m2. The production units will be capable of: softening and peeling, segregating and pressing dough, sifting and blending dry dough, toasting and bagging. The processors will include a freshwater system and processing tools. The processing stations have advanced ovens that reduce fuelwood demands.

The flour processing plant will apply social technologies to improve the health and quality of work for farmers involved in the GI (Geographical Indication) processes of Farinha Uarini. In addition, workshops focused on good production and processing practices will be developed. These activities will directly benefit the group of producers of the Association (APRU) of Flour Producers of the Uarini region.

Output 2.1.3. Biodiversity monitoring tool developed and adopted by target sites

98. The project will support the implementation of the monitoring tool in the target sites. This includes training local communities on protocols for node maintenance, data collection, data analysis (biodiversity measures, species distribution maps, behavioral patterns) that can be used to update and monitor management plans.

99. Mamirau? is in the process of developing a tool that would allow local communities, protected area managers, scientists, governments and society as a whole to (1) effectively monitor biodiversity in the Amazon (and other tropical forests), (2) to foresee the impact of deforestation and climate change on these natural communities, and (3) also that will increase global awareness, understanding and appreciation of biodiversity.[4] The proposed tool will use state of the art technology (i.e. Providence nodes) that allows continuous monitoring of biodiversity under a standard protocol, with real-time identification of species through image and sound cues (allowing the identification of more species than any other method available to date), wireless data transmission (i.e. with the capacity to send information from anywhere on the globe), and low energy consumption (to last long periods without the need of maintenance).

100. The project will compare the biodiversity monitoring results of the Monitora Program methodology (that use the linear transect method and camera traps) and the Providence nodes (that record species through sounds and images captured and classified automatically in the nodes) to evaluate if automated systems such as Providence nodes can provide important biodiversity information for managers and IPLCs to make informed decisions about management of protected areas and their biodiversity. We expected that with a positive result (showing the effective of this new technology) this will dramatically increase the ability of protected area managers to make informed decision about the management of their protected areas. We also expect that this type of technology can be carried forward and replicated nationally by Federal and State governments as a complementary protocol for the Monitora Program.

101. The project will support the implementation of Providence nodes in four target sites: Caet?-Tapera?u Marine Extractive Reserve, Piaga?u-Purus Extractive Reserve, Sarac?-Taquera National Forest and Amap? National Forest. Areas were selected based on implementation of MONITORA program and considering the diversity of environments covered by the project.

Protected Area	PA type	Total hectares
Caet?-Tapera?u Marine Extractive Reserve	Extractivist Reserve	41,807
Piaga?u-Purus Sustainable Development	Sustainable Development	1,008,167
Sarac?-Taquera National Forest	National Forest	429,600
Amap? National Forest	National Forest	412,000

102. The project will install three Providence nodes in line transects (using pre-existing transects or implementing transects following the Monitora Program protocol), in the first year of the project in the four target protected areas. These nodes will be installed at least 5 km from each other, paired with camera traps, and will collect data continuously over three years.

Taxon	Family	Species	Guild
Chiroptera	Mormopidae	*Pteronotus rubiginosus*	Insectivore
Chiroptera	Mormopidae	*Pteronotus alitonus*	Insectivore
Chiroptera	Molossidae	*Molossus molossus (search phase call)*	Insectivore
Ave	Dendrocolaptidae	*Xiphocolaptes guttatus*	Insectivore
Ave	Capitonidae	*Capito aurovirens*	Insectivore
Ave	Dendrocolaptidae	*Nasica longirostris*	Insectivore
Ave	Thamnophilidae	*Myrmelastes hyperythrus*	Insectivore
Ave	Thamnophilidae	*Myrmoborus leucophrys*	Insectivore
Ave	Thamnophilidae	*Sakesphorus canadensis*	Insectivore
Ave	Furnariidae	*Synallaxis albigullaris*	Insectivore
Ave	Thamnophilidae	*Myrmochanes hemileucus*	Insectivore
Ave	Buconidae	*Monasa nigrifrons*	Granivore
Ave	Tinamidae	*Tinamus major*	Omnivore
Ave	Tinamidae	*Crypturellus undulatus*	Insectivore
Ave	Thamnophilidae	*Rhegmatorhina melanosticta*	Insectivore
Ave	Thamnophilidae	*Oneillornis salvini*	Insectivore

Ave	Thamnophilidae	*Hafferia fortis*	Insectivore
Ave	Dendrocolaptidae	*Dendrocincla merula*	Carnivore
Ave	Thamnophilidae	*Thamnomanes saturninus*	Omnivore
Ave	Tyrannidae	*Attila bolivianus*	Insectivore
Ave	Nyctibiidae	*Nyctibius grandis*	Insectivore
Ave	Piscitacidae	*Amazona festiva*	Granivore
Ave	Columbidae	*Leptotila rufaxila*	Frugivoro
Ave	Strigidae	*Glaucidium brasilianum*	Carnivore
Ave	Piscitacidae	*Ara severus*	Granivore
Ave	Ramphastidae	*Ramphastos tucanus*	Granivore
Ave	Trogonidae	*Trogon c.f. melanurus*	Omnivore
Ave	Tyrannidae	*Pitangus sulphuratus*	Insectivore
Ave	Icteridae	*Cacicus cela*	Omnivore
Primates	Cebidae	*Saimiri vanzolini*	Frugivore/insectivore
Primates	Cebidae	*Saimiri macrodon*	Frugivore/insectivore
Primates	Cebidae	*Saimiri sciureus cassiquiarensis*	Frugivore/insectivore
Primates	Cebidae	*Sapajus macrocephalus*	Frugivore/insectivore
Primates	Pithecidae	*Cacajao calvus calvus*	Frugivore
Primates	Atelidae	*Alouatta seniculus (juara)*	Frugivore
Primates	Atelidae	*Ateles chamek*	Frugivore
Carnivora	Felidae	*Puma concolor*	Carnivore
Carnivora	Felidae	*Panthera onca*	Carnivore
Carnivora	Canidae	*Canis familiaris*	Omnivore
Artiodactyla	Tayassuidae	*Tayassu pecari*	Omnivore
Cetacea	Iniidae	*Amazon dolphins (buzz, clicks, whistle)*	Piscivore
Anura	Bufonidae	*Rhinella marina*	Omnivore
Anura	Hylidae	*Boana boans*	Omnivore
Anura	Hylidae	*Scinax ruber*	Omnivore
Anura	Hylidae	*Dendropsophus minutus*	Omnivore
Anura	Leptodactylidae	*Leptodactylus pentadactylus*	Omnivore

Component 3. Monitoring and evaluation of the impact of knowledge transfer and good practices.

Outcome 3.1.: Project implementation is supported by a gender sensitive M&E strategy based on measurable results, on adaptive management principles, and enhanced by access to information including status of biodiversity and its ecosystem benefits to society.	
Impact Indicators	These need to be harmonized with results framework: 4 Reporting workshops realized with significant participation of interested parties and project partners 47 project knowledge products developed and publicly available at Mamirau? Institute and FAO?s websites 500 people subscribe to and receive monthly updates and access electronic newsletters 500 people monthly users accessing project generated knowledge management website
Assumptions	Capacity enhanced efficiently and effectively by project Strong government and stakeholder engagement Improved practices adopted
Lead Executing Agency	Mamirau? Institute
Anticipated Budget	GEF: US$ 589,000 Co-Financing: US$ 780,000

3.1. Monitoring and evaluation system developed with relevant project partners and key stakeholders, with clearly defined and verifiable indicators.

Monitoring and Evaluation Program

103. The project will implement a comprehensive monitoring and evaluation program. During PY1, the project will draft and adopt a monitoring strategy. This strategy will focus upon making certain that all aspects of the project are tracked and reported upon. This will include project indicators and delivery of GEBs. The project will also track data related to gender and stakeholder engagement. Monitoring results will be reported according to FAO guidance.

Monitoring and Evaluation Specialist

104. The project will hire an M&E specialist within six months of project start. This person will work throughout the project implementation period to: (i) develop and oversee delivery of the M&E system; (ii) collect and collate information on progress in meeting targets and evaluate results; and (iii) lead on the identification of project best practices and lessons learned and the systematization of experiences, and the preparation of FAO and GEF monitoring reports.

Annual Summary Report

105. The project will generate an annual activity and progress summary report. This will include reporting on progress made towards achievement of intended objective, components and outputs. This summary report will be published in both English and Portguease on the project website. The report will be completed to target beneficiaries (e.g., CBOs and private enterprise), relevant government authorities, FAO, and GEF constituents.

Annual Reporting Workshop

106. The project will organize an annual reporting workshop. This will provide an opportunity for engaged government, CSO, and private stakeholders to engage. During the workshop, the project will report on results to date and present future planned activities. The workshop will review project progress and impacts and offer opportunity for exchange of ideas. During the annual workshop, CBO representatives benefitting from project investments will be expected to provide reports regarding activities and progress. The workshop will focus upon delivery of project intended impacts, including GEBs. All workshop proceedings will be recorded with summaries published on the project website.

3.2 Mid-term and annual reviews for project evaluation and alignment of processes carried out.

107. *Mid-Term Review*. The MTR is considered particularly crucial, providing a vital opportunity for reviewing progress, identifying successes, shortfall, bottlenecks and any needs for re-alignment through

adaptive management. Consultants will be retained and scheduled to conduct the mid-term review at least five months in advance of the anticipated mid-term review activities.

108. *Terminal Evaluation*. Lessons learnt and recommendations produced by the Terminal Evaluation will inform discussions on sustainability/durability of project results and impacts and future replication and scaling up initiatives. Consultants will be retained and scheduled to conduct the terminal evaluation at least five months in advance of the anticipated review activities.

3.3 Lessons learned and best practices disseminated to key stakeholders and the general public.

Communications Specialist

109. The project will hire a Communication Specialist to be employed by IDSM. The specialist will be responsible for implementing the communications strategy.

Communications Strategy

110. The project will adopt and implement a communications strategy within the first six months of operationalization. This strategy will detail how the project will make certain that lessons are captured and disseminated. The strategy approach will ensure that stakeholders are regularly updated in relation to project actions and results.

111. The strategy will describe outreach tools. This will include the web-based platform, other electronic media approaches (e.g., social media) and print media. The strategy will make certain these approaches are tailored to target audiences. The strategy will include a monitoring aspect to make certain intended users are accessing and benefitting from engagement.

112. The project will also support radio based programming which is relied upon by remote villages. The project will work to have a monthly radio ?update? and ?engagement? broadcast. For instance, Program Ligado no Mamirau? (PLM) is broadcast by R?dio Rural 93.9 FM of Tef? (AM). Radio brings information in uncomplicated language to 19 municipalities in the M?dio Solim?es region. The radio's target audience comprises the Jaquiri and Porto Praia Indigenous Lands; the Produtives Territories; Lagos Jurupari Grande, Paran? do Jacar? (Capivara) and Seringa complexes; Association of Cassava Flour Producers of the Uarini Region (APRU), Mother Margarida Maria de Alacoque Mothers Club/Tef? and Local Technical Coordination of FUNAI M?dio Solim?es.

113. The project will record short videos with testimonials from the beneficiaries, for wide dissemination on the project's website and inclusion in a YouTube series of the Mamirau? Institute.

114. The strategy will identify stakeholders and stakeholder groups to be certain IPLC are fully engaged, aware of, and benefitting from project activity. The strategy will identify target audience

(e.g., key stakeholders) and how the project will ensure that communication materials effectively reach, engage and motivate those audiences.

115. The implemented strategy consider language requirements to make certain knowledge products will be sensitive to sociocultural diversity, with a concern to different types of language, literacy levels and comprehension skills, ensuring that it is simplified and accessible communication, prioritizing IPLs, women and young people. The project will integrate a specific communications strategy that targets women and women-centered issues.

Monitoring tools

116. The project will incorporate monitoring tools to ensure that key audiences are reached, involved, that they can contribute, and that the project is effectively communicating key messages and results. This will include tracking items such as participants, users, downloads, subscriptions, followers, and other tools that help indicate that information is reaching, engaging, and informing the intended audience. The data generated will be used to help prioritize and improve the effective development and delivery of knowledge products. The monitoring results and progress report will be updated annually, and available electronically.

Knowledge Management Platform

117. The project will within the first six months of operation launch a project specific website to serve as knowledge management platform. This may be nested within the Mamirau? Institute portal. The website will capture all project activity. This includes the publishing of training manuals, training programs, monitoring efforts and other tools emplaced by this project. The specific objective will be to make certain all project effort is fully captured for replication and amplification. The website will also provide a means for project managers, FAO, GEF and others to track project progress. This will include verification of training programs, participants, infrastructure development, and achievement of project objective, components, outputs, and associated indicators.

118. The strategy will be implemented to support a knowledge management platform. This project is directed towards capacity building and modeling improved resource management. As such, the project will be generating a number of training programs. Capturing these activities and tracking activity impact will be of paramount importance. Each project activity will be designed to fit into and build the project?s knowledge management platform. This will include making certain that results, tools, and lessons learned are widely available electronically to facilitate uptake, review, and amplification.

119. Video classes will be generated with the proposal that the content be made available / accessed by other people who will not be in person in the courses, including other technicians of the institutions that will have members in the face-to-face course, enabling the expansion of the content and inclusion of the materials in the Mamirau? Institute?s *YouTube* channel and on the project website. Video classes will be generated of the following short modular courses: pirarucu, Caiman, Agroforestry, Forestry - Timber, Forestry ? Non-timber, Ecotourism and Swamp ghost crab transport protocol; totaling 7 video lessons.

Each modular course will have a video class, which will be a didactic summary of the course, describing all the steps, with forecast for production in the third year of the project. The video class will be captured and edited by a specialized agency. This product will be guided by the Project Communication team, in alignment with the leaders, from a detailed briefing, in order to ensure that all the guidelines stipulated in the Communication Plan are met, especially with regard to IPLs, women and young people. The video will mention all the partners involved and, above all, will respect the language of each participant.

2) Alignment with GEF focal area and/or Impact Program strategies

120. The proposed project is aligned with the GEF-7 Biodiversity Focal Area as follows:

BD Focal Area Objective	Alignment with FA objective
BD-1-1. Mainstream biodiversity across sectors as well as landscape and seascapes through biodiversity mainstreaming in priority sectors.	The project will work with local communities to improve and change production practices to be more biodiversity-friendly and reduce the impact from the fisheries, forestry and agriculture sectors on Amazonian wetlands. Under Component 2, the project will develop and support the implementation of participatory natural resources management plans for the five target value chains, namely (i) agroecological systems, (ii) wood and non-wood forest products, (iii) pirarucu, (iv) caiman and swamp ghost crab, and (v) community based tourism. These management plans will include community-based monitoring tools to ensure populations of target species remain steady or increase. In addition, the project will target special links within the pirarucu, agoroforestry, and tourism value chains to improve process efficiency. Finally, the project will implement spatial land use planning tools to support the development of forest-related management plans (i.e. wood and non-wood forest products and mangroves) and agroecological systems. The above-mentioned activities will be supported by a capacity building programme (Component 1) led by Mamiraua to incentivize stakeholders to change their current practices.

BD-2-7. Address direct drivers to protect habitats and species and improve financial sustainability, effective management, and ecosystem coverage of the global protected area estate	The proposed project will use the proven model developed by Mamiraua Institute to strengthen the capacity of indigenous peoples and local community organizations to conserve and sustainably use natural resources while improving the management effectiveness of target protected areas. This capacity-building programme coupled with resource management protocols and management plans, will increase their capacity to manage resources within protected areas so that the latter can achieve their conservation objectives.

3) Incremental/additional cost reasoning and expected contributions from the baseline, the GEFTF, LDCF, SCCF, and co-financing

121. Technical knowledge for implementation of biodiversity management processes are very poorly disseminated and, as a consequence, there is still a very limited number of capacitated human resources to implement and coordinate sustainable management processes. Extractive activities are still disarticulated with the rest of the biodiversity value chain.

122. Component 1 will contribute to the mitigation of barriers 1 and 3, improving the ability of managers to execute different steps of the management process, and providing technical support demanded by public agencies that regulate extractivism activities (i.e. IBAMA and IPAAM). Under business as usual, local communities will continue to use natural resources in an unsustainable way?without institutional organization, with limited capacities and without an information system that provides feedback to the resource management process. Activities under Component 1 will help structure and strengthen local community organizations, making them able to create fiscal receipts and to access public policies. The GEF's contribution will be used to improve and consolidate the participatory management models (interrelation of technical, managerial, financial and administrative processes) of natural resources necessary for the maintenance of wetland species. The co-financing ($8.85 million) will guarantee the majority of the executing agency ISDM 's technical staff and mainly scholarships for scientific studies on ecosystems. The project will invest approximately US$ 1,143,379 from GEF resources to achieve this goal.

123. Component 2 will contribute to the mitigation of barrier 2 by supporting the field application of knowledge adquired in the long and short courses of output 1.1.1, as well as the implementation of resource management plans developed in Component 1, by implementing adequate and sustainable technologies to improve extractivist and productive processes for target value chains, and to adopt a biodiversity monitoring tool to ensure targets are met. Creating new and adequate infrastructure is a key investment to improve processing in remote areas of Amazonia and to achieve all sanitary demands. In turn, this improvement allows exploration of larger markets and aggregation of value to

products. In the baseline scenario, local communities extract and process natural resources using inefficient processes and without meeting conditions that would allow them to access public policies (see next paragraph). Overall this project acts with an integrative approach between conservation and mainstreaming biodiversity and better livelihoods for local people of Amazonia. GEF's contribution will support the implementation of management plans and in the development and adaptation of sustainable production units. The co-financing ($8.0 million) will provide scholarships to adapt and validate the technologies. The project will invest approximately US$ 1,764,763 from GEF resources to finance activities under this component.

124. Activities of components 1 and 2 will help managers, local governments, the Brazilian Micro Support Service and Small Business to meet the regulations of Geographic Indication for the Pirarucu from Mamiraua Reserve and manioc flour from Uarini municipality. And also access public policies: National Food Acquisition Program (PAA), National Food Acquisition Policy for School Lunch (PNAE) and the minimum price guarantee policy of Companhia Nacional de Abastecimento (CONAB). These existing projects and policies are aimed at supporting products with a sustainable extractive base, providing subsidies and adding socio-environmental value to access the markets, however the regulations require hygienic-sanitary AFSety and the guarantee of the maintenance of biodiversity aspects that will be strengthened by this project.

125. Component 3 will have incremental GEF funding (USD 333,221) to monitor and evaluate project progress and compliance with indicators, mid-term and final external evaluations, systematization of experiences and lessons learned, preparation of outreach and dissemination materials, and project outputs and results.

The incremental reasoning is summarized in the table below

Component	Baseline activities (cofinancing)	Incremental activities
1. Strengthening the enabling environment to sustainably manage varzea floodplain forests and mangrove wetlands.		
2. Participatory management and sustainable use of protected areas and productive landscapes.		
3. Monitoring and evaluation (M&E) of the impact of knowledge transfer and good practices.		

4) Global environmental benefits (GEFTF) and/or adaptation benefits (LDCF/SCCF)

126. The project will support the conservation and sustainable use of globally significant biodiversity in Amazon wetlands. The varzea and mangrove wetlands play a fundamental role in the provision of environmental services, such as filtering and retaining water and sediments, recharging aquifers and regulating microclimate, and as important reserves of terrestrial carbon. In addition, they function as an important place for shelter, food, reproduction and nursery for a large number of species. It is estimated that approximately 50% of fish species in the Amazon occur in floodplain systems associated with large rivers, including almost all species of commercial importance. Finally, mangrove wetlands lining the coastal shores of the Amazon basin play a major protective role against erosion by waves and storms

- The project will improve management (measured by METT) of 415,706 ha in 20 protected areas, 18 of them federal and State Conservation Units and 2 Indigenous Lands, for which resource management plans for (i) forestry, (ii) caiman, (iii) fisheries, (iv) crab, (v) agro ecologic systems, (vi) NTFPs and (vii) tourism are developed and implemented. This area covers approximately 10% of the total area of the 20 protected areas. (Core Indicator 1).
- The project will improve management of natural resources in 33,242 ha of production landscapes covering 3 lake complexes (Jurupari Grande, Parana do Jacare, and Seringa) and the Tefe region where fisheries and agroforestry management plans are implemented. (Core Indicator 4.1).
- The project will improve capacity of at least 8,623 people (4408 women; 4215 men) in communities prioritized for the conservation and sustainable use of wetlands ecosystems (Core Indicator 11). Capacity building activities will take place in all 24 target protected areas and landscapes (i.e. 16 out of the 20 protected areas under Core Indicator 1, the 4 landscapes under Core Indicator 4, and the remaining 4 protected areas, 3 PAs and 1 IL, and target landscapes that may not receive funds for investment under Component 2).

127. These benefits will translate into direct benefits to amazonian species, many of which are of global significance, including, but not limited to: migratory species, including fish species such as gilded-catfish (Brachyplatystoma rousseauxii), tiger-sorubim (Pseudoplatystoma tigrinum) and kumakuma (Brachyplatystoma filamentosum); birds such as the sunderling (Calidris alba), Yellow-billed tern (Sternula superciliaris), seagulls (Phaetusa simplex) and the black skimmer (Rynchops niger); species of great economic and cultural importance such as the pirarucu (Arapaima gigas), tambaqui (Colossoma macropomum) and the mangrove-crab (Ucides cordatus); threatened species such as the manattee (Trichechus inunguis), jaguar (Panthera onca), harpy-eagle (Harpia harpyja); and

important wood species such as the sama?ma (Ceiba pentandra), ucu?ba (Virola surinamensis), cedro (Cedrela odorata) and Louro-inamu? (Ocotea cymbarum).

5) Innovativeness, sustainability, potential for scaling up and capacity development[5]

a. Innovation

128. The project aims to integrate national, regional and local stakeholders for the conservation and sustainable use of wetlands, and empower local stakeholders for territorial planning processes. The project will strengthen capacities for the effective and appropriate use of planning methodologies and decision support that contribute to the targeting of interventions, to identify and understand the main causes/drivers of degradation, to the selection and design of instruments that optimize net social and environmental results and/or understand the circumstances in which the maintenance of ecosystems and their services can generate a greater economic benefit than the promotion of economic processes that degrade and deplete ecosystems.

129. In this context, the project is innovative in a number of actions. First, it brings technical capacity to areas of Amazonia where it is lacking and promotes gender equality in biodiversity management processes. Second, the project will be innovative in terms of the use of technologies and applications for production, access to markets and monitoring of natural resources. Third, the project will be innovative in the use of state-of-the-art monitoring system. Finally, the promotion of alliances to catalyze innovations in technology, policies, financing and business models for the more sustainable development of productive activities is another innovative aspect of the project.

b. Sustainability

130. This project is aligned with national biodiversity conservation and development strategies for the Amazon Forest and is complementary to other important GEF projects occurring in the region (see coordination with other GEF projects).

131. The sustainability instruments that will support the project's actions include The Fisheries Agreements, regulated by IBAMA Normative Instruction No. 29, December 31, 2002, which recognizes the interests and the importance of the participation of collectives from riverside communities in sustainable exploration and the capacity to inspect the areas to guarantee the natural stock of different species. State Environmental agencies, through specific Ordinances and Normative

Instructions, also recognize this instrument as important for territorial management. This instrument has the potential to serve as a model for other management plans that will be developed in the project.

132. Ordinance No. 19/2005 of the Ministry of the Environment, Complementary Law 57/2007 of the Gov. Amazonas and Resolution 02/2008 of CEMA/AM, which regulate volunteering in protected areas and the Voluntary Environmental Agents Program that provides guidelines for voluntary participation in environmental education activities, protection, preservation and conservation of natural resources, and provides legal support for the maintenance of other management activities.

133. Mamirau? Institute is close to signing a ten year contract with the government of Brazil, guaranteeing funding for the maintenance of the Institute and its activities for the next decade. This will guarantee the continuation of many of the capacity building activities proposed in this project, the improvement of management protocols and technological development needed to make processes more effective and improve local livelihoods.

c. Upscaling

134. Since it was created, over two decades ago, Mamirau? Institute follows the rationale that management protocols must be based in scientific knowledge (many times complemented by traditional knowledge) and be replicable so that they can achieve other regions of the Amazon and eventually other biomes. Mamirau? Sustainable Development Reserve represents the epitome of this concept. First reserve of its category in Brazil, the model of sustainable development reserves created by the researchers that started Mamirau? Institute, have been applied to 42 other areas, protecting 11.331.948,89 ha and providing food security to thousands of families.

135. All activities proposed in this project have high scaling-up potential. The experience and knowledge of Mamirau? Institute's staff guarantees that protocols, technologies and courses created will follow the rationale that they are replicable and adequate for the Amazon region and its peoples. This is primarily a capacity development project that will incorporate a system-wide capacity development approach to maximize country ownership, sustainability and scale of intended results .

6) Summary of changes in alignment with the project design with the original PIF

136. Three Conservation Unit territories were subtracted from the initial project proposal as follows:

? **Tapajs -Arapiuns Extractive Reserve** was removed from the project, ceasing to be a beneficiary territory of the project's actions. This change was motivated by the social and political

context in the very sensitive territory at that time. The territory is going through processes of socio-environmental conflicts related to projects in progress at government bodies which, if accepted, will allow the installation of mines and the raising of cattle and buffaloes in these areas, altering the 2000 law that established the National System of Units of Nature Conservation. In this territory there are still processes of land claims between indigenous and riverside dwellers, making the project's performance scenario more delicate, as indicated by the local residents interviewed during the engagement processes carried out to collect data for gender and socio-economic analysis.

Contacts for engaging the territory began at the end of 2020, through dialogue between members of the IDSM and the NGO Saude e Alegria, headquartered in Santarm, PA. This dialogue flowed with the intention that the population of that unit would become one of the beneficiaries of the proposed GEF project. After a hiatus in conversations and the change of members in the NGO's technical staff, it was communicated by the current interlocutors of the Saude e Alegria Project that RESEX was experiencing a territorial conflict between indigenous and non-indigenous communities within its territory. It was also reported that the current board of the association of residents and users of the unit was not having a good relationship with the NGO with which we were dialoguing, and which was our interlocutor with the association. For these reasons, it was decided to temporarily withdraw the territory from the activities of the Mamiraua Institute, including future projects and action proposals.

? **Cujubim Sustainable Development Reserve** entered the first group of territories that would have its population as beneficiaries of the project. After several contacts with the Conservation Unit manager, including face-to-face meetings, the territory was removed from the project. Initially reticent, over the period of conversation, always unilateral, it was realized that the manager, due to lack of time and prioritization of other activities at RESEX, would not engage so that the actions necessary for the continuity of the territory in the project were possible. Therefore, it was decided to exclude this territory definitively.

? **Rio Unini Extractive Reserve** is benefiting from another project that the IDSM composes with other partners, this project includes activities similar to those that would compose the current project. Because of this, it was decided to withdraw this territory, avoiding duplication of resources for the same beneficiary, aiming, based on this decision, to favor other groups that do not have other funding and capacity building opportunities.

137.

? As described in the engagement plan during the PPG phase, it was also not possible to continue within the project with two productive territories related to the management of fisheries resources, namely: Complex of Middle and Lower Lagos Rio Cope? and Complex of Lagos Rio Cope? - Sectors A and B. Without proper contact with the indigenous and riverine people, it was not possible to collect data and agree on activities.

? Five out of seven Indigenous Lands (ILs) postulated as participant and beneficiaries of project activities have not been confirmed, due to the lack of feedback from the indigenous

leaderships, and the very weak or inexistent intermediation service on the side of the Indigenous Foundation FUNAI at the local level.

138.

? ?The field implementation of the biodiversity monitoring tool was transferred to Component 2, output 2.1.3, due to training for the implementation of the protocol and technology, together with the managers of protected areas and local communications, for collection, maintenance and analysis of data that can be used to update and monitor management plans.

? The original purpose of working for curbing off logging of mangrove trees has been withdrawn, due to the withdrawal of the R&D partner, namely the Federal University of Par?, who was originally foreseen to work out on this activity.

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[3] http://www.ipaam.am.gov.br/termos-de-referencia/

[4] Project Providence is an international collaboration between Mamirau? Sustainable Development Institute (Brazil), The Sense of Silence Foundation (Spain), Commonwealth Scientific and Industrial Research Organisation ? CSIRO (Australia) and the Federal University of Amazonas (Brazil). Phase 1 of the project is funded by the Gordon and Betty Moore Foundation.

[5] System-wide capacity development (CD) is essential to achieve more sustainable, country-driven and transformational results at scale as deepening country ownership, commitment and mutually accountability. Incorporating system-wide CD means empowering people, strengthening organizations and institutions as well as enhancing the enabling policy environment interdependently and based on inclusive assessment of country needs and priorities.

- Country ownership, commitment and mutual accountability: Explain how the policy environment and the capacities of organizations, institutions and individuals involved will contribute to an enabling environment to achieve sustainable change

- Based on a participatory capacity assessment across people, organizations, institutions and the enabling policy environment, describe what system-wide capacities are likely to exist (within project, project partners and project context) to implement the project and contribute to effective management for results and mitigation of risks.

- Describe the project?s exit / sustainability strategy and related handover mechanism as appropriate.

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[2] Examples include the Amazon Region Protected Areas Program, the Action Plan for the Prevention and Control of Deforestation in the Legal Amazon (PPCDAm), the Terra Legal Program, the National Landscape Connectivity Program (CONECTA), the National Policy for Territorial and Environmental Management of Indigenous Land (PNGATI), the National Water Resources Policy, among others.

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[5] http://hdr.undp.org/en/countries/profiles/BRA

[6] https://www.internationalpropertyrightsindex.org/

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[12] ISA, 2021b

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[16] According to the annual PRODES report by INPE, approximately 18,000 square kilometers were lost in 2000 compared to almost 7,000 in 2017.

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1b. Project Map and Coordinates

Please provide geo-referenced information and map where the project interventions will take place.

Figure 1. Cities, protected and non-protected areas directly impacted by the project (see Figure 2 for detail of non-protected areas impacted by the project).

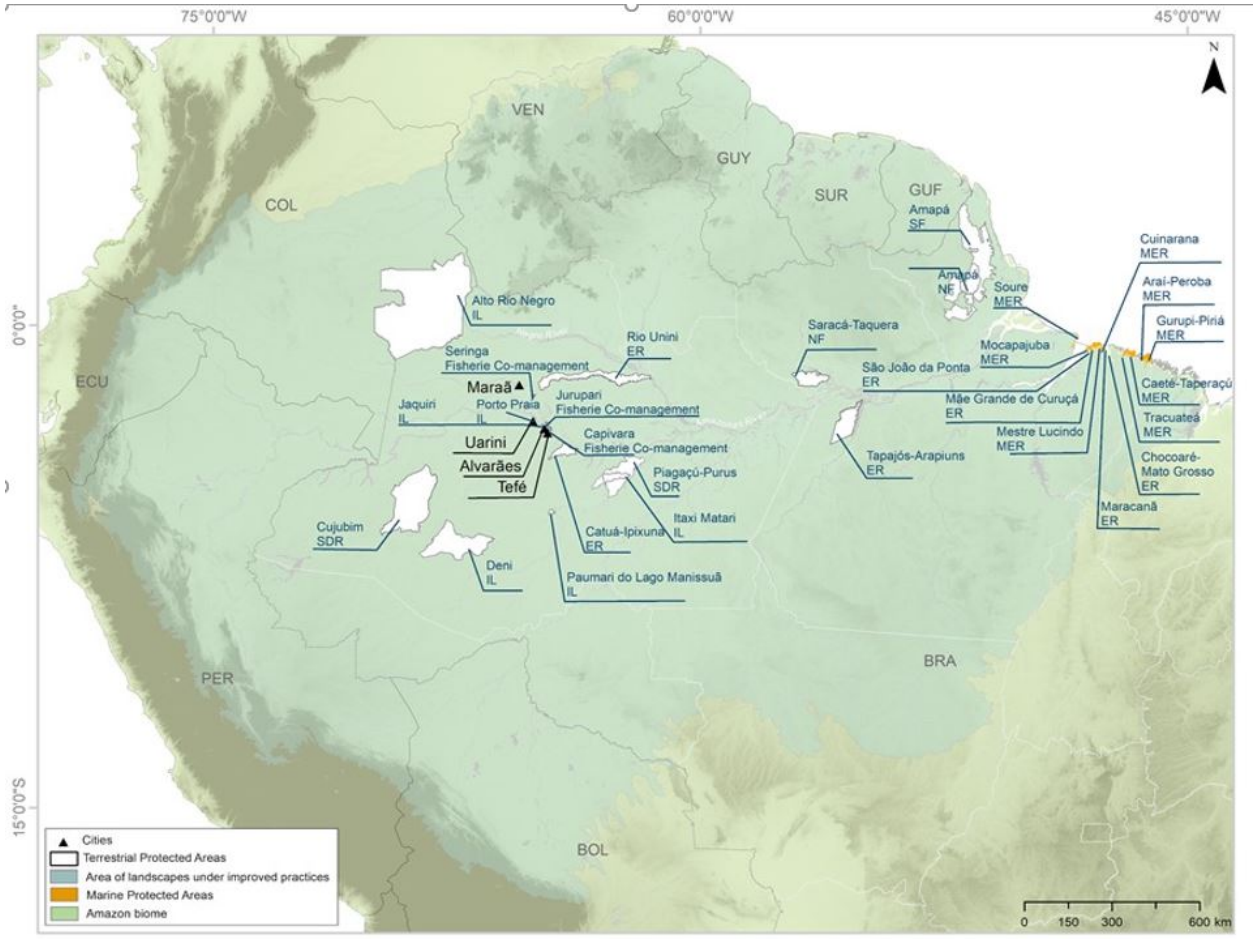


Figure 2. Zoomed view of cities, protected and non-protected areas directly impacted by the project in Amazonas State, Central Amazon, Brazil.

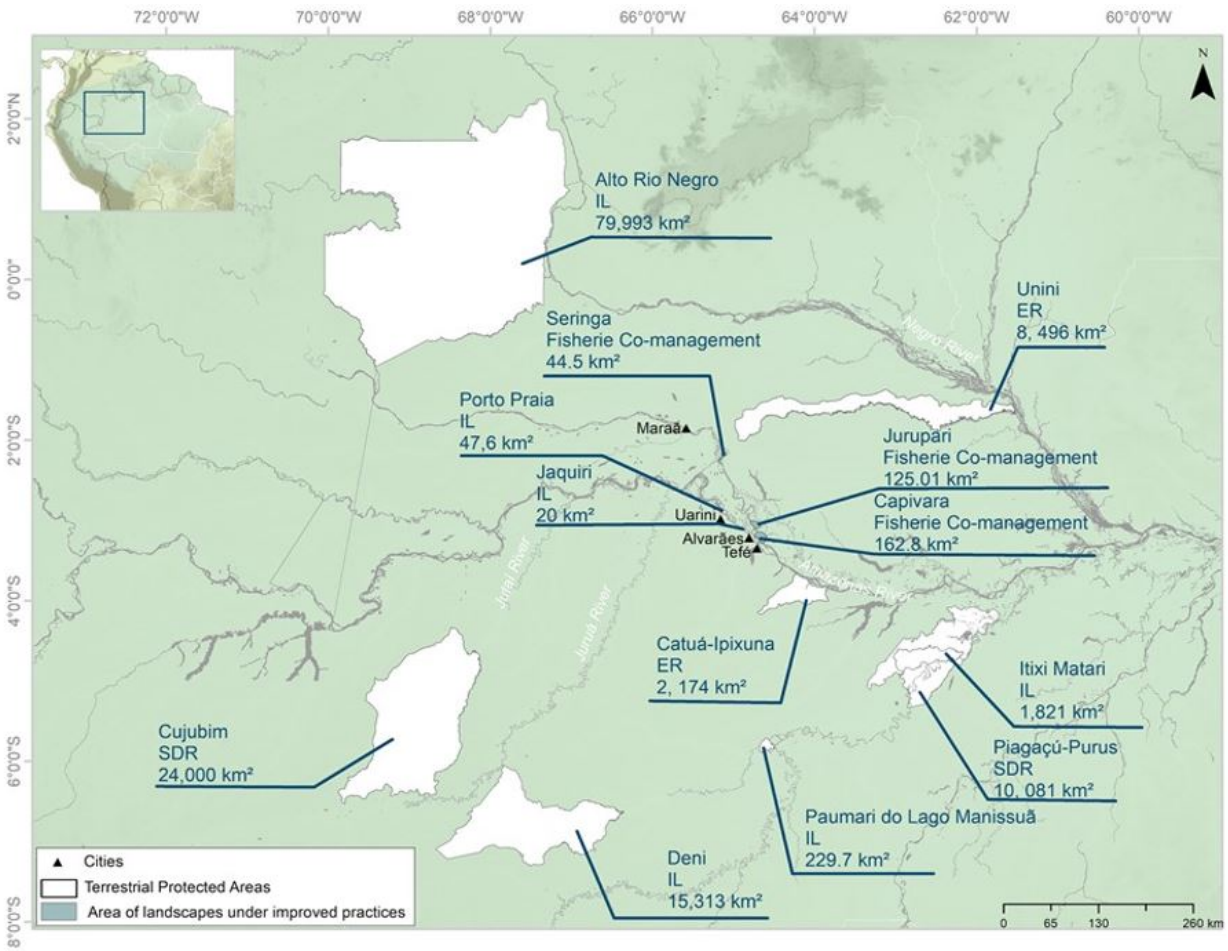


Figure 3. Zoomed view of terrestrial and marine protected areas impacted by the project in the coast of Par? State, Brazil.

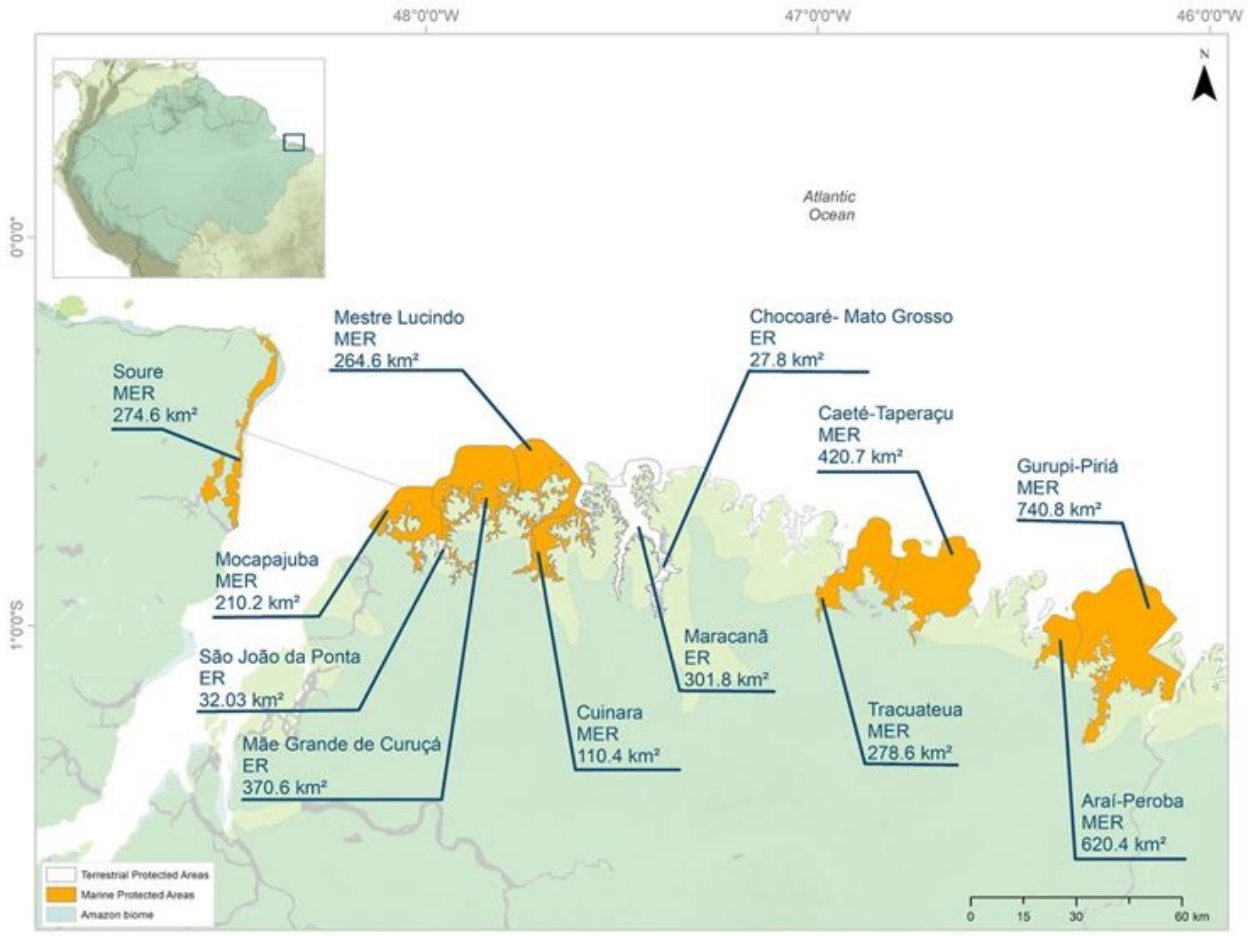
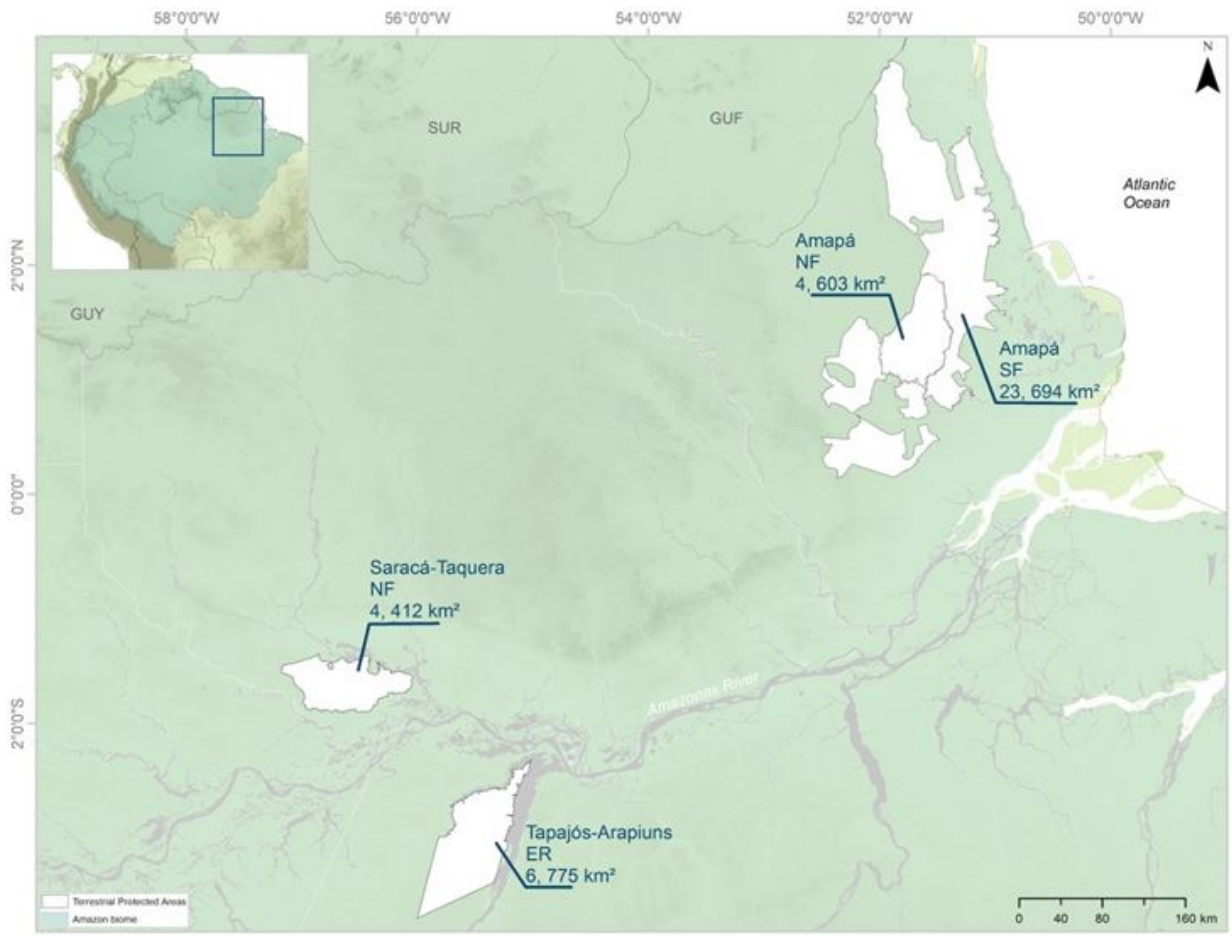


Figure 4. Zoomed view of terrestrial protected areas impacted by the project in Central Par? and Amap? States, Brazil.



1c. Child Project?

If this is a child project under a program, describe how the components contribute to the overall program impact.

Not applicable

2. Stakeholders

Select the stakeholders that have participated in consultations during the project identification phase:

Civil Society Organizations Yes

Indigenous Peoples and Local Communities Yes

Private Sector Entities

If none of the above, please explain why:

Please provide the Stakeholder Engagement Plan or equivalent assessment.

1. Please refer the project's stakeholder engagement plan and the indigenous people?s plan uploaded as separate documents in the GEF Portal for full details on the engagement process during participation and the proposed means of engagement during project implementation.

2. Stakeholder engagement was robust despite limitations stemming from the COVID-19 pandemic. Stakeholder consultations were carried out through individual online interviews, focus group discussions and through participatory virtual workshops to gather insights on the capacities to drive project actions and achieve the implementation of sustainable management programs for natural resources in the territories covered by the project. These actions included the application of participatory methods and stakeholder engagement reviews at different levels: from local to national. The results will serve as the basis for continuously engaging, enabling and empowering stakeholders during the project implementation phase.

3. The Inception Workshop was organized by FAO and Mamirau? Sustainable Development Institute through online meetings, and took place on the afternoon of the 2nd and the entire day of the 3rd of August of 2021. The meeting had 137 registered participants, bringing together 10 groups and community-based organizations of users and residents of Conservation Units, six grass-roots organizations of Indigenous Lands, three collectives from areas of Sustainable Productive Territories, five representatives of academic entities, 22 government representations in different levels of governance (federal, state and municipal), six representatives of civil society, and four of the private sector. A participatory stakeholder consultation workshop was held concurrently with the Inception Workshop on August 3, 2021, with the participation of 28 stakeholders representing the following organizations and entities: seven representatives from government representations at different levels of governance (federal, state and municipal), 15 groups and community-based organizations of users and residents of Conservation Units, two stakeholders from academic entities, two representatives from civil society and two from the private sector.

4. Meetings with FAO representatives were held to define the project design. They participated in the Inception Workshop and several meetings with PPG members. Decentralized PPG teams engaged 66 stakeholders (described in Stakeholder Engagement Plan), especially from bilateral meetings held from March and July 2021 (first engagement cycle) and August and September 2021 (second engagement cycle). Of the total number of interested parties, 54 (81.8%) attended the Inception Workshop. Other meetings between the PPG and FAO teams reinforced the need for a continuous engagement plan for stakeholders not present at this event, especially those government parties.

a. Stakeholder Mapping and means of engagement during implementation

Stakeholder	Mandate	Project Role

Federal Government		
Ministry of Economy (ME)	Ministry of the Brazilian Federal Government	Integrates actions related to Finance, Planning, Development and Management of Industry, Commerce, External Relations and Employment. Has a key strategy focused on reducing carbon emissions based on Green Economy.
Ministry of Science, Technology, and Innovations (MCTI)	Ministry of the Brazilian Federal Government. Responsible for formulating and implementing the National Science and Technology Policy.	Participates in monitoring the activities of the Mamirau? Institute in line with the priorities established in Ordinance n?. 1,122, of March 19, 2020.
Brazilian Institute of the Environment and Renewable Natural Resources (IBAMA)	Federal agency linked to the Ministry of the Environment. It is the executive body responsible for implementing the National Environmental Policy. It develops various activities for the preservation and conservation of natural heritage, exercising control and inspection over the use of natural resources.	Evaluates and authorizes requests for management and quotas of biodiversity products. Actively participates in monitoring the pirarucu and caiman management.
Chico Mendes Institute for Biodiversity Conservation (ICMBio)	Autarchy under a special regime linked to the Ministry of Environment and integrated to the National Environment System. It is responsible for managing and monitoring the Federal Protected Areas. It promotes and executes programs for research, protection, preservation, and conservation of biodiversity.	Approves and supports activities in Federal Protected Areas. Participates in consultations with local communities and in the conception, validation, design, and monitoring of the project. Evaluates Management Plans; authorizes quotas for biodiversity products and manages the activity's control mechanisms. Actively participates in monitoring the management of pirarucu and alligator.
National Indian Foundation (FUNAI)	Official indigenist organ of the Brazilian State. Coordinates and executes the Federal Government's indigenous policies, protecting and promoting the rights of indigenous peoples.	Approves and supports activities in Indigenous Lands. Participates in consultations with indigenous populations and in the conception, validation, design, and monitoring of the project.
Brazil?s Navy	Official organ related to marine and coastal national waters, as well as continental waters and flooded environments.	Regulates and enforce activities on national waters. Participates as licensing management infrastructures based on flooded forests and its surroundings.

Ministry of Agriculture, Livestock and Supply (MAPA)	Official national organ related to regulation and management of land conversion and management of agricultural practices, including those of small-medium farmers.	Regulates and enforce activities on national rural territories. Participates as licensing management projects related to food production. More recently, it started to work on the regulation and management of control mechanisms related to fisheries resources.
State and Local Government		
State Secretariat of Environmental of Amazonas (SEMA/AM)	State agency responsible for the environmental system. It is responsible for monitoring, managing, and conserving natural resources. It is responsible for creating and managing the State Protected Areas.	Approves and supports activities in State Protected Areas. Participates in consultations with local communities and in the conception, validation, design, and monitoring of the project.
State Secretariat of Environmental of Amap? (SEMA/AP)	State agency responsible for the environmental system. It is responsible for monitoring, managing, and conserving natural resources. It is responsible for creating and managing the State Protected Areas.	Approves and supports activities in State Forest of Amap?. Participates in consultations with local communities and in the conception, validation, design, and monitoring of the project.
Amazon Environmental Protection Institute (IPAAM)	Agency linked to the State Secretariat for the Environment of Amazonas. It is responsible for environmental control, through licensing, inspection, environmental monitoring, and environmental education actions.	They inspect areas that carry out reduced impact forestry and issue a license, authorizing annual extraction. Participates in monitoring management plans. In addition, participates in steering committee meetings and other key stakeholder meetings.
Institute for Agricultural Development of the State of Amazonas (IDAM)	State autarchy that supervises, coordinates, and executes agrarian policy. Provides technical assistance services to family farmers and rural producers in the State of Amazonas. It carries out educational and participatory processes to ensure sustainability, citizenship, and improved quality of life.	Advice for natural resources management, environmental monitoring, and training of rural producers.
Amazonas State Agricultural and Forestry Defense Agency (ADAF)	State autarchy that supervises, coordinates, and enforce the biodiversity use policy. Provides technical assistance services as well regulates biodiversity use.	Participates in regulating management infrastructures. In addition, participates in steering committee meetings and other key stakeholder meetings.

Department of Agricultural Development and Fishery of the State of Par? (SEDAP)	State autarchy, endowed with legal personality under public law, related to regulation and enforcement of fisheries and food production in Par? State.	Approves and supports for all activities related to swamp ghost crab management in the state of Par?. Participates in consultations with local populations and in the conception, validation, design, and monitoring of the project. Provides important technical information for the project.
Institute for Forestry and Biodiversity Development of the State of Par? (IDEFLOR-Bio)	State autarchy that supervises, coordinates, and executes environmental policy. Provides technical assistance services to family farmers and rural producers in the State of Par?.	Co-executing agency for activities related to biodiversity management in the state of Par?. It participates in consultations with local populations and in the conception, validation, design, and monitoring of the project based on technical advice.
Amazon Sustainable Development Agency (ADS)	State agency that catalyzes negotiations between family farmers, rural producers, fishermen, extractives and their organizations (associations and cooperatives), entrepreneurs in the primary sector (agribusiness, etc.), and private and government consumer markets. It enables commercial interaction between the rural productive sector and the consumer market.	It develops actions to make the commercialization of family farming products viable.
Amazonas State Health Surveillance Foundation - FVS/AM	State agency responsible for regulating and monitoring ecosystem and public health in Amazonas.	Participates in activities related to licensing socio-biodiversity products.
Tef? City Hall, Municipal Secretariat of Production and Supply of Tef? (SEMPA)	Municipal agency that implements and executes agricultural production policies. It carries out technical assistance activities and local capacity building.	Advice for natural resources management, environmental monitoring, and training of rural producers.
International Organizations		
Global Environment Facility (GEF)	International cooperation mechanism with the purpose of providing additional resources to countries through environmental projects. It invests in and supports the implementation of international environmental conventions, including on biodiversity, climate change, chemicals, and desertification.	Donor of the project's financial resources.

Food and Agriculture Organization (FAO)	International agency of the United Nations. It leads efforts to eradicate hunger and fight poverty. Promotes agricultural development, food security, environmental issues and access to essential foods for a healthy life	GEF Implementing Agency. Supports implementation and technical rollback.
Academia		
Federal University of Par? (UFPA); Amazonian Institute of Family Agriculture; Institute of Technology.	It is a Brazilian public higher education institution, located in Bel?m, capital of the State of Par?. It is a federal agency linked to the Ministry of Education.	Participates as partners in the articulation and execution of training for the implementation of the agroecosystems protocol; aspects of dimensioning and installation of solar energy technology to productive units and adaptation of electric engines to Amazonian canoes; and co-executing agency of all activities related to swamp ghost crab management in the state of Par?.
Federal Fluminense University (UFF)	It is a Brazilian public higher education institution, located in Rio de Janeiro State. It is a federal agency linked to the Ministry of Education.	Participates as partners in the articulation and execution of training and development of social technologies. Supports research on the quality of pirarucu meat managed by management organizations participating in the project.
Institute of Scientific and Technological Research of Amap? State (IEPA)	Estate?s public higher education located in the Macap? (Amap??s capital city)	Participates as partners in the articulation and execution of training for the implementation of management protocols, and co-executing agency of all activities related to forestry management.
Brazilian Agricultural Research Corporation - EMBRAPA Amap?	Research company linked to the Ministry of Agriculture, Livestock and Supply of Brazil. Located in the Macap? (Amap??s capital city)	Participates as partners in the articulation and execution of training for the implementation of management protocol, and co-executing agency of all activities related to forestry management.
Federal Institute of Par? (IFPA)	It is an institution of basic, professional, higher, multi-curricular education. It is located in Bragan?a/PA, which will help decentralize the activities of the project.	Participates as partners in the articulation and execution of training for the implementation of management protocols, and co-executing agency of all activities related to swamp ghost crab management in the state of Par?

Federal Institute of Amazonas (IFAM)	It is an institution of basic, professional, higher, multi-curricular education. It is in Manaus, in the capital of the State of Amazonas, and in other small towns in the interior of that state.	Participates as partners in the articulation and execution of training for the implementation of the agroecosystems protocol.
National Institute for Amazon Research (INPA)	The National Institute for Amazon Research (INPA), a research unit linked to the Ministry of Science, Technology and Innovations (MCTI) has the mission to eradicate and disseminate knowledge and technologies and to train human resources for the development of the Amazon.	Methodological support and in the execution of activities related to social entrepreneurship through INPA's incubator.
Civil society organization		
Mamirau? Sustainable Development Institute (IDSM)	It is a Social Organization and a scientific research unit promoted and supervised by the Ministry of Science, Technology, and Innovation. It carries out its activities through research, natural resource management and social development programs.	Entity executing the project. Leads the project from conception, validation, and design to implementation. It is the point of interaction between project participants and is responsible for the training methodology, meetings, and model production units.
Community Organizations	They are organizations representing local populations (traditional populations, such as riverine, fishermen, indigenous people, others). A list of those engaged institutions are provided on the table in Annex I2.	They are beneficiaries, contribute with traditional knowledge and actively participate in the design, validation, and monitoring of the project.
IMAZON (Institute of People and the Environment of the Amazon)	Imazon is a Brazilian research institution to promote conservation and sustainable development in the Amazon.	IMAZON will cooperate with its funds and resources of other projects to create vulnerability maps caused in the next 20-30 years by climate change
Local Fishermen's Organizations	These are organizations that bring together rights and duties of local fishermen and work in the fisheries resources production. A list of those engaged institutions are provided on the table in Annex I2.	They work to improve fishery resources production and manage productive areas. They are institutions representing the rights of the fishing class. They work in articulation with MAPA to obtain the professional registration of Fishermen.
Local Forest Producer Organizations	These are organizations that bring together rights and duties of local forest producers and work in the forest resources production. A list of those engaged institutions are provided on the table in Annex I2.	They work to improve timber resources production.

Deliberative Councils of Protected Areas	Main instrument of relationship between Protected Areas and society. It is formed by different actors and institutions and promotes the co-management of these units. It is the highest authority for decision-making regarding Protected Areas.	They authorize the execution of project activities in their territories or areas of expertise. They assist in action planning and are direct beneficiaries of some project actions.
Association-Mothers of Conservation Units	The parent associations provide political, social and productive representation of traditional populations, guaranteeing the right to use protected areas and access to natural resources for residents and users of conservation units. They are responsible for promoting the sustainable development agenda through their power to articulate and influence society. All organizations are managed by traditional populations.	They authorize the execution of project activities in their territories or areas of expertise. They assist in action planning and are direct beneficiaries of some project actions.
Non-governmental organizations (NGO) and similar institutions	Institutions that have historically operated in the Amazon and in the territories covered by the project. They are institutions not linked to the government. They promote social inclusion, biodiversity conservation, improved sustainable production of natural resources, territorial management, and sustainable development. A list of those engaged institutions are provided on the table in Annex I2.	Potential institutions for actions to improve production chains. They provide technical assistance for running community businesses and enable fair market access for sustainably harvested products.
Amazonian Forum of Geographical Indication and Collective Trademarks	The Amazonian Forum of Geographical Indications and Collective Brands has as its mission to promote Geographical Indication (GI) and Collective Brands stimulating the differentiation, innovation, competitiveness and regional development in a sustainable way	Support in the articulations for market access, execution of promotional events, and articulation of political representation with the organizations that represent the Geographical Indication of Pirarucu (FEMAPAM) and of Flour (APRU).
Amazon Network of Innovation and Entrepreneurship (RAMI)	Headquartered in Manaus, we operate in other states of the Northern region of the country. Through meetings, workshops, roundtables and lectures, we disseminate the importance of innovation and entrepreneurship for the region. Through mentoring and partner incubators, we create a favorable environment for companies to develop.	Support and partnership to carry out activities related to social entrepreneurship and innovation. It will also liaise with possible partners in the private sector to support market access for the participating productive collectives.

Private Sector		
Companies	Companies that aim to promote the sale of biodiversity products from sustainable management actions. Important link between local production and the market. A list of institutions engaged is provided on the table in Annex I2.	Establishes the relationship between local communities and the market. It favors commerce of biodiversity products and strengthens the production chain.
Frigor?ficos	They are private enterprises that carry out or finance the purchase of fish and process the production, making it available to distributors.	It has a commercial relationship established with the fish management organizations involved in this project.
Terramazonia Super Plants	The purpose of the company is to promote the connection between the latent need for well-being, the biodiversity of the Amazon, and the economic sustainability of local producers by providing a quality product to the consumer.	The company will buy inputs from family agriculture from the participating production collectives, and develop a project to improve the quality of the products that will be purchased.
Companies represented by the Manacapuru Wood and Furniture Association (APOMAM)	With headquarters in the center of the city of Manacapuru, in Amazonas. The Apomam has in its constitution the objective of organizing the primary sawmills and secondary sawmills (furniture and joinery), which make up a total of 59 small and medium-sized companies in Manacapuru.	APOMAM will act as a representative agent of the companies interested in acquiring managed and legal wood, being a link for this commercial exchange.

In addition, provide a summary on how stakeholders will be consulted in project execution, the means and timing of engagement, how information will be disseminated, and an explanation of any resource requirements throughout the project/program cycle to ensure proper and meaningful stakeholder engagement

Target Area	Interested party	Type of interested party*	Influence and interest of interested party**	Main role related project activities	Methodology used in consultation and date of consultation	Expected role during Project implementation
IPLCs/Productive territories						

Soure Marine Extractive Reserve; S?o Jo?o da Ponta Extractive Reserve; M?e Grande de Curu?? Extractive Reserve; Mocapajuba Marine Extractive Reserve; Cuinarana Marine Extractive Reserve; Master Lucindo Marine Extractive Reserve; Maracan? Marine Extractive Reserve; Chocoar?-Mato Grosso Extractive Reserve; Tracuateua Marine Extractive Reserve; Caet?-Tapera?u Marine Extractive Reserve; Ara?-Peroba Marine Extractive Reserve; Gurupi-Piri? Marine Extractive Reserve.	Associations of Marine Extractive Reserves in Par? (12 Associations)	I	P/DA	ID: beneficiary organization	Inception Workshop (2nd and 3rd of August 2021) Bilateral meetings in September, October and November. Sending information by email.	Beneficiary - Decides activities and receives training
Jaquiri IL	Mamirau? Ecotourism Helpers and Guides Association (AAGEMAM)	I	DA	Direct: Technical and logistical collaboration	Bilateral meeting (July 2021) and Inception Workshop (2nd and 3rd of August 2021)	Collaborate with the implementation of social technologies, welcome developers, and test and report on the technology.

Porto Praia IL	Association of Women of the Porto Praia Indigenous Territory (AMIPP)	I	DA	Indirect: Beneficiary organizatio n	Bilateral meeting (July 2021) and Inception Workshop (2nd and 3rd of August 2021)	Support for articulation and training for the strengthening of the group and management support.
	Indigenous Association of Porto Praia (AIPP)	I	DA	Key: represents the interests and actions of the territories	Bilateral meeting (July e novembro 2021) and Inception Workshop (2nd and 3rd of August 2021)	Support for articulation and training to strengthen the group and support for territorial and environmental management
Amap? National Forest Amap? State Forest	Association of Women Extractivists of Araguari - Sementes do Araguari/FLONA/FLO TA Amap?	I	P/DA	Direct: Beneficiary organizatio n	Bilateral meeting (July 2021) and Inception Workshop (2nd and 3rd of August 2021)	Articulation support and exchange groups and management support.
Rural area of Tef? - Productive Territories	Association of Cassava Flour Producers of the Uarini Region (APRU)	I	ID	Direct: Beneficiary organizatio n	Bilateral meeting (July 2021) and Inception Workshop (2nd and 3rd of August 2021)	Beneficiary ? Collaborate with the implementatio n of social technologies. Support for articulation and mobilization of the Producers group, strengthening the group and support de gest?o.

Deni IL	Association of the Deni People of the Xeru? River (ASPODEX) Deni Indigenous Land	C	ID	Key: represents the interests and actions of the territories	Two bilateral meetings (18 June and 23 July 2021) Participated in the Inception Workshop (August 2nd and 3rd, 2021)	Support for articulation, monitoring of activities and exchange groups and management support.
Itixi-Mitari IL	Association of the Apurin? Indigenous People of the Itixi-Mitari Indigenous Land (APIATI)	C	ID	Indirect: Beneficiary organizatio n	Two bilateral meetings (February 24 and April 1, 2021) Participated in the Inception Workshop (August 2nd and 3rd, 2021)	Support for articulation, monitoring of students in loco and exchange groups and management support.
Deni IL (setor Xeru?)	Association of the Takuna People of the Xeru? River (ASPOTAX)	C	ID	Key: represents the interests and actions of the territories	Two bilateral meetings (18 June and 23 July 2021) Participated in the Inception Workshop (August 2nd and 3rd, 2021)	Support for articulation, monitoring of students in loco and exchange groups and management support.
Piaga?u-Purus Sustainable Development Reserve	Association of Residents and Surroundings of RDS Piaga?u Purus (AMEPP)	I	DA/ID	Indirect: Beneficiary organizatio n	Bilateral meetings. Participated in the Inception Workshop (August 2nd and 3rd, 2021)	Supporting articulation and carrying out activities for the preparation of the alligator and lumber management plan.

Sarac?-Taquera National Forest	Association of Users of the Sarac?-Taquera National Forest	C	ID	Key: represents the interests and actions of the territories	Two bilateral meetings (18 June and 23 July 2021)	Support for articulation, monitoring of students in loco and exchange groups and management support.
Rural area of Tef? - Productive Territories	Mother Margarida Maria de Alacoque Mothers Club /Tef?	I	DA	Direct: beneficiary organizatio n	Meetings in July 2021 Participated in the Inception Workshop (2nd and 3rd August 2021)	Beneficiary of the pulp processing structure (Multifunction al kitchen). Collaborate with the implementatio n of social technologies, support for articulation and mobilization for the strengthening of the group and management support.
Productive Territories Jurupari Grande Lakes Complex	Management Collective - Jurupari Grande Fishing Agreement	I	P/DA	Indirect: mapping the production chain	Two bilateral meetings (April 8 and July 5, 2021) Participated in the Inception Workshop (August 2nd and 3rd, 2021)	Beneficiary ? Floating Model for Fish Reception and Pre-Processing

Productive Territories Paran? do Jacar? (Capivara)Lakes Complex	Management Collective - Paran? do Jacar? Fishing Agreement	I	P/DA	Indirect: mapping the production chain	A bilateral meeting (April 9, 2021) Participated in the Inception Workshop (August 2nd and 3rd, 2021)	Beneficiary ? Floating Model for Fish Reception and Pre-Processing
Productive Territories Seringa (Joacaca) Lakes Complex	Management Collective - Syringa/Joacaca Complex Fishing Agreement	I	P/DA	Indirect: mapping the production chain	A bilateral meeting (April 14, 2021)	Beneficiary ? Floating Model for Fish Reception and Pre-Processing
Complexo de Lagos M?dio e Baixo Rio Cope?	Management Collective - Complex of Middle Lakes and Lower Cope? River	I	DA	Indirect: Beneficiary organizatio n	A bilateral meeting (May 2021)	Support for articulation, monitoring of students in loco and exchange groups and management support.
Complexo de Lagos Rio Cope? - Setores A e B	Management Collective - Lagos Complex Rio Cope? - Sectors A and B	I	DA	Indirect: Beneficiary organizatio n	A bilateral meeting (May 2021)	Support for articulation, monitoring of students in loco and exchange groups and management support.
Productive Territories Jurupari Grande Lakes Complex	Z-32 Fishermen's Colony of Mara?	C	ID	Key: represents the interests and actions of managed territories	A bilateral meeting (April 5, 2021)	Articulation and mobilization of members involved in management projects

Jaquiri IL	Residents of the Jaquiri Indigenous Land	C/I	DA	Direct: Beneficiary territory	O three bilateral meetings (July, August and October) Participated in the Inception Workshop (August 2nd and 3rd, 2021)	Beneficiary territory with training courses, long- and medium-term courses and elaboration and implementation of the Indigenous Tourism Protocol
Catu?-Ipixuna Extractive Reserve	Agroextractive Association of RESEX Catu?-Ipixuna (AACI)	I	DA	Indirect: Beneficiary organization	organization Two meetings (November 2020)	Support for articulation and exchange groups and management support.

Soure Marine Extractive Reserve; S?o Jo?o da Ponta Extractive Reserve; M?e Grande de Curu?? Extractive Reserve; Mocapajuba Marine Extractive Reserve; Cuinarana Marine Extractive Reserve; Master Lucindo Marine Extractive Reserve; Maracan? Marine Extractive Reserve; Chocoar?-Mato Extractive Reserve Grosso; Tracuateua Marine Extractive Reserve; Caet?-Tapera?u Marine Extractive Reserve; Ara?-Peroba Marine Extractive Reserve; Gurupi-Piri? Marine Extractive Reserve.	National Commission for the Strengthening of Coastal and Marine Extractive Reserves (CONFREM)	C	ID	Key: represents interests and actions in 12 protected territories	Participated in the Inception Workshop (2nd and 3rd August 2021)	Coordination of managers and facilitation of project activities in situ
Tapaj?s-Arapiuns Extractive Reserve Tapaj?s Arapiuns Extractive	Reserve Indigenous Council (CITA))	C	DA	Key represents the interests and actions of indigenous territories in the UC	Meetings held between June and July 2021	Articulation of local actors

Alto Rio Negro IL Jaquiri IL	Federation of Indigenous Organizations of Rio Negro (FOIRN)	C	ID	Key: represents the interests and actions of IL	Three bilateral meetings (4 April, 22 July and 16 September 2021) Participated in the Inception Workshop (August 2nd and 3rd, 2021)	Articulation support and exchange groups and management support.
Syringe Complex (Joacaca) Lagos Complex of Paran? do Jacar? (Capivara Jurupari Grande Lakes Complex	Federation of Mamirau? Area Pirarucu Managers and Managers (FEMAPAM)	C	ID	Key: represents the interests and actions of managed territories	Duas reuni?es bilaterais (10 de Abril e 30 de Junho de 2021)	Mapping of the production chain
Academia						
Amap? National Forest Amap? State Forest	Institute for Scientific and Technological Research of the State of Amap? (IEPA)	II	ID	Indirect: Technical assistance	Two bilateral meetings (12 and 16 July 2021) Participated in the Inception Workshop (August 2nd and 3rd, 2021)	Articula??o de manejadores, facilita??o das atividades do projeto in situ, capta??o de pessoal
	National Institute for Amazon Research (INPA)	II	II	Indirect: Technical assistance	Bilateral meetings in November. Phone contacts and Whatsapp	Facilitating project activities in situ and attracting staff

Amap? National Forest Amap? State Forest	EMBRAPA AMAP?	II	ID	Indirect: Technical assistance	A Bilateral Meeting (September 23, 2021)	Coordination of managers, facilitation of project activities in situ, recruitment of personnel
Productive Territories Rural Area of Tef?	Federal Institute of Education of Amazonas (IFAM/Tef?)	C/I	ID	Direct: Technical assistance and beneficiary organizatio n	One remote meeting and one in person in the days before the event (held in July 2021)	Coordination of managers, facilitation of project activities in situ. Technical support Beneficiaries of multiplier courses
Tracuateua Marine Extractive Reserve; Caet?-Tapera?u Marine Extractive Reserve; Ara?-Peroba Marine Extractive Reserve; Gurupi-Piri? Marine Extractive Reserve	Federal Institute of Par? (IFPA/Bragan?a and Castanhal)	ID	ID	Indirect: Technical advice	Bilateral meetings (October and November) Participated in the Inception Workshop (August 2nd and 3rd, 2021)	Coordination of managers, facilitation of project activities in situ, recruitment of personnel
Reserva Extrativista Tracuateua Marine Reserve; Caet?-Tapera?u Marine Extractive Reserve; Ara?-Peroba Marine Extractive Reserve; Gurupi-Piri? Marine Extractive Reserve	Federal University of Par? (UFPA/Bragan?a) - Institute of Coastal Studies - Research Group on Coastal Socioenvironmental Studies	ID	ID	Indirect: Technical assistance	Bilateral meetings (October and November) Participated in the Inception Workshop (August 2nd and 3rd, 2021)	Coordination of managers, facilitation of project activities in situ, recruitment of personnel

Jaquir IL	Federal University of Par? (UFPA/Bel?m) - Group for the Study and Development of Energy Alternatives (Gedae)	C	ID	Key: Social technology developme nt	A bilateral meeting (April 2021) Participated in the Inception Workshop (August 2nd and 3rd, 2021)	Technical support
Productive Territories Productive Territories Syringe Complex (Joacaca) Lagos Complex of Paran? do Jacar? (Capivara Jurupari Grande Lakes Complex	Fluminense Federal University (UFF) - Fish Inspection and Technology Laboratory / Physical-Chemical Food Control Laboratory	II	II	Indirect: Technical assistance	Participated in the Inception Workshop (August 2nd and 3rd, 2021)	Technical support
Government Agencies and Entities						
Alto Rio Negro IL	Local Technical Coordination of FUNAI Alto Rio Negro	II	IA	Key: manageme nt of protected territories	Consultatio n and Participated in the Inception Workshop (August 2nd and 3rd, 2021)	Support in the articulation and facilitation of in situ project activities

Deni Indigenous Land; Itixi-Mitari Indigenous Land; Paumari Indigenous Land of Lake Manissu?; Caititu Indigenous Land;	Local Technical Coordination of FUNAI Medio Purus and Manaus	II	IA	Key: management of protected territories	Consultation Dialogues that took place between April and July 2021 Participated in the Inception Workshop (August 2nd and 3rd, 2021) (2 e 3 de Agosto de 2021)	Support in the articulation and facilitation of in situ project activities
Jaquiri Porto Praia Ils	Local Technical Coordination of FUNAI M?dio Solim?es	II	P	Key: management of protected territories	Consultation Dialogues that took place between April and July 2021 01 METT workshop Participated in the Inception Workshop (August 2nd and 3rd, 2021) (2 e 3 de Agosto de 2021)	Support in the articulation and facilitation of in situ project activities
Tapaj?s-Arapiuns Extractive Reserve	ICMBio Integrated Management Nucleus of Santar?m	C	P	Key: management of protected territories	01 METT workshop	Obtaining authorizations, coordinating managers and facilitating project activities in situ

Rio Unini Extractive Reserve	ICMBio Integrated Management Nucleus Novo Air?o	C	P	Key: management of protected territories	01 METT workshop	Obtaining authorizations, coordinating managers and facilitating project activities in situ
Sarac?-Taquera National Forest	ICMBio Trumpets Integrated Management Nucleus	C	P	Key: management of protected territories	Emails. Ongoing consultation and engagement in October and November. Two METT Workshops	Obtaining authorizations, coordinating managers and facilitating project activities in situ
Amap? National Forest	ICMBio Integrated Management Center Amap? Central	C	P	Key: management of protected territories	Ongoing consultation and engagement in the months of August, October and November. Two METT Workshops Participated in the Inception	Obtaining authorizations, coordinating managers and facilitating project activities in situ
Soure Marine Extractive Reserve	ICMBio Soure Integrated Management Nucleus	C	P	Key: management of protected territories	E-mails Two METT Workshops Bilateral meetings (October and November)	Obtaining authorizations, coordinating managers and facilitating project activities in situ

S?o Jo?o da Ponta Extractive Reserve; M?e Grande de Curu?? Extractive Reserve; Mocapajuba Marine Extractive Reserve; Cuinarana Marine Extractive Reserve; Master Lucindo Marine Extractive Reserve; Maracan? Marine Extractive Reserve; Chocoar?-Mato Grosso Extractive Reserve	ICMBio Integrated Management Nucleus Salgado Paraense	C	P	Key: management of protected territories	E-mails Two METT Workshops Bilateral meetings (October and November)	Obtaining authorizations, coordinating managers and facilitating project activities in situ
Tracuateua Marine Extractive Reserve; Caet?-Tapera?u Marine Extractive Reserve; Ara?-Peroba Marine Extractive Reserve; Gurupi-Piri? Marine Extractive Reserve	ICMBio Bragan?a Integrated Management Nucleus	C	P	Key: management of protected territories	E-mails Participated in the Inception Workshop (August 2nd and 3rd, 2021) Two METT Workshops Bilateral meetings (October and November)	Obtaining authorizations, coordinating managers and facilitating project activities in situ

Productive Territories Rural Area of Tef? Piaga?u-Purus Sustainable Development Reserve	Institute for Sustainable Agricultural and Forestry Development of the State of Amazonas (IDAM)/Tef? and Uarini	C/I	ID	Key: regulation of management processes and participation in the production of the protocol	Two bilateral meetings (August 26 and September 9, 2021) Participated in the Inception Workshop (August 2nd and 3rd, 2021)	Obtaining authorizations, articulating and facilitating project activities in situ and ex situ. Future support for technical assistance activities after project completion. Beneficiaries of the multiplier courses and technical support in the production of the agroecological systems management protocol
Productive Territories Jurupari Grande Lakes Complex Lagos Complex of Paran? do Jacar? (Capivara) Syringe Complex (Joacaca)	Amazonas State Agricultural and Forestry Defense Agency (ADAF)	C	ID	Key: regulation of management processes and social technologies	Ongoing consultation and engagement. Participated in the Inception Workshop (August 2nd and 3rd, 2021)	Obtaining authorizations, coordinating managers and facilitating project activities in situ

Productive Territories Rural area of Tef?	Sustainable Development Agency (ADS)	C/I	ID	Key: regulation of management processes and social technologies and participation in the production of the protocol	Ongoing consultation and engagement. Participated in the Inception Workshop (August 2nd and 3rd, 2021)	Obtaining authorizations, articulating and facilitating project activities in situ and ex situ. Future support for technical assistance activities after project completion. Beneficiaries of the multiplier courses and technical support in the production of the agroecological systems management protocol

Algodoal-Maiandeua Environmental Protection Area; Soure Marine Extractive Reserve; S?o Jo?o da Ponta Extractive Reserve; M?e Grande de Curu?? Extractive Reserve; Mocapajuba Marine Extractive Reserve; Cuinarana Marine Extractive Reserve; Master Lucindo Marine Extractive Reserve; Maracan? Marine Extractive Reserve; Chocoar?-Mato Grosso Extractive Reserve; Tracuateua Marine Extractive Reserve; Caet?-Tapera?u Marine Extractive Reserve; Ara?-Peroba Marine Extractive Reserve; Gurupi-Piri? Marine Extractive Reserve.	Institute for Forestry and Biodiversity Development of the State of Par? (IDEFLOR-Bio)	C	ID	Key: regulation of management processes and social technologies	Ongoing consultation and engagement. Participated in the Inception Workshop (August 2nd and 3rd, 2021)	Obtaining authorizations, articulation of managers and community associations and facilitation of project activities in situ

Productive Territories Jurupari Grande Lakes Complex Lagos Complex of Paran? do Jacar? (Capivara) Syringe Complex (Joacaca)	Amazon Environmental Protection Institute (IPAAM)	C	ID	Key: regulation of management processes and social technologies	Participated in the Inception Workshop (August 2nd and 3rd, 2021)	Coordination of managers and facilitation of project activities in situ
Productive Territories	Amazonas State Health Surveillance Foundation - FVS/AM	C	ID	Key: regulation of management processes and social technologies	Ongoing consultation and engagement. Participated in the Inception Workshop (August 2nd and 3rd, 2021)	Obtaining permits and facilitating in situ and ex situ project activities.
Rural area of Tef?	MAPA/Superintend?ncia Federal de Agricultura no Par?	C	ID	Key: regulation of management processes and social technologies	Ongoing consultation and engagement. Participated in the Inception Workshop (August 2nd and 3rd, 2021)	Obtaining authorizations, coordinating managers and facilitating project activities in situ

Productive Territories Rural area of Tef?	Municipal Secretariat of Production and Supply of Tef? (SEMPA)	C/I	ID	Key: management of protected territories and regulation of management processes and participation in the production of the protocol	Ongoing consultation and engagement. Three face-to-face meetings in the days before the event (held in July 2021)	Technical support, articulation and facilitation of project activities in situ. Future support for technical assistance activities after project completion. Beneficiaries of the multiplier courses and technical support in the production of the agroecological systems management protocol

Algodoal-Maiandeua Environmental Protection Area; Soure Marine Extractive Reserve; S?o Jo?o da Ponta Extractive Reserve; M?e Grande de Curu?? Extractive Reserve; Mocapajuba Marine Extractive Reserve; Cuinarana Marine Extractive Reserve; Master Lucindo Marine Extractive Reserve; Maracan? Marine Extractive Reserve; Chocoar?-Mato Grosso Extractive Reserve; Tracuateua Marine Extractive Reserve; Caet?-Tapera?u Marine Extractive Reserve; Ara?-Peroba Marine Extractive Reserve; Gurupi-Piri? Marine Extractive Reserve.	State Secretariat for the Development of Agriculture and Fisheries of Par? (SEDAP)	C	ID	Key: regulation of management processes and social technologies	Ongoing consultation and engagement. Participated in Inception Workshop (2 e 3 de Agosto de 2021)	Obtaining authorizations, coordinating managers and facilitating project activities in situ

Amap? State Forest	Amap? State Secretariat for the Environment (SEMA)	C	P	Key: management of protected territories	Ongoing consultation and engagement. Two METT Workshops Participated in the Inception Workshop (August 2nd and 3rd, 2021)	Obtaining authorizations, coordinating managers and facilitating project activities in situ
Piaga?u-Purus Sustainable Development Reserve Catu?-Ipixuna Extractive Reserve Productive Territories: Complex of Lagos Jurupari Grande Lagos Complex of Paran? do Jacar? (Capivara) Syringe Complex (Joacaca)	State Secretariat for the Environment of Amazonas (SEMA)	C	P	Key: management of protected territories	Ongoing consultation and engagement. Three METT Workshops Participated in the Inception Workshop (August 2nd and 3rd, 2021)	Obtaining authorizations, articulating managers and stakeholders, and facilitating project activities in situ
	Executive Secretary for Science, Technology and Innovation at the State Secretariat for Economic Development, Science, Technology and Innovation of Amazonas (SEDECTI)	C	ID	Key: Facilitation of research and management processes	Ongoing consultation and engagement. Participated in the Inception Workshop (August 2nd and 3rd, 2021)	Obtaining authorizations, articulating managers and stakeholders, and facilitating ex situ project activities

Jaquiri Indigenous Land; Porto Praia Indigenous Land; Rio Negro Indigenous Land; Paumari Indigenous Land of Lake Manissu?; Caititu Indigenous Land; Itixi-Mitari Indigenous Land; Alto Rio Negro Indigenous Land; Deni Indigenous Land.	FUNAI/General Coordination for the Promotion of Ethnodevelopment, Headquarters Bras?lia	C	P	Key: management of protected territories	Ongoing consultation and engagement. Participated in the Inception Workshop (August 2nd and 3rd, 2021)	Support for the approval of the Tourism Visitation Plan at TI Jaquiri; articulations with to facilitate in situ and ex situ project activities. Support in articulation with regional and local Coordinations.
All Federal Conservation Units in Amap? and Par?.	Brazilian Institute for the Environment and Renewable Natural Resources (IBAMA/AM) - Biodiversity Center	C	P	Key: management of protected territories	Ongoing consultation and engagement.	Obtaining authorizations, articulating managers and stakeholders, and facilitating in situ and ex situ project activities
Complexo de Lagos Jurupari Grande Complexo de Lagos do Paran? do Jacar? (Capivara) Complexo de Seringa (Joacaca)	Marinha do Brasil	C	ID	Key: regulation of management processes and social technologies	Ongoing consultation and engagement.	Obtaining authorizations, articulating managers and stakeholders, and facilitating in situ and ex situ project activities
Productive Territories Rural area of Tef?	Ministry of Agriculture, Livestock and Supply (MAPA) - Federal Superintendence of Agriculture in Amazonas	C	ID	Key: regulation of management processes and social technologies	Ongoing consultation and engagement Participated in the Inception Workshop (August 2nd and 3rd, 2021)	Obtaining authorizations, articulating managers and stakeholders, and facilitating in situ and ex situ project activities

	Ministry of Agriculture, Livestock and Supply (MAPA) - Secretariat for Innovation, Rural Development and Irrigation and Secretariat for Family Agriculture and Cooperatives	C	ID	Key: regulation of management processes and social technologies	Ongoing consultation and engagement Participated in the Inception Workshop (August 2nd and	Obtaining authorizations, articulating managers and stakeholders, and facilitating in situ and ex situ project activities
All areas of the project	Minist?rio da Ci?ncia, Tecnlogia e Inova??es (MCTI)	C	P	Key: articulation and financing	Ongoing consultation and engagement Participated in the Inception Workshop (August 2nd and 3rd, 2021)	Articula??o com partes interessadas e capta??o financeira
All areas of the project	Ministry of Economy	C	P	Key: articulation and financing	Ongoing consultation and engagement Participated in the Inception Workshop (August 2nd and 3rd, 2021)	Articula??o com partes interessadas e capta??o financeira
Private sector						
	Association of Sawmills and Furniture Makers of Uarini (ASSEMOVE)	II	II	Indirect: Participates in the production chain	Ongoing consultation and engagement Participated in the Inception Workshop (August 2nd and 3rd, 2021)	Product flow

Piaga?u-Purus Sustainable Development Reserve	Association of the Wood and Furniture Center of Manacapuru (APOMAM)	I	DA	Direct: Participates in the production chain	Consulta e engajament o cont?nuos Participou do Inception Workshop (2 e 3 de Agosto de 2021)	Product flow
Piaga?u-Purus Sustainable Development Reserve	New Kaeru Leather-industry trade	II	II	Indirect: Influences the production chain	Participated in the Inception Workshop (August 2nd and 3rd, 2021)	Product flow
Productive Territories Rural area of Tef?	O SEMEAR Institute	II	DA	Indirect: Influences the production chain	Participated in the Inception Workshop (August 2nd and 3rd, 2021)	Raising awareness for the adoption of sustainable practices in their activities as representatives of a private company that works with conventional techniques
Productive Territories Rural area of Tef?	Brazilian Micro and Small Business Support Service (SEBRAE/Tef?)	C	ID	Indirect: Technical Assistance	Ongoing consultation and engagement Participated in the Inception Workshop (August 2nd and 3rd, 2021)	Technical support and articulation of interested parties
Productive Territories Rural area of Tef?	Terramazonia Super Plants	II	DA	Indireta: Influencia a cadeia produtiva	Bilateral meetings in November. Virtual contact. 2021)	Product flow

Soure Marine Extractive Reserve; S?o Jo?o da Ponta Extractive Reserve; M?e Grande de Curu?? Extractive Reserve; Mocapajuba Marine Extractive Reserve; Cuinarana Marine Extractive Reserve; Master Lucindo Marine Extractive Reserve; Maracan? Marine Extractive Reserve; Chocoar?-Mato Grosso Extractive Reserve; Tracuateua Marine Extractive Reserve; Caet?-Tapera?u Marine Extractive Reserve; Ara?-Peroba Marine Extractive Reserve; Gurupi-Piri? Marine Extractive Reserve.	Lawyers Palheta	ID	ID	Indirect: Accounting and legal advice	Two bilateral meetings (July 1 and 8, 2021)	Articulation of extractivists and financial planning
Civil society						

Deni IL	Indigenous Missionary Council (CIMI)	C	ID	Key: represents the interests and actions of managed territories	Three bilateral meetings (24 February, 1 April and 5 April, and in July 2021)	Technical support and articulation of interested parties
Sarac?-Taquera National Forest	Instituto Igarap? Nhamund?	ID	ID	Indirect: Advice and technical support	participated in the Inception Workshop (August 2nd and 3rd, 2021)	Technical support and articulation of interested parties
Piaga?u-Purus Sustainable Development Reserve	Institute for Indigenous Research and Training (IEPE)	II	ID	Indirect: Advice and technical support	A bilateral meeting (August 23, 2021) recruitment of personnel	Coordination of managers, facilitation of project activities in situ, recruitment of personnel
Alto Rio Negro IL	Social and Environmental Institute (ISA)	C	II	Indirect: Advice and technical support	Two bilateral meetings (April 4 and July 22, 2021) Participated in the Inception Workshop (August 2nd and 3rd, 2021)	Technical support and articulation of interested parties
Paumari do Lago Manissu?, Caititu; and Deni IL	Operation Native Amazon (OPAN)	C	ID/DA	Indirect: Advice and technical support	Bilateral meetings between March and September 2021 Participated in the Inception Workshop (August 2nd and 3rd, 2021)	Technical support and articulation of interested parties

Soure Marine Extractive Reserve; S?o Jo?o da Ponta Extractive Reserve; M?e Grande de Curu?? Extractive Reserve; Mocapajuba Marine Extractive Reserve; Cuinarana Marine Extractive Reserve; Master Lucindo Marine Extractive Reserve; Maracan? Marine Extractive Reserve; Chocoar?-Mato Grosso Extractive Reserve; Tracuateua Marine Extractive Reserve; Caet?-Tapera?u Marine Extractive Reserve; Ara?-Peroba Marine Extractive Reserve; Gurupi-Piri? Marine Extractive Reserve.	Rare Brasil	ID	ID	Indirect: Advice and technical support	Two bilateral meetings (12 and 16 July 2021) Participated in the Inception Workshop (August 2nd and 3rd, 2021)	Linkage between actions and financial funding

Productive Territories Rural area of Tef?	Maniva Agroecology Network (REMA)	C	ID/DA	Key: represents the interests and actions of the managed territories and participatio n in the production of the protocol	Ongoing consultation and engagement . Two meetings: one face-to-face meeting and one online meeting (alignments carried out in August 2021, after FAO event)	Technical support, in the construction of the agroecological systems management protocol, in the carrying out of multiplier courses, facilitation of in situ and ex situ project activities, articulation of interested parties
Productive Territories Rural area of Tef? Jurupari Grande Lakes Complex Lagos Complex of Paran? do Jacar? (Capivara) Syringe Complex (Joacaca)	Amazonian Forum of Geographical Indication and Collective Trademarks	C	II	Indirect: Influences the production chain	Bilateral meetings in November	Product flow

Productive Territories Rural area of Tef? Jurupari Grande Lakes Complex Lagos Complex of Paran? do Jacar? (Capivara) Syringe Complex (Joacaca)	Amazon Network of Innovation and Entrepreneurship (RAMI)	C	II	Indirect: Influences the production chain	Bilateral meetings in November	Product flow

Select what role civil society will play in the project:

Consulted only;

Member of Advisory Body; Contractor;

Co-financier; No

Member of project steering committee or equivalent decision-making body; Yes

Executor or co-executor; Yes

Other (Please explain)

3. Gender Equality and Women's Empowerment

Provide the gender analysis or equivalent socio-economic assesment.

a. Summary from the Gender Analysis

1. According to the Brazilian Institute of Geography and Statistics (IBGE), about 15 million women live in rural areas (47.5% of the population) and are responsible for the administration of 20% of the businesses. Women also represent 45% of Brazil's one million artisanal fishermen. Despite these very representative numbers, the recognition of the importance of women in the biodiversity value chain and in agroforestry production in the Amazon is still low, as they continue to be attributed only to domestic tasks and family care practices, disregarding the relevance of this knowledge and acting as structuring components in local forms of organization. This gap has an effect on the scarcity of

systematized knowledge about women's participation in territorial management and natural resource management programs.

2. Mamirau? Institute has conducted several research projects to identify the participation of women in fisheries, extractivism of non-timber products and AFSs, and understand its importance for politics, well-being, food security and income generation. The institute has also promoted actions to increase the participation of women in biodiversity management processes. The knowledge gathered through these studies and experience from these actions helped define the best strategy to improve gender equality and empower women in biodiversity management processes. The gender action plan will ensure equal access of men and women to all aspects of project development and implementation.

3. The project will target women and will ensure that their needs are met in order to participate in the different project activities (i.e. training specifically for women, women leaders, care for children, transport costs). In particular, under Output 1.1.1, during the training of young leaders, the project will ensure that at least 50% of the participants are women. In addition, project activities under Component 2 will also target women beneficiaries.

4. In the Amazon as a whole, and in the project's target territories, especially, the way of life of indigenous and traditional peoples is characterized by pluriactivity, by a judicious and specific way of knowing, living and practicing their knowledge in a diversity of environments and niches ecological. Gathering, extractivism, hunting, fishing, raising small animals and agricultural practices are activities performed by all social groups and make up the economic arrangement of domestic groups, communities and peoples in the region. There is a multiplicity of strategies and guidelines, anchored in the ways of life, in the traditional rules of use and appropriation of natural resources and in the different legal management systems in dialogues with that cosmological knowledge, which have been shown to be effective for the conservation of biodiversity and which should be valued.

Table xx. Synthesis of forms of women's participation in territories

Resource Use	Organization and division of labor	Family income	Management
Vegetal Extraction not wood	Predominantly performed by women or family groups	Women participate in the cultivation and sale of forest products	They work in community associations and cooperatives
Forestry Extractivism wood	Predominantly male activity	--	Women work to support grassroots organizations
Agriculture (swidden)	Familiar and collative	They operate in the extraction, processing and sale of forest products	They work in community associations and cooperatives

Fishery Resources (cayman, fish and crab)	Familiar and collative	Marketing is predominantly male; women work in the fishery production chain, especially fish and crab resources; they receive for their activities;	They work in community associations and cooperatives.
Community-based tourism	Familiar and collative	They act in the production and commercialization of handicrafts; as local guides, cooks, some coordination and administration positions;	They work in community associations and cooperatives

5. For the preparation of the Gender Action Plan, a gender diagnosis was carried out, focused on the territories covered by the project, based on an extensive literature review and interviews with focal points of the territories and local partners in 11 territories. The documents ?Guidelines on gender equality? (GEF, 2017), ?Guide to mainstreaming gender in FAO's project cycle? (FAO, 2017), ?Policy on Gender Equality 2020 ? 2030 (FAO, 2020), ?Botswana Sustainable Miombo- Mopane Landscape Management Project? (FAO, 2021) and ?Do no harm toolkit: Integrating the elimination of violence against women and economic empowerment programs.? (IWDA, 2018) . The approach to these instruments is based on the definition of the concept of gender according to which the category of gender is a way of understanding the social organization of the relationship between men and women. Gender is not a category that concerns only women, nor does it refer only to the domestic sphere or family relationships, the gender dimension is inherent to all social relations. This perspective adopted is in line with HeForShe campaign, launched in 2014 by UN Women, whose objective is to involve all of society in actions that can effectively accelerate progress towards achieving gender equality.

GENDER DIAGNOSTICS ? Contribution from main focal points in target areas	
Themes	**Main findings**
Territorial management and management of natural resources	Regarding the participation of local communities in territorial management and natural resource management mechanisms, local associations and, in the case of the coast of Par?, community committees, promote participatory management of territories. However, management is still quite centralized in leaders and there is difficulty in articulating these with the community bases. An aggravating factor is the irregular situation of many associations, mainly related to the lack of technical training and the absence of continuous assistance to support and strengthen their performance. In some contexts, especially in the UCs, it is already evident that the management instruments do not take into account the modes of traditional use and occupation of territories and do not start from a symmetrical approach between local knowledge systems and technical-scientific knowledge.

Forms of participation	In the territories studied, there is an expressive participation of women in associations and leadership positions, as well as the diffuse and growing existence of women's associations. There is a huge variety of local associations, with an emphasis on the coast of Par?. The participation of women in associations, councils and decision-making bodies is influenced by the characteristics of these organizations, as well as by the specific conditions of women, whether married, single and whether they have children or not, as well as the age of the children. The life trajectories and individual experiences ? living in the city, the distance from their dwelling places in relation to the places where meetings and events take place ? also influence the opportunity to participate. In the case of indigenous women, the degree of knowledge and mastery of the Portuguese language is also a determining factor, when women do not speak Portuguese, men play the role of translators and mediate relations with external actors. There are also cultural specificities that can make it difficult to participate in activities outside the community.
Participation in associations	The creation of spaces and women's collectives is an important mechanism to guarantee a space for speech and participation. Women's associations play an important role in training on mechanisms external to the community, as well as in valuing and strengthening their own knowledge systems, including promoting the transmission of intergenerational knowledge. There is a difficulty in including specific issues of the women's universe in expanded instances, a fact that may be related to the attribution of issues associated to women to the domestic universe, reducing the possibility of a more collective attention to their demands. On the other hand, the lesser experience of women in groups and collectives, in dialogue with external actors and in training processes, makes it more difficult to receive their agendas in collective instances, as well as their understanding of political processes and negotiation mechanisms with external actors.
Challenges for participation	Although in most contexts women participate and have an active voice, especially in meetings held in their territories. Difficulties for their full participation were pointed out, such as lack of time, lack of infrastructure for moving and the difficulty of positioning themselves in environments different from those traditionally existing, such as meetings involving external actors. Young women face greater difficulty in participating, both due to the age of their children and asymmetric gender relations. Women also have greater difficulty in participating in events, training and meetings held outside their territories due, in addition to the factors already mentioned, not traveling alone outside the territories, which is usually done in groups and not being familiar with the diversity of topics discussed at these meetings. Finally, even when there are spaces for participation, decision-making often remains centered on men, leaders and elders.

b. Gender action Plan

6. The project will ensure that the needs of the participating women are met in order to provide conditions to act in different activities throughout the project, including places in Component 1 training actions, with access to specific training activities for women, women leaders and front of sustainability initiatives, natural resource management, management activities and grassroots organizations, providing for this support for travel logistics and respecting the temporalities and commitments they have associated with caring for children and families. In particular, under Output 1.1.1, during the youth leader trainings, the project will ensure that at least 50% of the participants are women. In addition, project activities under Component 2 will also target women beneficiaries.

7. Project implementation is supported by a gender-sensitive Monitoring and Evaluation (M&E) strategy based on measurable results, adaptive management principles, and enhanced by access to information, including the status of biodiversity and ecosystem benefits to society. The project includes gender-sensitive indicators, aiming to reach the number of direct beneficiaries of 8,623 people, with gender-disaggregated indicators reaching 4,408 women and 4,215 men as a co-benefit of the GEF investment.

Does the project expect to include any gender-responsive measures to address gender gaps or promote gender equality and women empowerment?

Yes

Closing gender gaps in access to and control over natural resources;

Improving women's participation and decision making Yes

Generating socio-economic benefits or services or women Yes

Does the project?s results framework or logical framework include gender-sensitive indicators?

Yes

4. Private sector engagement

Elaborate on the private sector's engagement in the project, if any.

1. Much of this project is directed towards the private sector. This is highlighted in the stakeholder table in Section 2. Each of the project?s components is designed to support the private sector to transform actions to adopt nature-based solutions designed to address threats and promote biodiversity conservation through the sustainable use of resources.

2. The private sector already participates in the commercial arrangements but in an unarticulated way, resulting in decreasing prices over the years and insufficient to pay the total handling expenses and impairing the valorization of the products of sustainable extraction in the market. Some of the main representatives of the private sector are in the transportation of products, slaughterhouses, sawmills and furniture and tour operators. The diagnosis made during the preparation phase identified the bottlenecks and opportunities for project actions with this sector under the different components.

3. At the core of the project is a set of capacity building and technical skill building activities directed towards the private sector (Component 1). The project will target a significant number of associations that will receive training on: (i) leadership training, (ii) strengthening of community organizations, and (iii) training on community-based management protocols for target value chains. The project will target 26 indigenous organizations, including at women organizations such as the Association of Women of the Porto Praia Indigenous Territory and the Association of Women Extractivists of Araguari.

4. In addition, under Component 2, the private sector will benefit from improved technologies, economies, and sustainable use patterns that help to promote the resilience and survival of target species and associated ecosystems upon which they depend for subsistence and livelihoods. Activities include value chain improvement, raising awareness for the adoption of sustainable practices in their activities as representatives of a private company that works with conventional techniques, technical support and articulation of interested parties, articulation of extractivists and financial planning. The private segment participating in the value chain work is represented by associations of producers who will be directly beneficiaries of the project, and intermediaries and secondary beneficiaries Specifically, the project will work with the following associations:

Area	**Association**
Piaga?u-Purus Sustainable Development Reserve	Association of the Wood and Furniture Center of Manacapuru (APOMAM)
Piaga?u-Purus Sustainable Development Reserve	New Kaeru Leather-industry trade
Productive Territories Rural area of Tef?	O SEMEAR Institute
Productive Territories Rural area of Tef?	Brazilian Micro and Small Business Support Service (SEBRAE/Tef?)
Productive Territories Rural area of Tef?	Terramazonia Super Plants
	Association of Sawmills and Furniture Makers of Uarini (ASSEMOVE)
Soure Marine Extractive Reserve; S?o Jo?o da Ponta Extractive Reserve; M?e Grande de Curu?? Extractive Reserve; Mocapajuba Marine Extractive Reserve; Cuinarana Marine Extractive Reserve; Master Lucindo Marine Extractive Reserve; Maracan? Marine Extractive Reserve; Chocoar?-Mato Grosso Extractive Reserve; Tracuateua Marine Extractive Reserve; Caet?-Tapera?u Marine Extractive Reserve; Ara?-Peroba Marine Extractive Reserve; Gurupi-Piri? Marine Extractive Reserve.	Lawyers Palheta

5. Risks to Achieving Project Objectives

Elaborate on indicated risks, including climate change, potential social and environmental risks that might prevent the project objectives from being achieved, and, if possible, the proposed measures that address these risks at the time of project implementation.(table format acceptable):

Risk	Impact/Probability Rating (Low: 1 to High: 5)	Management Strategy
Changes in public policies and staff of public institutions may impact project schedule and successful implementation of management plans.	Impact: 5 Probability: 2	For good governance and interinstitutional relations, a management matrix will be constructed for each component and instruments will be elaborated, such as cooperation agreements between the executing agency and partners. This process will link tasks to responsible entities and financial resources and will facilitate monitoring and reporting with lessons learnt.
Climate change may generate unexpected changes in the flood pulse regime of wetlands impacting all extractive activities.	Impact: 5 Probability: 1	The effects of climate change on Amazonian ecosystems will be a theme of discussion during courses and the technical support for implementation of management plans. Strategies for adaptation of management plans will be defined.
Difficulty in engagement of managers and community organizations impacts continuity of management plans.	Impact: 5 Probability: 2	The project will work with managers and community organizations that have already demanded support to develop management plans. To engage new managers capacity building activities will use participatory teaching and mapping tools.
Difficulty in achieving gender equality goals.	Impact: 3 Probability: 3	Vacancy in all project activities will be made available for women, and training will be adapted to respect social contexts where women participate.
Illegal extraction and low prices of illegal products may impact the success of sustainably managed biodiversity products.	Impact: 5 Probability: 2	The project will map bottlenecks in the biodiversity value chains and develop a mitigation plan to increase value of sustainably extracted products.

Covid-19 adversely impacts the ability to implement project actions in a timely manner.	Impact: 3 Probability: 3	Please see the Covid-19 discussion below for more details. As discussed, the Covid-19 situation is evolving rapidly. The pandemic will very likely impact the project in the short-term with longer-term impacts diminishing over time. FAO at both the national and international levels has designed and adopted a number of Covid-19 coping strategies to make certain projects are able to move forward. Likewise, the impacts will be most prevalent in the short-term and will diminish over-time. During the project design phase, remote working conditions proved to be adequate for most technical support activities. For field-based activities, the project is designed to rely primarily upon Brazilian national staff and government staff. This will limit requirements and constraints associated with international travel. As stated in the FPIQ, work directly with indigenous communities will be highly challenged due to heightened Covid-restrictions. Again, please note the comments in the Covid-19 section below for more details.
Natural resource constraints ? including climate change, drought, and food security - impact project ability to achieve intended results.	Impact: 3 Probability: 1	Please see ?Environment and Social Risks? section below detailing climate related risks and proposed responses. The project is designed to address and alleviate the current exposure of rural people to natural resource risks, including those related to climate change, drought and food insecurity. Each of the project activities is directed to take an integrated approach to these issues, shifting current unsustainable management/production regimes to sustainable management/production.

Risks Associated with Covid-19

1. The country, by the end of October 2021, had 20.7 million cases of Covid-19 registered and 600,000 identified deaths. Among indigenous peoples, there were 40,724 registered cases and 1,006 death records. The northern region is the hardest hit in the national territory. The numbers for the three states in the northern region where the project will have actions and stakeholders involved indicate.

2. In this Amazonian context, studies show that the coronavirus mortality rate associated with indigenous peoples is 150% higher than the Brazilian average, and 20% higher than that recorded only in the Northern region . Equally worrying is the lethality rate, indicating how many people infected by the disease have died: among indigenous people, the rate is 6.8%, while the average for Brazil is 5% and, for the North region, 4.5 %. The study also shows that the infection rate (per 100,000 population) is 84% higher among indigenous people than the national rate.

3. Despite the significant decrease in registered cases and control of mortality levels among this population and the coping measures generated by the priority Vaccination Plans carried out for this specific audience with support from the Special Secretariat for Indigenous Health (SESAI), working through the Districts of Special Indigenous Health (DSEI), the risks and uncertainties indicated by the stakeholders heard in the consultation processes indicate the moderate level of impact on the actions and development of the project. The displacement factor to participate in actions outside the territories was pointed out by these actors as a sensitive aspect to be observed, as well as for the reception of visits in their communities and villages to carry out activities during the project.

4. In the Middle Rio Solim?es region, between March 2020 and October 2021, 819 confirmed cases were registered in indigenous people, 11 deaths. In the two territories participating in the project, no deaths were registered. In these contexts, the indigenous people themselves developed strategies to confront the transmission and faced a set of social, environmental and economic vulnerabilities aggravated by the health crisis.

5. In the two indigenous territories maintained in the project, the vaccination cycle has already been carried out, with all residents of Porto Praia and Jaquiri being vaccinated. This ensures more sanitary security for them and the entire project execution team.

6. With regard to traditional populations, the Covid-19 pandemic reveals conditions of social, economic and health vulnerability that are very similar to those faced by indigenous peoples, in which riverside dwellers, extractivists and family farmers who live in rural contexts or far from municipal seats of references, experience contexts of poverty, very little access to public basic sanitation policies, with structural problems of access to water, hygiene products, food safety and basic sanitation, whose conditions favor the spread of the virus.

7. These traditional populations have their way of life structured and strongly dependent on extractive, fishing, and agricultural practices, with the commercialization circuit linked to the flows of displacement to cities, where they also seek access services to government incentives, services. public health, among others. Thus, configuring the risk of contracting the virus during the stay in the city and consequently favoring its transmission in communities and villages.

8. To mitigate the risks of contamination, the project's actions will be guided by the protocols of the World Health Organization and the specific national, regional, or municipal guidelines in force, added to those specific guidelines of the management parties and institutions of Indigenous Lands and other PAs. It will be essential to know the reality of the actors involved in relation to immunization processes and sanitary barriers before the implementation phase. And, based on these conditions, the schedules and formats of the actions will be adapted according to the local contexts are prepared and the participation of these actors in the protected activities.

9. Another orientation indicated in the consultations and that the project's guidelines ensure that all traditional actors and other stakeholders involved in collective and face-to-face activities are immunized,

thus avoiding contagious situations, whether in displacements between villages and communities, or mobility between cities and states, or in visits received in the territories. In addition to these safety protocols, the project will incorporate actions to promote and encourage the circulation of information on ways to prevent Covid-19, reducing the impacts caused by the disease in these locations and on the participants.

10. The project coordination and execution team will be constantly monitoring the situation to determine the best approaches to mitigate potential issues as the pandemic progresses through the projected 48 months of project implementation. Sensitive to the contexts and strategies of traditional actors in the PPG phase, face-to-face activities in most territories were disregarded. The actions of articulations, engagement plans, and consultations were mostly carried out remotely. Data collection activities for the preparation of the seminar and information for the preparation of PRODOC in which face-to-face dialogues took place, these were controlled and monitored, avoiding agglomerations, restricting the participation of actors only to territories and local groups with a completed immunization cycle.

11. The use of remote support has been only partially effective so far, especially connecting government, third sector, civil society, and academic stakeholders. Due to the pandemic and the barrier of communication and internet access structures identified in most of the protected areas, access and dialogues do not occur easily. This was a limiting factor for the continuation of the consultation processes and identification of risks and threats.

12. If the challenges of COVID-19 continue or expand in 2022, the project will need to continue with the activities and engagement plan remotely, especially in territorial contexts that are more fragile due to the precarious structures of access to public policies and government support to face the vulnerabilities generated or aggravated by the pandemic.

Climate risks summary

13. While the risks identified at the identification (PIF) stage and projected for its implementation cycle (2022-2026) have been scored as MODERATE, the long-term climate change risk can be considered HIGH in both varzea floodplain forests and mangrove ecosystems. Such assessment is determined by the long-term effects of the drivers directly ascribable to climate change, compounded by others of socio-economic origin, such as augmented pressure over natural resources (in both ecosystems), including deforestation, and advance of urbanization in the coastal areas, in a possible business-as-usual scenario.

14. Although it is beyond the scope of the project to address such complex and large-scale effects, project activities will be planned to: (i) avoid generating unnecessary emissions, investing in clean energy facilities, solar-powered refrigerators and boat engines, and more efficient stoves for cassava flower production; (ii) to develop a robust awareness package conveying sound information on climate change and its drivers, as well as to map areas more vulnerable to climate change with targeted project areas.

15. A set of information and awareness products addressed to the direct beneficiaries of the project, namely local groups depending on selected natural resources in the two target ecosystems, will be prepared by the IDSM communication specialist with the assistance of the FAO climate change team at Headquarters. These products (fliers, audio-visuals, presentations etc.) will be deployed at selected training and capacity development events planned during the project under component 1. At later stages, the cartography products issued by the project team in partnership with its partners (see ?152) will be included in the communication package.

16. Selected GIS and thematic cartography tools will be deployed, in collaboration with local, national and international partners aimed at sketching the contours of climate change risk areas with a subset of ecosystem (floodplains/mangrove), target natural resources (pirarucu, caiman, u??, etc.) and scenarios according to the IPCC models.

17. At the regional (Amazon biome) level, the National Research Institute for Amazonia (INPA), belonging to the Ministry of Science, Technology and Innovation, who has developed cartographic skills and has published outstanding papers on the topics of interest and the grass-root research NGO Imazon (www.imazon.org.br), also interested in thematic mapping of the dynamics of water surface in the floodplains. At national level, the National Space Research Institute (INPE), also belonging to the Ministry of Science, Technology and Innovation, acknowledged worldwide as leader in remote sensing applications in earth studies and environmental monitoring of the Amazon biome;

18. At the international level, the Institute of Environmental Studies (INV) at the University of Amsterdam (http://www.ivm.vu.nl/en/projects/Projects/spatial-analysis/stream/index.aspx) has advanced experiences in the application of GIS and remote sensing tools to the study of sustainability. INV has developed a spatial-analysis tool suitable for river basin (STREAM) which is a subset of the FAO-hosted package MOSAICC (Modelling System for Agricultural Impacts of Climate Change, http://www.fao.org/in-action/mosaicc/en/). The climate group hosted at FAO Headquarters will also act as a partner, supported as part of FAO in-kind co-financing, direct interacting with the local, national and international partners in the development of spatial analysis products under project governance.

6. Institutional Arrangement and Coordination

Describe the institutional arrangement for project implementation. Elaborate on the planned coordination with other relevant GEF-financed projects and other initiatives.

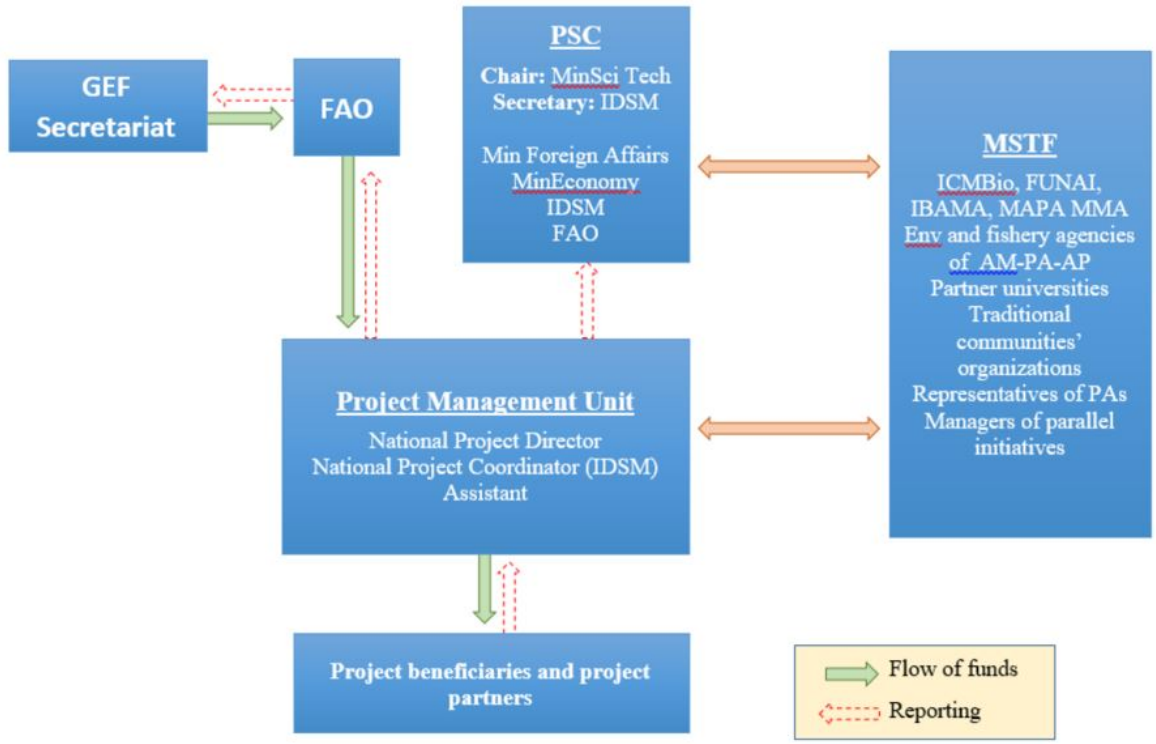
6.a Institutional arrangements for project implementation.

1. The Ministry of Science, Technology and Innovation (MCTI) will have the overall executing and technical responsibility for the project, with FAO providing oversight as GEF Implementing Agency as described below.

2. On behalf of MCTI, the Mamirau? Sustainable Development Institute (IDSM, in Portuguese) will act as the lead executing agency and Operational Partner (OP) and will be responsible for the day-to-day management of project results entrusted to it in full compliance with all terms and conditions of the Operational Partnership Agreement (OPA) signed with FAO. As OP of the project, IDSM is responsible and accountable to MCTI and FAO for the timely implementation of the agreed project results, operational oversight of implementation activities, timely reporting, and effective use of GEF resources for the intended purposes and in line with FAO and GEF policy requirements. It should be noted that the OP has been indicated by MCTI.

3. The project will be coordinated by MCTI and ISDM, in partnership with the following key agencies: Chico Mendes Institute for Biodiversity Conservation (Instituto Chico Mendes de Conserva??o da Biodiversidade, ICMBio), the Indigenous Foundation of the Ministry of Justice (FUNAI, Funda??o Nacional Indigenista), the environment and fishery agencies of the state governments of Amazonas, Par? and Amap? and the municipality of Tef? (Amazonas).

Figure 6.1. Project organization structure



National Project Director

4. MCTI?s Secretariat of Research and Scientific Capacity Building (Secretaria de Pesquisa e Forma??o Cient?fica, SEPEF, Department of Natural Sciences DECIN) will retain overall policy-level responsibility and will grant political leadership and its coordination with the leading directives, programs and other projects of the Federal Government in the field of intervention of the project. Its functions will include (1) overseeing the preparation of annual work plans and budgets (AWP/B), (2) preparing supervisory and other reports as required by FAO, (3) monitoring and evaluating project activities in partnership with FAO, (4) endorsing the technical cooperation agreements drafted at the beginning or during project execution, (5) securing project AFSeguard compliance in collaboration with ICMBio, FUNAI and state environment agencies, and (6) conducting communication and information dissemination programs

5. MCTI will designate a National Project Director (NPD). The NPD will be responsible for coordinating the activities with all the national bodies related to the different project components, as well as with the project partners. He will also be responsible for supervising and guiding the Project Coordinator (see below) on the government policies and priorities.

6. The NPD will chair the Project Steering Committee which will be the main governing body of the project.

Project Steering Committee (PSC)

7. The PSC will ensure linkages to relevant sectorial policies and programs, assisting in the resolution of any inter-sectorial debates and suggesting improvements regarding sustainable management of relevant biodiversity assets in the varzea and mangrove ecosystems, and integration of Green and Blue Economy principles into the project. The PSC will meet at least once a year, and more frequently on an ad hoc basis as needed.

8. The PSC will be comprised of representatives from MCTI, the Secretariat of International Affairs (SAIN) of the Ministry of Economy, the Brazilian Cooperation Agency (ABC) of the Ministry of Foreign Affairs, IDSM and FAO. The members of the PSC will each assure the role of a Focal Point for the project in their respective agencies. Hence, the project will have a Focal Point in each concerned institution. As Focal Points in their agency, the concerned PSC members will: (i) technically oversee activities in their sector; (ii) ensure a fluid two-way exchange of information and knowledge between their agency and the project; (iii) facilitate coordination and links between the project activities and the work plan of their agency; and (iv) facilitate the provision of co-financing to the project.

9. The National Project Coordinator (see below) will be the Secretary to the PSC. The PSC will meet at least twice per year to ensure:

i. Oversight and assurance of technical quality of outputs;

ii. Close linkages between the project and other ongoing projects and programmes relevant to the project;

iii. Timely availability and effectiveness of co-financing support;

iv. Sustainability of key project outcomes, including up-scaling and replication;

v. Effective coordination of governmental partners work under this project;

vi. Approval of the six-monthly Project Progress and Financial Reports, the Annual Work Plan and Budget;

vii. Making by consensus, management decisions when guidance is required by the National Project Coordinator of the PMU.

Project Management Unit

10. A Project Management Unit (PMU) will be co-funded by the GEF grant and established within IDSM. The main functions of the PMU, following the guidance of the Project Steering Committee, are to ensure overall efficient management, coordination, implementation and monitoring of the project through the effective implementation of the annual work plans and budgets (AWP/Bs). The PMU will be composed of a National Project Coordinator (NPC) who will work full-time for the project lifetime. In addition, the PMU will include (i) a National Technical Assistant, (ii) a Monitoring and Evaluation expert, (iii) a Financial Manager, and (iv) two field assistants.

11. Only the evaluation and monitoring specialist will be paid by the GEF and must be included in the Project Management Cost in the budget. Each type of natural resource management worked out in the project will have a National Technical Assistant; these professionals will be the national counterpart of ISDM and the Secretariat of Agriculture and Fishery of Amazonas State (SEDAP) to the project, 6 of which are IDSM employees and 1 Sedap officer. The finance manager will also be IDSM's counterpart, whereas the field assistants will be consultants hired by the project to support the activities of Component 2, output 2.1.1.

National Project Coordinator

12. The National Project Coordinator (NPC) will oversee daily implementation, management, administration and technical supervision of the project, on behalf of the Operational partner and within the framework delineated by the PSC. S/he will be responsible, among others, for:

i) Coordination with relevant initiatives;
ii) Ensuring a high level of collaboration among participating institutions and organizations at the national and local levels;
iii) Ensuring compliance with all Operational Partners Agreement (OPA) provisions during the implementation, including on timely reporting and financial management;
iv) Coordination and close monitoring of the implementation of project activities;
v) Tracking the project?s progress and ensuring timely delivery of inputs and outputs;
vi) Providing technical support and assessing the outputs of the project national consultants hired with GEF funds, as well as the products generated in the implementation of the project,;
vii) Approving and managing requests for provision of financial resources using provided format in OPA annexes;
viii) Monitoring financial resources and accounting to ensure accuracy and reliability of financial reports;
ix) Ensuring timely preparation and submission of requests for funds, financial and progress reports to FAO as per OPA reporting requirements;
x) Maintaining documentation and evidence that describes the proper and prudent use of project resources as per OPA provisions, including making available this supporting documentation to FAO and designated auditors when requested;
xi) Implementing and managing the project?s monitoring and communications plans;
xii) Organizing project workshops and meetings to monitor progress and preparing the Annual Budget and Work Plan;
xiii) Submitting the six-monthly Project Progress Reports (PPRs) with the AWP/B to the PSC and FAO;
xiv) Preparing the first draft of the Project Implementation Review (PIR);
xv) Supporting the organization of the mid-term and final evaluations in close coordination with the FAO Budget Holder and the FAO Independent Office of Evaluation (OED);
xvi) Submitting the OP six-monthly technical and financial reports to FAO and facilitate the information exchange between the OP and FAO, if needed;
xvii) Informing the PSC and FAO of any delays and difficulties as they arise during the implementation to ensure timely corrective measure and support.

Multi-stakeholder Technical Forum (MSTF)

13. A multi-stakeholder Technical Forum (MSTF), comprising representatives of key partner agencies and beneficiary groups involved in this project and other parallel initiatives will oversee Project implementation and will be asked to contribute to the fulfilment of project objectives, also by enhancing the synergies with other ongoing projects. The MSTF will be supported by the MSDI and the MCTI.

14. The TF will meet at least twice a year. It will be chaired by a representative from MCTI and will consist of the following members. Additional representatives will be invited on an ad hoc basis.

- ? 1 representative of MCTI (Chair)
- ? 1 representative from ICMBio
- ? 1 representative from FUNAI/MJ
- ? 1 representative of the Ministry of Environment (MMA)
- ? 1 representative of the Ministry of Agriculture (Secretary of Family Agriculture and Cooperativism)
- ? 1 representative from the Executing Agency (OP) ? ISDM
- ? 1 representative from FAO
- ? 1 representative (each) of the states of Par? (SEDAP) Amazonas (SEMA), and Amap? (SEMA)
- ? representatives of base associations of local communities in the project areas, as far as possible representive each of a specific community and region:
  - ? 1 representative of Indigenous Lands (Amazonas)
  - ? 1 representative of Extractive Reserves on the coast of Par? (Par?)
  - ? 1 representative of RDS Piaga?u-Purus (Amazonas)
  - ? 1 representative of the State and National Flona of Amap? (Amap?)
  - ? 1 representative of fisheries agreements (productive territory) (Amazonas)
  - ? 1 representative of the productive territory Tef? region (Amazonas)
- ? 1 representative of partner research and academic partners
- ? 1 representative of relevant initiatives ongoing in the same thematic field and territorial coverage
- ? representatives of the civil society on behalf of the social participants in the PAs? deliberative and consultative councils, possibly at the level of president of the PA deliberative councils where they are functioning, namely:
  - ? Middle Solim?es Funai
  - ? 1 ICMBio manager (NGI Maraj?)
  - ? 1 ICMBio manager (NGI Salgado Par?)
  - ? 1 ICMBio manager (NGI Bragan?a)
  - ? 1 ICMBio manager (NGI Amap?)

15. The members of the Multi-Stakeholder Technical Forum will each assure the role of a Focal Point for the project in their respective organizations. Hence, the project will have a Focal Point in each concerned institution. As Focal Points in their organization, the concerned MSTF members will: (i) technically oversee activities in their sector; (ii) ensure a fluid two-way exchange of information and knowledge between their organization and the project; (iii) facilitate coordination and links between the project activities and the work plan of their organization; and (iv) facilitate the provision of co-financing to the project, as appropriate.

Implementing agency

16. The Food and Agriculture Organization (FAO) will be the GEF Implementing Agency (IA) for the Project, providing project cycle management and support services as established in the GEF Policy. As the GEF IA, FAO holds overall accountability and responsibility to the GEF for delivery of the results. In the IA role, FAO will utilize the GEF fees to deploy three different actors within the organization to support the project (see Annex J for details):

? The Budget Holder, which is usually the most decentralized FAO office, will provide oversight of day to day project execution;
? The Lead Technical Officer(s), drawn from across FAO will provide oversight/support to the projects technical work in coordination with government representatives participating in the Project Steering Committee;
? The Funding Liaison Officer(s) within FAO will monitor and support the project cycle to ensure that the project is being carried out and reporting done in accordance with agreed standards and requirements.

17. FAO responsibilities, as GEF agency, will include:

? Administrate funds from GEF in accordance with the rules and procedures of FAO;
? Oversee project implementation in accordance with the project document, work plans, budgets, agreements with co-financiers, Operational Partners Agreement(s)and other rules and procedures of FAO;
? Provide technical guidance to ensure that appropriate technical quality is applied to all activities concerned;
? Conduct at least one supervision mission per year; and
? Reporting to the GEF Secretariat and Evaluation Office, through the annual Project Implementation Review, the Mid Term Review, the Terminal Evaluation and the Project Closure Report on project progress;
? Financial reporting to the GEF Trustee.

6.b Coordination with other relevant GEF-financed projects and other initiatives.

The project will coordinate with other GEF-financed projects with the objectives of identifying opportunities and facilitate mechanisms to achieve synergies. This collaboration will be undertaken through: i) formal and informal communications between GEF Agencies and executing partners of other programs and projects; ii) annual coordination meetings; iii) specific meetings on technical matters; iv) meetings and activities to exchange experiences and lessons.

? **GEFID No. 10198 (with World Bank as IA): Amazon Sustainable Landscapes Program - Phase II (ASL-II).** This project seeks to improve integrated landscape management and conservation of ecosystems in targeted areas in the Amazon region. In Brazil, the project is expected to (i) improving protected area financial sustainability and management effectiveness of roughly 11.9 million ha; (ii) bringing 8.2 million hectares of landscapes under improved practices, (iii) restore 1,200 ha of land, and (iv) enhance technical support and financial incentives for adoption of sustainable land and water management. In addition, Brazil will strengthen sustainable governance arrangements and capacity to plan and manage landscape connectivity.

During the PPG phase, FAO and its executive partner IDSM have approached the officers at World Bank responsible of the oversight of the ongoing project ASL-1 and the future ASL-2 impact program, along with representatives of the Ministry of Environment who are coordinating both projects. Officers of the current and future executive agencies, namely Funda??o da Biodiversidade (Funbio), Conservation International, Funda??o Getulio Vargas (FGV) have participated in the meetings, as well.

In the first meeting, the spots, including protected areas, where the Varzea project will intervene and the respective activities foreseen in each of them have been disclosed in advance to the participants in order to detect possible territorial and thematic overlapping. In the second meeting, a nearly consolidated list of areas have been presented and compared with the ones where ASL-1 is at work and those of the ASL-2 are being planned.

As an outcome of such process, please see the Annex for a synoptic table where 3 protected areas of sustainable use (Extractivist Reserves of Piaga?u-Purus, RDS Puranga Conquista and Auat?-Paran?) were in both lists but with different activities, so in these PAs the potential of interactions, integration and synergies will be explored in higher depth.

FAO also agreed with the managers at MMA in the first place and with the executive agencies CI, FunBio and FGV that at least two meetings per year will be held, aimed at exchanging information on the respective WPs and discuss how to explore and optimize resources and efforts among FAO and WB projects. One of these meetings will be held at the time of planning exercise, usually between November and December.

? **GEFID No. 10660 (with IADB as IA): Unlocking Private Capital for Biodiversity through the Bioeconomy in Amazon Basin Countries.** The project aims to de-risk and enable private investments in the bioeconomy in up to three Amazon's countries. This will be done by demonstrating innovative and replicable financing models (Special Purpose Vehicles, SPVs) which will enable the pooling and blending of capital from different sources with varying risk appetite with a view of mobilizing private investments in

the bioeconomy and meet the multiple financing needs of this still nascent market. The project will contribute to preserve and enhance target Amazon countries' natural capital by addressing the root causes of deforestation and land degradation and halting biodiversity loss, while boosting their sustainable recovery from the COVID-19 crisis. De-risking private investments and nurturing the bioeconomy ecosystem in Amazonia will act in favor of the biodiversity value chains supported in the project being proposed here, and may facilitate access of biodiversity products to larger markets.

? **GEFID No. 10531 (with World Bank as IA): Integrated watershed management of the Putumayo-I?a river basin.** The objective of the project is to Improve the capacity of Brazil, Colombia, Ecuador and Peru to manage freshwater ecosystems and aquatic resources of the Putumayo-Ica watershed in the Amazon. This will be achieved by (i) enhancing management and accessibility of traditional and scientific knowledge and information, (ii) Improving governance for integrated water resource management and equitable access to resources by women and other vulnerable communities, (iii) Reducing impacts from water and environmental pollution, associated to mercury and other contaminants, from legal and illegal activities, and (iv) supporting freshwater fisheries management initiatives, including adding value and commercialization of fisheries and other natural resources. Watershed management and empowering local vulnerable communities that depend on the Amazon river basin is at the heart of the project being proposed here. Activities and lessons learned in both projects will certainly add to the impact of both projects. Mamirau? Institute has been invited and is already collaborating with the design and planning of this initiative, under the invitation of the Amazonas state government.

? **GEFID 5091. (UNDP/EMBRAPA) Mainstreaming Biodiversity Conservation and Sustainable Use into NTFP and AFS Production Practices in Multiple-Use Forest Landscapes of High Conservation Value.** The objective of this project is to conserve the biodiversity of Brazilian multiple-use forest landscapes of high conservation value by strengthening the sustainable use management framework for non-timber forest products (NTFP) and AFS(AFS). The proposed project has potentially two very clear points of interaction with this project as both management NTFP and AFSs are both important themes in both projects. In addition, the project will build on lessons learned and share experiences with projects currently under implementation or recently completed-namely GEFID 9272: Amazon Sustainable Landscapes Program (Phase 1); GEFID 9617: Comm-IAP: Taking Deforestation Out of Commodity Supply Chains (with UNDP as IA), GEFID 9413: Realizing the Biodiversity Conservation Potential of Private Lands.

7. Consistency with National Priorities

Describe the consistency of the project with national strategies and plans or reports and assesments under relevant conventions from below:

NAPAs, NAPs, ASGM NAPs, MIAs, NBSAPs, NCs, TNAs, NCSAs, NIPs, PRSPs, NPFE, BURs, INDCs, etc.

Relevant National Strategy, Plan, Report and/or Assessment	Description of Consistency
Strategy and National Action Plans for Biodiversity	The project is aligned with the Strategy and National Action Plans for Biodiversity, which has the objective of protecting biodiversity and natural ecosystems of Brazil. The main objective of EPANB is "the promotion, in an integrated form, of conservation of biodiversity a sustainable utilization of its components, with fair and equitable partition of benefits derived from the utilization of genetic resources, of components of the genetic patrimony and of traditional knowledge associated with these resources". For this purpose, the EPANB is structured in components (thematic axes) that orient its implementation. This proposal is aligned with four thematic axes: Conservation of biodiversity; Sustainable utilization of biodiversity components; Access to genetic resources and associated traditional knowledge, and equitable partition of benefits; Education, public awareness, information and communication about biodiversity, Legal and institutional strengthening for management of biodiversity. Transversely it also touches on two other axes: Knowledge of biodiversity; and Monitoring, evaluation, prevention and mitigation of impacts on biodiversity. The development of management protocols, foreseen in this project, meets the specific goals of EPANB. The EPANB Action Plan foresees that government collegiate bodies and organized civil society will be involved in the formulation and execution of training plans in ABS and Community Protocols and in the training of multipliers on the theme. Community Protocols are documents generated from participatory processes of discussion and deliberation, where a set of community rules regarding the use and management of territories, rules regarding the exploitation of their natural resources and AFSeguarding traditional knowledge are defined and agreed upon by the residents of the communities involved.

CBD National Report	The Project is aligned with the Convention on Biological Diversity (CBD) which has three main objectives: the conservation of biological diversity; the sustainable use of the components of biological diversity; and the fair and equitable sharing of the benefits arising out of the utilization of genetic resources. The project involves indigenous peoples, traditional communities and small scale farmers with key links in productive sectors that keep the forest standing, generating income and reducing pressure on the environment, and at the same time valuing and protecting traditional knowledge. Community-based biodiversity management protocols, one of the tools used in this project, is a recognized tool by the CBD and the Nagoia Protocol. Interventions of this project strengthen the strategic and political role of traditional people, including indigenous and non-indigenous populations. They are therefore in line with law n 13.123/2015 that guarantees that protection of traditional knowledge of these populations, the right to participate in decision making at the national level in matters concerning the conservation and sustainable use of biodiversity and traditional knowledge, and the free exchange of diffusion of genetic patrimony and of associated traditional knowledge practiced internally for their own benefit and based in uses, costumes and tradition.
Law No. 9,985, of July 18, 2000	The project is in line with Law No. 9,985, of July 18, 2000, which instituted the National System of Conservation Units (SNUC), and consists of a set of federal, state, municipal and district Conservation Units, arranged in 12 categories whose specific objectives differ in the form of protection and permitted uses. The planned actions aim to enhance the role of Conservation Units in the sustainable use and conservation of biodiversity.
International Union for Conservation of Nature (IUCN)	Mamirau? Institute is a member of the International Union for Conservation of Nature (IUCN) and all actions taken are in line with the IUCN mission, seeking to influence, encourage and assist societies for nature conservation, and to ensure that any and all use of natural resources is equitable and ecologically sustainable.
RAMSAR	The project has a strong presence in two wetlands of international importance (RAMSAR), in compliance with the Convention on Biological Diversity (CBD), the Convention on Trade in Endangered Species (CITES), the Convention on Migratory Species (CMS), the Convention for the Protection of the World, Cultural and Natural Heritage (WHC) and the United Nations Framework Convention on Climate Change (UNFCCC), the International Plant Protection Convention (IPPC) and the International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA).

Sustainable Development Goals	The project is aligned with the Sustainable Development Goals, specifically to the objectives: 1. Eradication of poverty - developing products or services that benefit and improve the quality of life of economically vulnerable groups; 2. Zero hunger and sustainable agriculture - for supporting small food producers and family farming; 3. Health and Well-being - by improving income, and improving the access of its employees to health care, sanitation infrastructure and drinking water and clean energy for domestic use and for sustainable production; 4. Quality education - through technical and specialized training for productive actions and training for management, ensuring that rural producers have access to professional training and learning opportunities; 5. Gender Equality - seeking equal opportunities for professional growth and political representation; 6. Potable water and sanitation - for implementing water management strategies that are environmentally sustainable and economically beneficial in the hydrographic region where it operates; 7. Clean and Accessible Energy - implementing demonstrative and experimental models of equipment and productive processes with greater energy efficiency and with renewable sources; 8. Decent work and economic growth and 12. Responsible consumption and production - strengthening the productive chain of sustainable nature products; 13. Action against global climate change, 14. Life in water and 15. Terrestrial life - for implementing policies and practices to protect natural ecosystems.

8. Knowledge Management

Elaborate the "Knowledge Management Approach" for the project, including a budget, key deliverables and a timeline, and explain how it will contribute to the project's overall impact.

1. Knowledge generation and management will be an essential component of the project. The project integrates a number of tools designed to build and manage knowledge in line with GEF Knowledge Management Guidelines .

2. The project under Component 3 will design a full communications strategy, in conjunction with the Global Coordination Project and the REM. As described in the Component, this strategy will integrate innovative tools, including web-based and smartphone-based technologies designed to engage and inform stakeholders at many levels. The communications strategy will incorporate within it specific monitoring tools to make certain that target audiences are reached, that target audiences are engaged and contributing, and that communications are actually resulting in improved practices and positive impacts. Progress on this communication strategy and the aligned knowledge management approach will be monitored and reported upon throughout the project period. As with all project investments, the project will make certain through the handover strategy that advances made in terms of knowledge management and communication are sustained and enduring. The project strives to assist to build the initial framework required and to then provide this framework in a form and function so that it can be perpetually maintained and improved to drive forward on-going improvements.

3. This project's knowledge management approach has the goal of keeping track of project interventions and impacts to allow replication in other areas of Amazonia, and, potentially, in other biomes. Activities conducted within Component 3 will record project activities and promote a continuous

learning process, creating a solid background for project scaling as well as fundamental knowledge for communication and political advocacy.

4. Under this component the project will raise awareness about the importance of the amazon flooded environments and its biodiversity through strategic communications and publications that disseminate project activities and experiences. Information will be disseminated in fairs, participants websites and social media, and other media outlets.

5. The project will also promote an exchange process of learning between women and men leaders, assessment and regularization of the legal and accounting framework of organizations aligned with training and strategies on: finance, administration, accounting, preparation of plans, guidelines for accessing markets and institutional relationships.

6. Part of this knowledge management approach includes working to integrate lessons learned from past and on-going projects. As detailed in the baseline, the project design took a very inclusive and broad look at on-going investments and programs by the Government, donors, and other stakeholders. This was done to not only make certain the proposed project is aligned with this on-going baseline and will provide incremental improvements, but also to make certain lessons learned are reflected and pathways are in place to bring new knowledge and lessons within this proposed project?s actions and innovations to build synergy and scale.

9. Monitoring and Evaluation

Describe the budgeted M and E plan

1. Project monitoring will be carried out by the Project Implementation Unit (PIU) and the FAO person in charge of budget. Project performance will be monitored using the project outcome matrix, including indicators (baseline and targets), work plans and annual budgets. Initially, the outcome matrix will be reviewed for the purpose of finishing identification of: i) outputs ii) indicators; and iii) missing information and baseline objectives. During project inception an M&E expert will provide support in developing a detailed M&E plan based on the outcome matrix and defining each indicator?s specific requirements (data gathering methods, timing and frequency, data gathering and analysis responsibilities, etc.), aspects that will be presented in the Inception Report.

2. **Project Launch Phase.** The Inception Workshop will be conducted during the first quarter of Year I, at the latest, with personnel from all stakeholders involved, such as MARENA headquarters and its local offices, co-participating government institutions, Indigenous People authorities, and FAO and FAO-GEF officials. This workshop?s main purpose consists of contributing to create ownership of project objectives and targets, in order to develop the first Annual Plan of Operations (APO). To this end, the Results Framework (indicators, means of verification, assumptions) will be reviewed to make the required relevant adjustments by adding accurate and measurable performance indicators to APOs, as they relate to

project deliverables. Meetings between the implementing organisation and its counterparts or partners will also be scheduled, as shall meetings of the Project Steering Committee (PSC) and other bodies deemed important for good project performance.

3. The Inception Workshop enables all members of different teams to gain an in-depth understanding of roles, functions and responsibilities of each party in the decision-making and relationship structure. Members of the different teams will get to know each other and become aware of each team?s capabilities and contributions to project development and satisfactory performance, in addition to requirements for requesting support, time, operations and reporting.

4. **Monitoring.** Once the Year 1 APO has been developed, the PIU is responsible for monitoring it and submitting regular reports to enable implementation process feedback. In achieving satisfactory operations, the APO will be broken down into monthly and then weekly plans. The PIU will submit monthly, quarterly, biannual and annual reports aimed at monitoring project implementation and facilitating feedback. In addition to feeding the project?s M&E system, assessments made in these periods will contribute to knowledge management through identification of constraints and best implementation practices. Regular reports will be prepared by the Project Coordinator, who will work together with MARENA?s local offices (LO) through its headquarters to obtain information on progress made in their regions. Analyses of contributions to knowledge management will be the responsibility of a methodology expert, who will also be in charge of gender and Indigenous peoples? issues to ensure required approaches are built into the reports, learnings and the new planning. The methodology expert will also provide support in biannual LO and/or PIU meetings with Indigenous peoples in order to follow up on plans agreed upon with them.

5. The Tripartite Committee (GEF/FAO/MARENA) will hold annual meetings to learn about the progress and activities to be developed in the following year, with an eye on anticipating needs and taking actions in support of implementation (technical advice, other support). The PSC will meet biannually to hear about advances, identify constraints and provide guidance on adjustments or measures (interinstitutional coordination, mutual support) contributing to a satisfactory performance of planned activities. In both cases, the Project Coordinator will prepare a report based on results achieved during implementation of the APO, which is, in turn, based on the adjusted Results Framework.

6. **Regular Monitoring.** Concerning PIU?s project monitoring and follow-up, in addition to receiving reports from MARENA?s local offices, PIU members will visit them every quarter on a rotational basis to carry out in situ verification of complaints, sub-project implementation, progress made in the field and to take note of and record evidences. These monitoring visits will also be useful to identify constraints and find alternatives to support regional implementation. Some of these visits will coincide with meetings of the Commission for Communication with Indigenous Peoples, and PIU members will participate in order to gain an understanding of progress made and to contribute as needed. For each monitoring visit a report containing documented findings will be developed; it is to provide feedback to the M&E system, and particular to identify qualitative implementation aspects not recorded in the system.

7. **Annual Monitoring.** The FAO Country Office will make joint monitoring visits with MARENA at least once a year to obtain on-site knowledge and verify advances regarding project

implementation, for the purpose of contributing with actions that ensure its success and a learning process among participating parties. Aiming at resource optimisation, these joint monitoring visits will overlap with one of PIU rotating visits to LOs and to a sample of sub-projects. To the extent possible, they will also hold meetings with Rama and Kriol Indigenous people and their authorities, Indigenous and non-Indigenous women and other local actors to hear their perceptions of project implementation and gather feedback useful to decision-making. The best time for these monitoring visits would be the third quarter of each year, prior to beginning the next year?s planning process, thus facilitating the use of any helpful feedback.

8. **Regular Reports.** The PIU will prepare different kinds of reports, according to their periodicity. The Project Coordinator is the person in charge of all these reports, including:

? **Biannual Report.** To be developed at mid-year, taking into account implementation in the two previous quarters, and meant to inform the PSC about implementation progress and receive its guidelines.

? **Annual Report.** This report will be prepared by gathering and systematising information on activities performed throughout the year; previous regular reports, regular monitoring records and the joint monitoring aide-m?moire will be taken into account. After the joint monitoring process, a first interim Annual Report will be drafted to start the planning process for the upcoming year; subsequently, in the last month of the year, the Annual Report will be adjusted according to fourth quarter actions. The Annual Report should contain an analysis of each component?s progress, a gender-based analysis of activities carried out, engagement with Indigenous peoples and other stakeholders, and the inclusion of topics in their work agendas and development plans. This annual report will be shared with the parties to get their feedback, and will serve as the foundation for meetings of both the TC and the PSC early the next year.

? **Terminal Report.** At the end of five years, the Project Coordinator will prepare a Terminal Report (TR), based on implementation outcomes. This report will be drafted at least one quarter before closing operations and be submitted to the parties for comment. The report will be based on the Results Framework; it will identify levels of compliance of outcomes with the project?s objective and their contribution to fulfilling overall objectives; it will explain compliances and non-compliances, constraints and strengths, achieved sustainability and replicability; pending steps to reach higher levels and the main lessons learnt.

? **Specific Thematic Reports.** Annual or regular reports may be accompanied by specific thematic reports when these are useful in scoping project implementation, facilitate learning processes or are requested by the PSC and the TC. A portion of these reports should be included in biannual and annual reports. Thematic reports include biodiversity monitoring, which should have at least two reports linked to technical consultancies and monitoring implementation, forest, habitat and degraded area restoration.

Evaluation provisions.

? The GEF evaluation policy foresees that all medium and large size projects require a separate terminal evaluation. Such evaluation provides: i) accountability on results, processes, and performance; ii) recommendations to improve the sustainability of the results achieved and iii) lessons learned as an evidence-base for decision-making to be shared with all stakeholders (government, execution agency, other national partners, the GEF and FAO) to improve the performance of future projects.

? The BH will be responsible to contact the Regional Evaluation Specialist (RES) within six months prior to the actual completion date (NTE date). The RES will manage the decentralized independent terminal evaluation of this project under the guidance and support of OED and will be responsible for quality assurance. Independent external evaluators will conduct the terminal evaluation of the project taking into account the ?GEF Guidelines for GEF Agencies in Conducting Terminal Evaluation for Full-sized Projects?. FAO Office of Evaluation (OED) will provide technical assistance throughout the evaluation process, via the OED Decentralized Evaluation Support team ? in particular, it will also give quality assurance feedback on: selection of the external evaluators, Terms of Reference of the evaluation, draft and final report. OED will be responsible for the quality assessment of the terminal evaluation report, including the GEF ratings. After the completion of the terminal evaluation, the BH will be responsible to prepare the management response to the evaluation within 4 weeks and share it with national partners, GEF OFP, OED and the FAO-GEF CU.

9. **Publications.** The project shall publish information targeted at the different stakeholders throughout its duration, although it will also disclose outcomes and experiences; in some cases, it may develop and issue technical summaries to be shared with other institutions. Publications reporting on joint progress made will be periodically issued, according to proposals made in the Communication and Disclosure Committee in coordination with Indigenous Peoples. For the purpose of drawing attention to work done with women and performing a gender-based analysis of project implementation, short publications will be issued identifying women?s experiences in biodiversity conservation and habitat restoration roles. In order to defray the costs of these publications, annual budgeted amounts have been included in the Knowledge Management Plan described in the foregoing.

10. **Audits.** The project will be audited in line with FAO administrative and financial rules and procedures.

Table 22. Work Plan and budget for M&E activities

M&E activities	Responsible	Time frame	Budget, USD
Inception Workshop	NPC with NFP support FAO Representation in Brazil	Within three (3) months after the signature of the project document by the country	3,000
Inception Workshop report	NPC with NFP support	Within two (2) weeks following the Initial Workshop	NPC and NFP

M&E activities	Responsible	Time frame	Budget, USD
Annual Work Plan and Budget (AWP/B)	Prepares NPC with support from the LTO, and the BH with support from the National Budget and Operations Officer PMU and Inter-institutional Technical Team contributions PSC approval	Annual; at the beginning of the project and subsequently, every calendar year	National counterpart, NPC and Agency Fee
Support and supervision visits	LTO, PMU	At least once a year	PMU, Agency Fee and specific activities
Project Progress Report (PPR)	NPC, LTO, BH	Every six (6) months (June and December)	NPC y Agency Fee
Project Implementation Report (PIR)	Prepares NPC with PMU inputs LTO and BH supervision Approval and submission to the GEF by PSC	Annual	National counterpart, NPC and Agency Fee
Co-financing Report	PMU	Annual (with the PIR)	PMU
Mid-Term Review	BH in consultation with the project team, including the FAO-GEF Coordination Unit and others	At mid-point of project implementation	35,000
Final Evaluation	The BH will be responsible to contact the Regional Evaluation Specialist (RES) within six months prior to the actual completion date (NTE date). The RES will manage the decentralized independent terminal evaluation of this project under the guidance and support of OED.	To be launched 6 months prior to terminal review meeting	45,000
Final Project Report	Consultant with PMU support LTO and BH supervision Approval and submission to the GEF by PSC	Within two months after project closure	6,750
Specific project budget for M&E activities			89,750

?The project will ensure transparency in the preparation, conduct, reporting and evaluation of its activities. This includes full disclosure of all non-confidential information, and consultation with major groups and representatives of local communities. The disclosure of information shall be ensured through posting on websites and dissemination of findings through knowledge products and events. Project reports will be broadly and freely shared, and findings and lessons learned made available.?

10. Benefits

Describe the socioeconomic benefits to be delivered by the project at the national and local levels, as appropriate. How do these benefits translate in supporting the achievement of global environment benefits (GEF Trust Fund) or adaptation benefits (LDCF/SCCF)?

1. The project will directly benefit approximately 6,000 rural producers and strive for 50/50 engagement of men and women. The livelihoods of these producers are currently challenged due in large part to the inability to address degradation challenges and the loss of critical ecosystem services leading to deteriorating living conditions and well-being of local communities. The project will reverse this trend by providing rural interests with the opportunities to access knowledge, information, capacity and experience to adopt improved practices. This will be comprehensively applying best practices to the entire value chain, starting from resource management to market. This will include providing residents to access to greater profitability through sustained production methods and ability to better realize gains from existing and new markets. These practices will result in GEBs along with increased standards of living, food security, and climate change resiliency.

2. Rural communities will be engaged equitably with clear consideration given to cultural norms and practices. The project will work collaboratively with these stakeholders to assist them with the design and implementation of management regimes that build knowledge for informed decision-making and provide opportunities to regulate resource use through planning, by-laws, and improved practices.

3. The project will closely monitor and track benefit delivery. This will be done to make certain that target beneficiaries are meaningfully increasing livelihood security, reducing climate risk exposure through the adoption of pro- BD conservation approaches.

4. Employment is an on-going challenge. By improving these practices, increased livelihoods, and income the project is expected to have knock-on impacts in terms of economic development and associated increases in employment opportunity.

5. At the governance level, national benefits will accrue to a variety of agencies particularly at the local level where resource concerns are greatest and management capacity most needed. This will include the ability to more efficiently and effectively address conservation issues. The results of more strategic and collaborative approaches will also increase cost-effectiveness.

6. As noted, the project will pay special attention to these issues with regards to women empowerment and gender equity. These concepts are woven throughout the project framework and reflected in the results framework. The project will assist women to engage meaningfully in decision-making and capacity building. The project will help build skills and empower women to realize more equity and greater economic security.

11. Environmental and Social Safeguard (ESS) Risks

Provide information on the identified environmental and social risks and potential impacts associated with the project/program based on your organization's ESS systems and procedures

Overall Project/Program Risk Classification*

PIF	CEO Endorsement/Approval	MTR	TE
High or Substantial	Medium/Moderate		

Measures to address identified risks and impacts

Elaborate on the types and risk classifications/ratings of any identified environmental and social risks and impacts (considering the GEF ESS Minimum Standards) and any measures undertaken as well as planned management measures to address these risks during implementation.

Supporting Documents

Upload available ESS supporting documents.

Title	Module	Submitted
FAO ES Screening Checklist Brasil PRODOC	CEO Endorsement ESS	
Indigenous Peoples Plan	CEO Endorsement ESS	

Title	Module	Submitted
FAO ES Screening Checklist Brazil	**Project PIF ESS**	
PIF Brazil FAO 690442 - Climate Risks Screening Summary	**Project PIF ESS**	

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).

Results chain	Indicators	Baseline	Mid-term target	Final target	Means of verification	Assumptions	Responsible for data collection
Project Objective: Conserve and sustainably use biodiversity and maintain carbon stocks in varzea floodplain forests and mangroves wetlands of Amazonia							
Component 1: Strengthening the enabling environment to sustainably manage varzea floodplain forests and mangrove wetlands.							
Outcome 1: Improved enabling environment enhances the effectiveness of natural resources management	Increase in METT score for each of the evaluated target project target areas, ranging from 10 to 25 percent.	(Baseline METT) Average value of METT scores for all evaluated project target areas	5 percent	10-25 percent	METT application at mid-term and project end.	Project impacts are not offset by external, uncontrolled factors that lead to a decrease in the values of METT indicators.	PCU
	Number of direct beneficiaries disaggregated by gender as co-benefit of GEF investment (CORE INDICATOR 11)	0	2000 (1000 women; 1000 men)	8623 (4408 women; 4215 men)	Progress reports	Stakeholders engage with project activities	PCU
	Number of people benefiting from capacity building program that actively participate in community-based biodiversity management processes.	0	1200 people (600 women; 600 men)	3168 people (1584 women; 1584 men)	Project progress reports (attached attendance lists)	Communities participate in capacity building courses and apply good practices and techniques in community-based biodiversity management processes.	PCU

	Number of community-based organizations involved in biodiversity management processes structured and strengthened	0	10	26	Project progress reports	Continued commitment of stakeholders in applying the good practices and knowledge received during training	PCU
1.1 Capacity building program for community leaders developed and implemented	Number of Short modular course editions prepared for each management protocol covering basic elements of the biology and ecology of managed species, natural resource management and governance, as well as principles and directives of zoning in protected areas	The proposed course will build on the capacity needs assessment carried out during project preparation, and will build on technical documents and training materials developed by Mamirau? Institute	31 Short-term modular courses editions realized	67 Short-term modular courses editions realized	Project progress reports	Targeted stakeholders participate in courses	PCU

	Number of Long-term course editions (1,800 hours) developed targeting (i) young leaders to mainstream biodiversity in their communities and regions, and (ii) local community-based organizations to improve their management practices and sustainability, mainstreaming biodiversity conservation practices inside and outside protected areas	The proposed course will build on the capacity needs assessment carried out during project preparation, and will build on technical documents and training materials developed by Mamiraua Institute	1 Long-term course edition realized	3 Long-term course editions realized	Project progress reports	Targeted stakeholders participate in courses	PCU
	Number of people trained	0	1000 (500 women; 500 men)	2852 (1426 women; 1426 men)	Project progress reports (attached Attendance sheets)	Targeted stakeholders participate in courses. Project activities are effective in engaging women in capacity building courses.	PCU

1.2. Local organizations created or strengthened to engage in the sustainable management of natural resources	Training program for IPLC developed and implemented.	Based on the capacity needs assessment, the training program will include 6 units, namely (i) association and leadership, (ii) leadership, (iii) financial management, (iv) access to markets, (v) marketing strategies and commercialization, and (vi) data analysis and preparation of reports aimed at licensing agencies	Training modules develop and implementation of the training program started	Training program implemented	Progress reports (attached course contents and attendance lists)	Targeted stakeholders participate in courses.	PCU
	Number of organizations with strengthened capacities	0	8	26	Project progress reports (attached Attendance sheets)	Stakeholders from the community-based-organizations that participate in courses will be engaged throughout the training process	PCU
	Number of people trained	0	158 (79 women; 79 men)	316 (158 women; 158 men)	Project progress reports (attached Attendance sheets)	Targeted stakeholders participate in courses. Project activities are effective in engaging women in capacity building courses.	PCU

1.3. Community-based management protocols (linked to Protected Area management plans) developed for target resources (i.e., caiman, agroecology, forestry, non-timber forest products, and community-based tourism)	Agroecological systems management protocol developed	The protocol currently applied in the municipality of Tef? to manage agroecological systems is not adequate as they don?t mainstream biodiversity nor encourage agroecological production. The protocol will build on technical materials from the Ministry of Agriculture, Livestock and Supply (MAPA) for production in agroecological and organic systems	Management protocol development initiated	Management protocol developed	Progress report and management protocol	Stakeholders are committed to using the protocol in their productive activities.	
	Caiman management protocol developed	Limited understanding of the framework required by law for the development of a caiman management plan. Caiman management protocol will be based on the requirements of federal and state legislation for the management of caimans in protected areas	Management protocol development initiated	Management protocol developed	Progress report and management protocol	Stakeholders are committed to using the protocol in their productive activities.	

	Community-based tourism protocol developed	The Visitation Plan approved by FUNAI, allows tourism to be conducted inside that indigenous land. The document gives detail on the type of tourism activities that will be carried out, identifies the group(s) responsible for executing each activity and how tourism will be managed	Management protocol development initiated	Management protocol developed	Progress report and management protocol	Stakeholders are committed to using the protocol in their productive activities.	
	Timber management protocol developed	There are no experiences of forest management plans for simultaneous harvest in both V?rzea Floodplain Forest and Terra Firme Forest environments	Management protocol development initiated	Management protocol developed	Progress report and management protocol	Stakeholders are committed to using the protocol in their productive activities.	
	Non-timber forest products management protocol developed	The management of non-timber forest resources does not depend on the establishment of licensed management plans, or the attention to specific management protocols, however, in this way, the sustainability of the activity is not guaranteed	Management protocol development initiated	Management protocol developed	Progress report and management protocol	Stakeholders are committed to using the protocol in their productive activities.	

1.4 Biodiversity monitoring tool developed and adopted by target sites	Number of target sites that implement the Providence System nodes	0	4	4 (Caet?-Tapera?u Marine Extractive Reserve, Piaga?u-Purus Extractive Reserve, Sarac?-Taquera National Forest and Amap? National Forest)	Progress report		PCU
2. Participatory management and sustainable use of protected areas and productive landscapes	(Core Indicator 4.1) Hectares of landscapes covering 3 lake complexes (Jurupari Grande, Parana do Jacare, and Seringa) and the Tefe Region under improved management for the benefit of biodiversity	0	33,242 ha	33,242 ha	Progress report and management reports sent to responsible environmental agencies.	Stakeholders apply good practices, follow adequate management protocols and report management activities adequately.	PCU
	By project end, population of target species (pirarucu, caiman, and crab) does not decline	To be determined at first semester Y1	--	Population of target species remains steady or increases	Stock estimates reported to responsible environmental agencies and progress report.	Estimates are calculated and reported adequately.	Researchers and managers responsible for each specific management.

Output 2.1.1. Development and/or implementation of participatory natural resource management plans including agroforestry, wood and non-wood forest products, pirarucu, caiman and swamp ghost crab management, and community-based tourism in 15 protected areas, one	Pirarucu management reports approved by responsible environmental agency.	0	3	6	Approval of reports by responsible environmental agency.	Responsible environmental agency analyses and replies in a timely manner.	Mamirau? Institute?s Fisheries Program
	Number of pirarucu management reports submitted by fishing colonies and community-based organizations.	0	3	6	Reports submitted by fishing colonies and community-based organizations.		Mamirau? Institute?s Fisheries Program
	Number of fishermen participating in the pirarucu management process	0	170	170	Reports submitted by fishing colonies and community-based organizations.		Mamirau? Institute?s Fisheries Program

indigenous land and four productive landscapes	Caiman management plan developed for Piaga?u-Purus SDR	Caiman management plans submitted to regulatory agencies are usually denied due to faults in document preparation related to misinterpretation of the relevant legislation or inadequate application and monitoring of management process. Community based organizations have little or no training to implement and effectively monitor caiman management plans.	Baseline information collected with local communities, including zoning map of the management area identifying nesting locations and harvest areas and population surveys	Caiman management plan delivered to AMEPP	Progress report and management plan		Mamirau? Institute?s Fauna Management Program
	Development and approval of required documents for implementation of community-based tourism activities in Jaquiri IL.	Visitation Plan prepared and already submitted to FUNAI.	Visitation Plan evaluated and approved by FUNAI	Community-based tourism implemented in Jaquiri IL.	Progress reports	FUNAI analyses and replies in a timely manner.	Mamirau? Institute?s Community-based Tourism Program

	Percent farmers trained by the project on Agroecological Systems Management Protocol (ASMP) that apply its principles in their productive areas	0	10%	50%	Progress reports	Stakeholders actively participate in training.	Mamirau? Institute?s Agroecosystems Management Program
	Number of beneficiaries trained (by target group) on the ASMP, disaggregated by gender	0	IPLCs: 20 Local technicians: 8 (50% women)	IPLCs: 100 Local technicians: 8 (50% women)	Progress report	Stakeholders actively participate in training.	Mamirau? Institute?s Agroecosystems Management Program
	Forest management plan for non-timber products developed and adopted in two conservation units in the state of Amap? (FN do Amapa and RE do Amapa)	The Association of Women Extractivists of Araguari (Sementeiras do Araguari) is consolidated and its members carry out the management of forest resources, mainly those related to oilseed species. However, its members do not have an established protocol for the development of their activities.	Non-timber forest product management plan developed	Non-timber forest product management plan implemented in Amapa NF and Amapa SF	Progress report and management plan	Stakeholders are engaged and follow the management plan.	Mamirau? Institute?s Forestry Management Program

	Timber management plan developed for Piaga?u-Purus SDR	Currently, Amazonas state forest legislation establishes technical procedures for forest management plans in different categories and environments. However, there are no procedures for management in which two predominant environments coexist, as is the case of the Piaga?u-Purus SDR, which covers upland and floodplain areas.	Inventory and stock estimate activities initiated.	Forest management plan for Piagacu-Purus SDR delivered	Progress reports and management plan	Stakeholders are engaged in management plan development activities.	Mamirau? Institute?s Forestry Management Program
	Number of crab fishermen using baskets for transportation	0	240	720	Progress report	Stakeholders are willing to use baskets to transport crabs.	Researchers and monitors
	Percent reduction in mortality of swamp ghost crab during transport	To be determined in first semester Y1		30%	Direct observation	Mortality is adequately quantified.	Researchers and monitors

2.2 Improved livelihood opportunities for local communities arising from the adoption of sustainable technologies to strengthen target biodiversity value chains (pirarucu, agroforestry, tourism)	Number of pre-processing units for managed Pirarucu operating in target areas to improve the hygienic-sanitary quality of the product for its entry into the national sanitary inspection system	0	1	3 One unit each in the Jurupari, Capivara and Seringa Management Units	Photographic evidence Production logs State inspection seal	Unit present commitment. The inspection body of municipal and state authority works in collaboration. The services contracted for the constructions were completed correctly	
	Multifunctional Kitchen for processing fruit pulp and other agrobiodiversity foods built for the Clube de M?es of the Miss?o community in the Tef? region	Fruit pulp processing activities from the productive areas of the Tef? region are carried out in the homes of riverside dwellers, where there is no basic infrastructure necessary for the processing, packaging and/or cooling of food for commercial purposes, meeting the requirements hygienic-sanitary facilities	Multifunctional kitchen built	Multifunctional kitchen in operation	Production logs Health registration by competent authorites	The community presents commitment. The inspection body of municipal and national authority works in collaboration. The services contracted for the construction were completed correctly.	

	Number of stations developed to improve manioc flour production and obtain Geographic Indication certification (Farina Uarani)	The production of manioc flour in the Tef? region is mainly a family activity, carried out by practically all the farmers in traditional flour houses, which have a simple wooden structure and use basic instruments for processing	1	1 manioc flour production units operational	Sanitary registration number for production unit Production logs	The community presents commitment . The inspection body of municipal and state authority works in collaboratio n. The services contracted for the construction were completed correctly.	
	Experimental electric motor powered by photovoltaic solar energy implemented		Prototype model developed	Engines installed and tested in a community-based ecotourism initiative.	Prototype model document and progress report	Stakeholders are willing to test engines in real tourism activities.	

Outcome 3.1. Project implementation is supported by a gender sensitive M&E strategy based on measurable results, on adaptive management principles, and enhanced by access to information including status of biodiversity and its ecosystem benefits to society.			Project follows BMR	Project follows BMR	Project progress reports	ProDoc reviewed at inception, indicators, base-lines in place	PCU
Output 3.1.1. Monitoring and evaluation system developed with relevant project partners and key stakeholders, with clearly defined and verifiable indicators.	Project M&E system established and implemented	0	1	1	Project progress reports		PCU
	Mid-Term Review and Terminal Evaluation carried out on time	0	MTR in Year 2	TE in Year 4	MTR and TE reports		PCU
	Percent PPRs and PIRs submitted on schedule	0	100%	100%	PPRs and PIRs		PCU

Output 3.1.2. Lessons learned and best practices disseminated to key stakeholders and the general public.	Meetings with synergistic projects and key stakeholders (MMA, E, ICMBio, etc)	0	4	8	Meeting memory		PCU
	Protocols developed by the project incorporated into public policies (State, Federal or local)	To be checked in Prodoc	To be checked in Prodoc	To be checked in Prodoc	Legal documents		
	Protocols published and properly disseminated						

ANNEX B: RESPONSES TO PROJECT REVIEWS (from GEF Secretariat and GEF Agencies, and Responses to Comments from Council at work program inclusion and the Convention Secretariat and STAP at PIF).

Brazil: Strengthening participatory natural resource management processes for sustainable economic development, conservation of biodiversity and maintenance of carbon stocks in Amazon Wetlands. - FAO - GEFID= 10706	
Comment by Jennifer Novotney, U.S. Department of State (DOS), Bureau of Oceans and International Environmental and Scientific Affairs (OES), Office of Environmental Quality (ENV), Council, United States made on 1/11/2021	
Comment	Response

We are very supportive of this project?s aims, and the focus on community lead interventions. This is a very targeted project that makes a strong case for community-based natural resource management. Our domestic reviewers appreciate the flexibility for stake holder engagement within this proposal, however, the level of detail does not present a clear understanding of the management of this project, which leaves us uncertain of the successful trajectory of this project.	Noted. The management issues are more fully detailed in the project document.
On page 41 of the PIF, it states ?The M&E strategy of the project will be formulated with the relevant stakeholders and the expected results will be clearly defined, as well as the expected time frames for its achievement and confirmation through objective indicators and means of verification.? We are concerned this approach, while again offering flexibility and opportunity for stakeholder engagement, might not lead to as ambitious outcomes.	The PPG was used to fully elucidate M&E approaches as reflected in the prodoc.
We would like to see more developed risk management and mitigations strategies. This project is rated as a ?high-risk? project by the GEF, and the proposed mitigation strategies are not sufficient for the level of risk posed. This project?s success hinges on community participation, and the guidance and support of community leaders. Currently, the mitigation strategies focus on mapping risks, and developing plans, but does not adequately address those risks.	Noted. The prodoc now includes a comprehensive risk management and mitigation strategies.
Comment by Hannah Boyne, Senior Policy Advisor and Programme Manager, Department for Environment, Food and Rural Affairs? , Council, United Kingdom made on 1/7/2021	
Comment	Response

For the United Kingdom comments below, an initial agency response has been provided and can be found in the list of documents specific to the project in the GEF Portal. There could be a risk on delivery. This is mainly related to FAO eventually sub-contracting/outsourcing project implementation to third sector agencies.	Noted and addressed.
There seems to be an intention from the Brazilian Government to impose control over the performance of non-governmental organizations (NGOs) in the Amazon, in order to have them fully scanned and monitored by 2022. If the Brazilian Government intentions materialise, we foresee a direct repercussion on donors, government or international organisations being prevented from making financial transfers to NGOs, which jeopardise final project delivery and effective impact on the ground. The UK are closely following demonstrations from environmentalists and jurists explaining that idea is unconstitutional and threatens civil rights.	Noted. Mamiraua has a long and successful track record of working with the Government.
Comment by Liesl Karen Inglis, Senior Advisor, Department for Green Diplomacy and Climate (GDK), Ministry of Foreign Affairs of Denmark?, Council, Norway made on 1/11/2021	
Comment	Response
Key assumptions in the theory of change may not take sufficiently into account contextual organizational and policy alterations, mainly regarding governmental stakeholders.	Noted. The project?s framework is now much more detailed with regards to addressing organizational and policy considerations.
The risk analysis and mitigation measures on the lack of involvement of governmental stakeholders could be underestimated, leading to an unrealistic alignment between the project goals and the current Brazilian biodiversity policies	Note and addressed in the risk analysis.

It is essential to secure good buy-in at the highest political level in Par? and the other states included in the project, especially having in mind the barriers identified in the ToC regarding technical and organizational capacity and governance.	Noted. Mamiraua and FAO worked closely with these levels during the PPG.
Suggestion of further analysis on the sustainability of the project without/with less co-financing, in-kind support, and/or structural public policy backing	This is now addressed in the prodoc, including the sustainability analysis.
Informed ?National Center for Applied Technologies ? Water (NCAT)?, under the Ministry of Science and Technology of Brazil (MCTI), is not currently an existing institution under the Ministry if Science and Technology of Brazil.	Well-noted and addressed.
Component 1. Strengthening the enabling environment to sustainably manage Varzea floodplain forests and mangrove wetlands. (capacity development)	-
Participatory processes require an analysis of power relations both between the target groups and between the target groups and those who are responsible for these processes. Such an analysis is lacking in the project document. Some more information can be provided on the empowerment of the local stakeholder. This point might be of higher relevance if considering that Brazil has a strong Agri-business sector (on a general basis). This analysis can be preventive and be useful in the mechanism to resolve conflicts reported under ?Key assumption for The Theory of Change?.	This is well-noted. These issues were explored and discussed in detail during the PPG and reflected in the project design.
Communication strategies can be considered to be included in this component.	This is reflected both in the more detailed description of Component 1 activities as well as Component 3 communication strategy.

Not much is explained on how the private sector is involved, something than can be necessary to include in detail, given the strong private sector in Brazil. According to the project document: ?The private segment participating in the value chain is represented by associations of producers who will be directly beneficiaries of the project, and intermediaries and secondary beneficiaries.?	The issue of private sector engagement was considered during design and now integrated more fully within the project description.
Component 2. Sustainable use of protected areas and productive landscapes (implementation of the management plans and activities related to value chain development)	-
When working with the value chains of a product it is important to include an analysis of the supply and demand from the national and international market, at it is strictly related. This could also work as risk reducing measure.	Noted. the issues of value chains, supply/demand and various market levels were discussed with project stakeholders including beneficiaries during design.
Comment by Tom Bui, Director, Environment, Global Issues and Development Branch (MFM), Global Affairs Canada?, Council, Canada made on 1/11/2021	
Comment	Response
Canada understands that the project will intervene in multiple protected areas (PA) and buffer zones in the Amazon Wetlands. Specifically, the project will implement capacity building programs and provide technical support on agroforestry, non-timber products, forestry, pirarucu, caiman and mangrove crab management, as well as community. The project is planning to build and equip physical infrastructures within the PAs and their buffer zones. According to the ESMG this qualifies the risk as ?high? and requires preparation of a full environmental and social impact assessment (ESIA).	Noted and completed.

The project also involves indigenous peoples and traditional communities which requires the preparation of an Indigenous Peoples Plan (IPP) if a substantial number of project beneficiaries are indigenous and to follow a Free, Prior and Informed Consent process (FPIC) for all activities targeting indigenous peoples. It would be necessary to ensure that ESIA and IPP are adequately prepared.	Noted and completed.
Overall, Canada views the project proposal as well-written and demonstrates effectiveness of community-based natural resource management in critical ecosystems such as mangroves and floodplains.	Noted.
However, adaptation benefits are not clearly discussed in the project documentation.	Adaptation benefits are now more fully addressed in the project description.
The success of this project will depend on whether or not local people will benefit more from biodiversity-friendly value chains than illegal extraction, as is currently the case.	This is very well noted. The issue of relative valuation was critical to project design and consideration.
STAP acknowledges that on scientific or technical grounds this project has merit. Canada supports the Secretariat?s recommendation	Noted.

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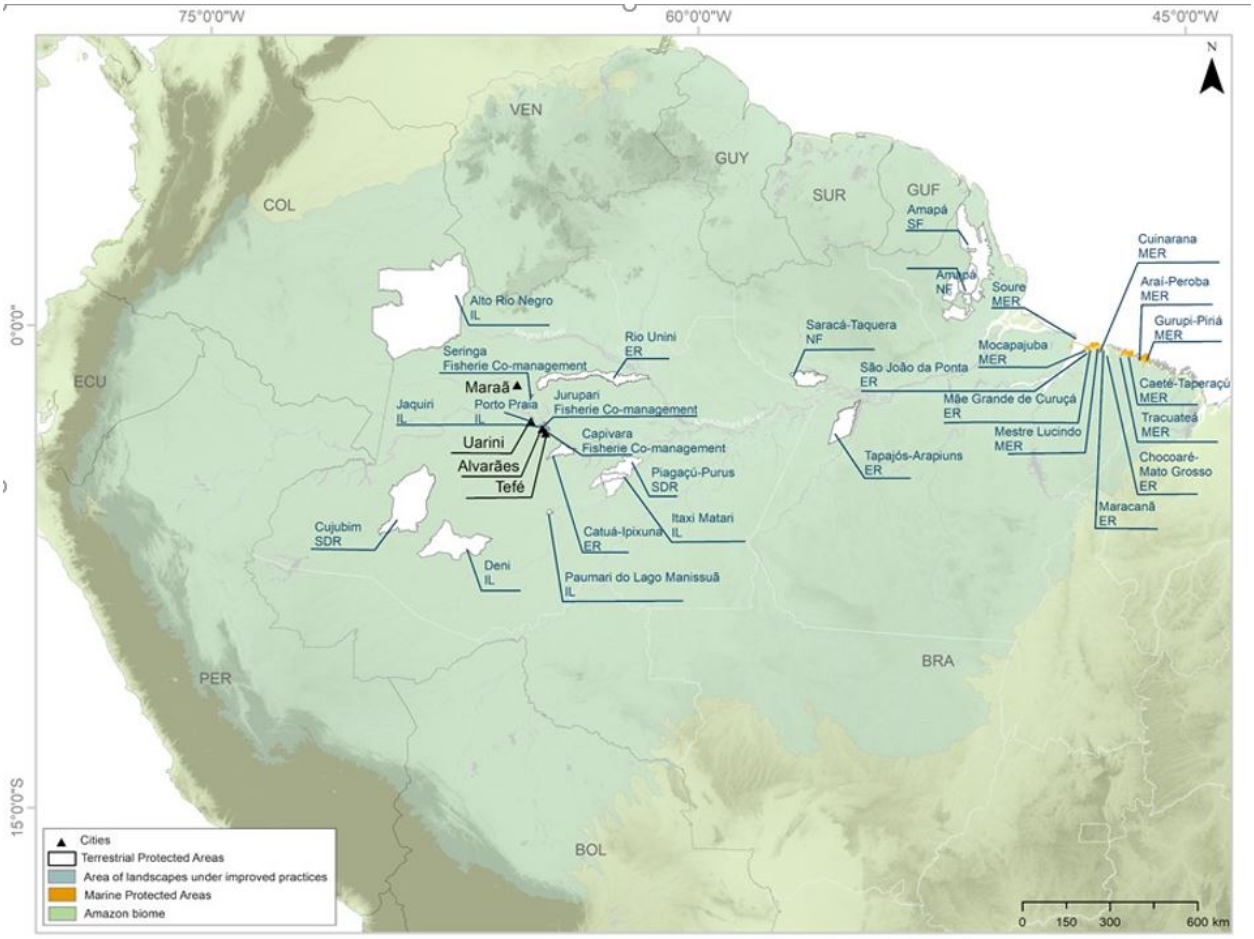
ANNEX C: Status of Utilization of Project Preparation Grant (PPG). (Provide detailed funding amount of the PPG activities financing status in the table below:

Activity	Budget	Expenses	Commitment
Activity 1: Elaborate Component 1. Strengthening the enabling environment to sustainably manage varzea floodplain forests and mangrove wetlands.	35,572	35,572	-
Activity 2: Elaborate Component 2. Participatory management and sustainable use of protected areas and productive landscapes.	30,000	25,000	
Activity 3: Elaborate Component 3. Monitoring and evaluation (M&E) of the impact of knowledge transfer and good practices.	22,000	20,000	2,000
Activity 4: Stakeholder consultations, gender mainstreaming, partnership/co-financing and implementation arrangements.	17,786	22,786	
Activity 5. Preparation of GEF submission package	44,642	35,000	9,642
Total	150,000	138,358	11,642

ANNEX D: Project Map(s) and Coordinates

Please attach the geographical location of the project area, if possible.



Project sites? coordinates are as follows:

Proposed Project Site	Lat	Long
Porto Praia Indigenous Land	-2,8933	-65,1197
Jaquiri Indigenous Land	-3,0846	-64,8801
Piaga?u-Purus Sustainable Development Reserve	-4,8611	62,4954
Catu?-Ipixuna Extractivist Reserve	-3,8505	-64,2123
Amap? State Forest	1,4061	-51,1523
Amap? National Forest	1,3676	-51,1523
Sarac?-Taquera National Forest	-1,6971	-56,6125
Algodoal-Maiandeua Environmental Protection Area	-0,6166	-47,5605

Soure Marine Extractivist Reserve	-0,3886	-48,4277
S?o Jo?o da Ponta Extractivist Reserve	-0,8016	-47,9604
M?e Grande de Curu?? Extractivist Reserve	-0,5932	-47,8852
Mocapajuba Marine Extractivist Reserve	-0,6976	-48,0219
Cuinarana Marine Extractivist Reserve	-0,7758	-47,695
Reserva Extrativista Marinha Mestre Lucindo Marine Extractivist Reserve	-0,5987	-47,7191
Maracan? Marine Extractivist Reserve	-0,7154	-47,4705
Chocoar?- Mato Grosso Extractivist Reserve	-0,8895	-47,4073
Tracuateua Marine Extractivist Reserve	-0,7964	-46,8745
Caet?-Tapera?u Marine Extractivist Reserve	-0,8802	-46,6973
Ara?-Peroba Marine Extractivist Reserve	-0,9832	-46,4639
Gurupi-Piri? Marine Extractivist Reserve	-0,973	-46,2277
Jurupari Grande Sustainable Productive Territory	-3,049	-64.718
Capivara Sustainable Productive Territory	-3.178	-64.641
Seringa Sustainable Productive Territory	-2.171	-65.131
Tef? Region	-3.465	-65.699

ANNEX E: Project Budget Table

Please attach a project budget table.

FAO Cost Categories	Unit	Unit cost	No. Units	Component 1	Component 2	Component 3	Subtotal	PMC	Total	M&E
5011 Salaries professionals										
				0	0	0	0		**0**	
5011 Sub-total salaries professionals				0	0	0	0	0	**0**	0
5012 GS Salaries										
				0	0	0	0		**0**	
5012 Sub-total GS salaries				0	0	0	0	0	**0**	0
5013 Consultants										

National consultants										
PMU - Project coordinator (expert in project monitoring and coordination)	months	2,302	45	0	0	0	0	103,587	**103,587**	
Instructors of long duration course	months	1,196	150	179,465	0	0	179,465		**179,465**	
Instructors for enhancement of managerial capacities	months	1,195	85	50,179	51,373	0	101,552		**101,552**	
Instructors for agrosystem management protocols	months	1,195	45	0	53,763	0	53,763		**53,763**	
Instructors for caiman management	months	1,000	60	0	59,972	0	59,972		**59,972**	
Consultants to study the impact of social technologies	Months (fellowships)	650	12		7,800	0	7,800		**7,800**	
Consultants to develop timber forest plans	months	1,195	45		53,763	0	53,763		**53,763**	
Promoters of community based tourism	months	1,195	45	0	53,763	0	53,763		**53,763**	
Consultants to study the sanitary hygienic conditions	Months (fellowships)	650	24	0	15,600	0	15,600		**15,600**	
Consultants to study the health status of fishers	Months (fellowships)	650	24		15,600	0	15,600		**15,600**	
Consultant to study the value chain of ghost crab	Months (fellowships)	650	72		46,800	0	46,800		**46,800**	
Consultants to oversee all the management protocols	Months	1,195	90		107,525	0	107,525		**107,525**	

Consultant to lead the plan of action for youth	Months	1,195	45		53,763	0	53,763		**53,763**	
Instructors for fruit pulp processing	Days	80	29		2,308	0	2,308		**2,308**	
Instructors on pirarucu processing	Months (fellowships)	629	30		18,885	0	18,885		**18,885**	
Communication consultants	months	1,195	45		0	53,763	53,763		**53,763**	
Sub-total national Consultants				229,644	540,914	53,763	824,320	103,587	**927,907**	**0**
International consultants										
Mid-Term Review	lump sum	35,000	1	0	0	35,000	35,000		**35,000**	35,000
International consultant - Final evaluation	lump sum	45,000	1	0	0	45,000	45,000		**45,000**	45,000
Sub-total international Consultants				0	0	80,000	80,000	0	**80,000**	**80,000**
5013 Sub-total consultants				**229,644**	**540,914**	**133,763**	**904,320**	**103,587**	**1,007,907**	**80,000**
5650 Contracts										
Agroecological Systems Management Protocol LoA	lump sum	7,693	1	7,693	0	0	7,693	0	**7,693**	0
Community-based tourism protocol LoA	lump sum	5,288	1	5,288	0	0	5,288		**5,288**	
Non-timber forest products protocol LoA	lump sum	9,471	1	9,471	0	0	9,471		**9,471**	
Caiman management protocol LoA	lump sum	2,885	1	0	2,885	0	2,885		**2,885**	
Service for the pirarucu management protocol	lump sum	144	1	0	144	0	144		**144**	
Service for articulation of fairs and negotiation spaces	lump sum	4,692	1	0	4,692	0	4,692		**4,692**	

Service contracts for fruit processing plants	lump sum	63,340	1	0	63,340	0	63,340		**63,340**	
Service contracts for pirarucu processing	lump sum	108,004	1	0	108,004	0	108,004		**108,004**	
Service contracts for enhancement of cassava flour processing	lump sum	19,615	1	0	19,615	0	19,615		**19,615**	
Service contracts for biodiversity monitoring	lump sum	712	1		712		712		**712**	
Service contracts for accounting	lump sum	1,154	1		0	1,154	1,154		**1,154**	
Service contracts for communication and publishing	lump sum	4,202	4	0	0	16,808	16,808		**16,808**	
				0	0	0	0		**0**	
Terminal Report	lump sum	6,750	1	0	0	6,750	6,750		**6,750**	6,750
OPIM - Audits	lump sum	9,025	4	0	0	0	0	36,100	**36,100**	0
OPIM Spot-checks	Per unit	4,275	4	0	0	0	0	17,100	**17,100**	0
5650 Sub-total Contracts				22,452	199,392	24,712	246,556	53,200	**299,756**	**6,750**
5021 Travel										
Travel for international consultants	lump sum	0	0	0	0	0	0		**0**	0
Travel for national consultants	lump sum			0	0	0	0		**0**	0
Travel for PMU	lump sum			0	0	0	0		**0**	
Travel for implementation of management protocols	lump sum	724	180	0	130,346	0	130,346		**130,346**	

Travel for improved resource management	lump sum	540	45	0	24,311		24,311		**24,311**	
Travel for biodiversity monitoring	lump sum	624	40	0	24,973		24,973		**24,973**	
Travel for awareness and communicatio n	lump sum	240	4			962	962		**962**	
5021 Sub-total travel				0	179,630	962	180,59 2	0	**180,59 2**	**0**
5023 Training										
Long course for young leaders	Course 1 yr	71,26 9	3	213,808	0	0	213,80 8		**213,80 8**	
Community-based tourism protocol				70	0	0	70		**70**	
TBC training workshop with communities of FLONA Sarac?-Taquera	Worksho p	1,149	2	2,298	0	0	2,298		**2,298**	
Short Modular Course Community-based tourism in Tef?	Course	26,10 5	3	78,316	0	0	78,316		**78,316**	
Short Modular Course Forestry ? Community-based forest management of non-timber Resources in Tef?	Course	5,791	2	11,582	0	0	11,582		**11,582**	
Short Modular Course Forestry - Community-based forest management of timber in Varzea Floodplain Forests in Tef? (1st stage)	Course	12,86 3	1	12,863	0	0	12,863		**12,863**	

Short Modular Course Forestry - Community-based forest management of timber in Varzea Floodplain Forests in Tef? (2st stage)	Course	13,481	1	13,481	0	0	13,481		**13,481**	
Short Modular Course Management of Agroecological Systems in Tef? (Module 1 Good practices in agroecological and organic production)	Course	10,247	1	10,247	0		10,247		**10,247**	
Short Modular Course Management of Agroecological Systems in Tef? (Module 2 Management and implementation of agroforestry system (AFS) without the use of fire)	Course	7,465	1	7,465	0		7,465		**7,465**	
Short Modular Course Management of Agroecological Systems in Tef? (Module 3 Management of native stingless bees)	Course	8,231	1	8,231	0		8,231		**8,231**	

Short Modular Course of Community-based Caiman Management in Tef?	Course	4,926	3	14,777	0	0	14,777		**14,777**	
Short Modular Course of Shared management of fishery in Tef?	Course	24,814	4	99,255	0		99,255		**99,255**	
Short Modular Crab management protocol course for fishermen	Course	2,317	48	111,226	0	0	111,226		**111,226**	
Financial Management and Market Access (Module I Prices, Financial Organization)	Course	10,586	1	10,586	0	0	10,586		**10,586**	
Associativism and Leadership (Modules 1,2,3,4)	Courses	13,946	10	139,456	0	0	139,456		**139,456**	
Marketing and Commercialization Strategies (Module I Marketing Techniques)	Module	11,983	1	11,983	0	0	11,983		**11,983**	
Marketing and Commercialization Strategies (Module II Marketing and Promotion Tools)	Module	57,416	1	57,416	0	0	57,416		**57,416**	
Financial management and market access	Course	8,002	1	8,002	0	0	8,002		**8,002**	

Financial Management and Market Access (Module II Market Access and Promotion Publications	Module	7,788	1	7,788	0	0	7,788		**7,788**	
Marketing and commercialization strategies (Module III Articulation of fairs and negotiation spaces	Module	1,477	1	0	1,477	0	1,477		**1,477**	
Management data analysis and reporting workshop - Col?nia Z-32 and ASPEM (Mara?)	Workshop	2,043	4	8,173	0	0	8,173		**8,173**	
Management data analysis and reporting workshop - Colonies Z-4 and Z-23 (Tef?)	Workshop	5,123	4	20,493	0	0	20,493		**20,493**	
Viagem - Articula??o Interinstitucional (IDSM, Z32 e ASPEM)	Workshop	5,312	1	5,312			5,312		**5,312**	
Viagem - Articula??o Interinstitucional (IDSM, Z4 e Z23)	Workshop	5,423	1	5,423			5,423		**5,423**	
Agroecological Systems Management Protocol	Workshop	28,609	1	28,609	0	0	28,609		**28,609**	
Non-timber forest products protocol	Workshop	21,641	1	21,641	0	0	21,641		**21,641**	

Timber Forest Management Protocol for V?rzea Floodplain Forests and Terra Firme Forests	Workshop	15,712	1	15,712	0	0	15,712		**15,712**	
Field practice of agroecological system management	Workshop	7,601	1	0	7,601		7,601		**7,601**	
Field practice of caiman management protocol	Workshop	1,422	1	0	1,422		1,422		**1,422**	
Field practise of caiman management plan for Piaga?u-Purus SDR	Workshop	3,962	1	0	3,962		3,962		**3,962**	
Field practise of timber management protocol	Module	85,477	1	0	85,477		85,477		**85,477**	
Forest management plan for timber - Company & community agreement exchange	Module	23,773	1	0	23,773		23,773		**23,773**	
Financial Management and Market Access (Module II: Access to market and participation in bids	Module	5,406	3	0	16,219	0	16,219		**16,219**	
Field implementation of community tourism	Module	3,746	1	0	3,746		3,746		**3,746**	

Implementation of the community-based tourism - Exchanges with the Federation of Indigenous Organizations of Rio Negro	Module	5,550	1		5,550		5,550		**5,550**	
Field practise of access to market and fairs	Module	6,250	3	0	18,750		18,750		**18,750**	
Field training for implementation of pirarucu management plans in Sustainable Productive Territories	Module	8,416	3	0	25,248	0	25,248		**25,248**	
Field year of the long course for young leaders (action plan)	Course 1 yr	68,679	3	0	206,036		206,036		**206,036**	
Field training for fruit processing	Workshop	1,279	1	0	1,279		1,279		**1,279**	
Field training of pre-processing of pirarucu	Workshop	8,395	3	0	25,184		25,184		**25,184**	
Training on use of solar engines for canoas	Workshop	1,038	3	0	3,115		3,115		**3,115**	
Training costs for improved cassava flour house	Workshop	3,355	1	0	3,355	0	3,355		**3,355**	
Training On the use of biodiversity monitoring tools	Workshop	1,081	4	0	4,323		4,323		**4,323**	
Inception Workshop	Workshop	3,000	1			3,000	3,000		**3,000**	3,000
Awareness and divulgation events	Workshop	3,652	12	0	0	43,821	43,821		**43,821**	

5023 Sub-total training				924,214	436,518	46,821	1,407,552	0	**1,407,552**	**3,000**
5024 Expendable procurement										
Office materials	Lumpsum		1	298	0	0	298	0	**298**	
Materials for the implementation of management protocols				0	67,731	0	67,731	0	**67,731**	
Materials for enhanced resource management					39,992		39,992		**39,992**	
Expendables for biodiversity monitoring					10,261		10,261		**10,261**	
Office expendables						28,462	28,462		**28,462**	
Communication expendables				0	0	5,643	5,643		**5,643**	
				0	0	0	0		**0**	
5024 Sub-total expendable procurement				298	117,983	34,104	152,386	0	**152,386**	**0**
6100 Non-expendable procurement										
Computers	Unit	688	20	13,750	0	0	13,750		**13,750**	
PC accessories	Unit	284	20	5,673	0	0	5,673		**5,673**	
Equipement for caiman management	Lumpsum	1,635	1	0	1,635	0	1,635		**1,635**	
Equipment for forest management plan for timber	Lumpsum	3,750	1	0	3,750	0	3,750		**3,750**	
Equipment for community tourism	Lumpsum	1,577	1		1,577		1,577		**1,577**	
Equipment for long course young leaders	Lumpsum	2,577	1		2,577		2,577		**2,577**	
Equipement for fruit processing plants	Lumpsum	5,208	1	0	5,208	0	5,208	0	**5,208**	

Equipment for pirarucu pre-processing	Lumpsum	37,854	1	0	37,854	0	37,854		**37,854**	
Equipment for solar engines for canoas	Lumpsum	12,905	1		12,905		12,905		**12,905**	
Equipment for biodiversity monitoring	Lumpsum	2,200	50		110,019		110,019		**110,019**	
Equipment for back-up, big data storage and voltage stabilization	Lumpsum	1,421	36			51,154	51,154		**51,154**	
Miscellanea informatic equipment	Lumpsum	1,356	4			5,423	5,423		**5,423**	
Miscellanea informatic equipment	Lumpsum	1,436	4			5,744	5,744		**5,744**	
6100 Sub-total non-expendable procurement				19,423	175,526	62,321	257,270	0	**257,270**	**0**
5028 GOE budget										
GOEs for management protocols	Lumpsum			288	0	0	288		**288**	
GOEs for the implemntation of field implementation of protocols	Lumpsum			0	11,212	0	11,212		**11,212**	
GOEs for field implmentation of resource management	Lumpsum			0	1,015	0	1,015		**1,015**	
Subscription fo the biodiversity monitoring software	Lumpsum				53,377	0	53,377		**53,377**	
Subscriptions for communication platforms	Lumpsum					3,846	3,846		**3,846**	
General office services	Lumpsum					4,038	4,038		**4,038**	
GOE for communication and exchanges of experiences	Lumpsum					32,404	32,404		**32,404**	

6300 Sub-total GOE budget	288	65,604	40,288	106,180	0	**106,181**	**0**
TOTAL	**1,196,319**	**1,715,567**	**342,971**	**3,254,857**	**156,787**	**3,411,644**	**89,750**

ANNEX F: (For NGI only) Termsheet

Instructions. Please submit an finalized termsheet in this section. The NGI Program Call for Proposals provided a template in Annex A of the Call for Proposals that can be used by the Agency. Agencies can use their own termsheets but must add sections on Currency Risk, Co-financing Ratio and Financial Additionality as defined in the template provided in Annex A of the Call for proposals. Termsheets submitted at CEO endorsement stage should include final terms and conditions of the financing.

Not applicable

ANNEX G: (For NGI only) Reflows

Instructions. Please submit a reflows table as provided in Annex B of the NGI Program Call for Proposals and the Trustee excel sheet for reflows (as provided by the Secretariat or the Trustee) in the Document Section of the CEO endorsement. The Agencys is required to quantify any expected financial return/gains/interests earned on non-grant instruments that will be transferred to the GEF Trust Fund as noted in the Guidelines on the Project and Program Cycle Policy. Partner Agencies will be required to comply with the reflows procedures established in their respective Financial Procedures Agreement with the GEF Trustee. Agencies are welcomed to provide assumptions that explain expected financial reflow schedules.

Not applicable

ANNEX H: (For NGI only) Agency Capacity to generate reflows

Instructions. The GEF Agency submitting the CEO endorsement request is required to respond to any questions raised as part of the PIF review process that required clarifications on the Agency Capacity to manage reflows. This Annex seeks to demonstrate Agencies? capacity and eligibility to administer NGI resources as established in the Guidelines on the Project and Program Cycle Policy, GEF/C.52/Inf.06/Rev.01, June 9, 2017 (Annex 5).

Not applicable