GEF-8 PROJECT IDENTIFICATION FORM (PIF)

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General Project Information

Project Title
Restoration of Wetlands and other important Amazonian Ecosystems - Capacity-building, innovation, development and technological transfer for ecological restoration and climate change mitigation

Region	GEF Project ID
Brazil	11167
Country(ies)	Type of Project
Brazil	FSP
GEF Agency(ies):	GEF Agency ID
FAO	744042
Executing Partner	Executing Partner Type
Mamiraua Sustainable Development Institute Ministry of Science, Technology and Innovation (MCTI)	Others Government
GEF Focal Area (s)	Submission Date
Multi Focal Area	4/12/2023

Project Sector (CCM Only)
AFOLU

Taxonomy
Protected Areas and Landscapes, Biodiversity, Focal Areas, Biomes, Forest, Influencing models, Type of Engagement, Communications, Stakeholders, Civil Society, Gender results areas, Gender Equality, Gender Mainstreaming, Learning, Capacity, Knowledge and Research, Knowledge Generation, Community Based Natural Resource Mngt, Terrestrial Protected Areas, Tropical Rain Forests, Amazon, Convene multi-stakeholder alliances, Demonstrate innovative approache, Deploy innovative financial instruments, Community Based Organization, Non-Governmental Organization, Local Communities, Indigenous Peoples, Behavior change, Partnership, Beneficiaries, Knowledge Generation and Exchange, Capacity Development, Access and control over natural resources, Training, Professional Development, Indicators to measure change

Type of Trust Fund	Project Duration (Months)
GET	60
GEF Project Grant: (a)	GEF Project Non-Grant: (b)
5,000,000.00	0.00
Agency Fee(s) Grant: (c)	Agency Fee(s) Non-Grant (d)
475,000.00	0.00
Total GEF Financing: (a+b+c+d)	Total Co-financing
5,475,000.00	40,910,000.00
PPG Amount: (e)	PPG Agency Fee(s): (f)
150,000.00	14,250.00

PPG total amount: (e+f)	Total GEF Resources: (a+b+c+d+e+f)
164,250.00	5,639,250.00

Project Tags

CBIT: No NGI: No SGP: No Innovation: No

Project Summary

Provide a brief summary description of the project, including: (i) what is the problem and issues to be addressed? (ii) what are the project objectives, and if the project is intended to be transformative, how will this be achieved? iii), how will this be achieved (approach to deliver on objectives), and (iv) what are the GEBs and/or adaptation benefits, and other key expected results. The purpose of the summary is to provide a short, coherent summary for readers. The explanation and justification of the project should be in section B "project description".(max. 250 words, approximately 1/2 page)

Despite the unequivocal importance of the Amazon Forest and a global call for ecosystem restoration, the Amazon continues to be deforested at alarming rates and there are important obstacles to restoration in Amazonian wetlands and lowland forest ecosystems. The objective of this project is to restore wetland and lowland forest ecosystems and biodiversity in the Amazon mainland and coast through strengthening capacity for ecosystem restoration, improving the enabling environment, and initiating restoration in overlooked areas of the Amazon.

To achieve this objective, the project will deliver four components covering: (1) the development of a Strategic Plan for the restoration of wetland ecosystems in the Amazon, with focus on *varzeas* and mangroves, and promotion of its adoption by relevant stakeholders to support conservation of these ecosystems and their globally significant biodiversity; (2) the strengthening of technical capacities for ecological restoration and related value chains; 3) the development of technology and generation of background knowledge to improve restoration initiatives in Amazonian wetlands and lowland forest; (4) the restoration of the three targeted ecosystems of the project; (5) the communication of knowledge and project results, as well as good practices in restoration.

The expected global environmental benefits (GEBs) of this project are: i) the restoration of 25,774 hectares in important Amazonian ecosystems; ii) the improved management of at least 1,869,230 hectares, avoiding emissions of -10,128,438 tCO_2e. Direct project co-benefits will be delivered to 1,669 people. The project is aligned with GEF-8 strategy by promoting the conservation of biodiversity, enhancement of carbon sinks and maintenance of environmentally significant ecosystems for mitigation of global climate change.

Indicative Project Overview

Project Objective

To restore wetland and lowland forest ecosystems and biodiversity in the Amazon mainland and coast through strengthening capacity for ecosystem restoration, improving the enabling environment, and initiating restoration in overlooked areas of the Amazon.

Project Components

1. Improving the enabling environment for ecosystem restoration

Component Type	Trust Fund
Technical Assistance	GET
GEF Project Financing ($)	Co-financing ($)
178,000.00	2,513,022.00

Outcome:

Outcome 1.1. Integrated landscape management approach adopted in overlooked areas of the Amazon (*varzeas,* mangroves, *Terra Firme* lowland forests of Central and Western Amazonia), with a gender-sensitive vision.

GEF Core Indicator 4: Area of landscapes under improved practices

Target: 1,869,230ha

Output:

Output 1.1.1. Strategic Plan for the restoration of selected wetlands and lowland forest ecosystems in the Amazon.

Target: plan published and adopted in at least one varzea, one mangrove and one lowland forest site.

Output 1.1.2. Report on the state of the art of wetlands/ lowland ecosystem restoration.

Output 1.1.3. New scientific and technical advisory panel (focused on wetlands and lowland forest of Amazonia and linked to CONAVEG[1][1]), operational.

[1] The Executive Commission for Control of Illegal Deforestation and Recovery of Native Vegetation (CONAVEG) was created under the Ministry of the Environment and Climate Change (MMA), by Presidential Decree No. 10.142, of November 28, 2019, as a collegiate body for public policy formulation for the reduction of illegal deforestation and promotion of the recovery of native vegetation. CONAVEG is an inter-ministerial decision instance, coordinated by the MMA, which has the mission of proposing plans and guidelines, coordinating and articulating strategic sectoral initiatives for all Brazilian biomes, incorporating the actions of previous action plans. In the actions developed for the Legal Amazon, CONAVEG works in articulation with the National Council of the Legal Amazon (CNAL).

2. Strengthening capacities for ecosystem restoration

Component Type	Trust Fund
Technical Assistance	GET
GEF Project Financing ($)	Co-financing ($)
966,000.00	10,052,091.00

Outcome:

Outcome 2.1.

Technical capacities for ecological restoration, strengthened.

GEF Core indicator 11: Number of direct beneficiaries disaggregated by gender. Target: 1,669 people (50% women).

Output:

Output 2.1.1. A gender-sensitive capacity development program[1][2], created.

(Targeted audience: Indigenous peoples and local communities (IPLCs); municipal, state, and national governmental agencies; family farmers; Micro, Small and Medium Entrepreneurs (MSMEs).

Output 2.1.2. Restoration networks identified and strengthened with a gender-sensitive approach.

(Targeted audience: MSMEs)

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[1] Topics: seed identification, collection, handling, and storage, phenological and fauna monitoring techniques, seedling nurseries and commercialization, agroforestry systems implementation and maintenance and entrepreneurship.

3. Initiation of restoration efforts in wetlands and lowland forest ecosystems

Component Type	Trust Fund
Investment	GET
GEF Project Financing ($)	Co-financing ($)
3,326,000.00	24,888,977.00

Outcome:

Outcome 3.1. Restoration initiatives launched in overlooked wetlands and lowland forest ecosystems (*Varzea* and mangroves wetlands, and Lowland *Terra Firm*e Forests)

GEF Core Indicator 3: 25,774 ha (400 ha active restoration, 25,374 ha passive restoration)

GEF Core Indicator 4: Area of landscapes under improved practices:

(Sub-indicator 4.1: 12,230 ha; Sub-indicator 4.4 = 1,857,000 ha. Total: 1,869,230ha)

GEF Core Indicator 6.1: -10,128,438 *tCO_2e of GHG emissions mitigated in the AFOLU sector*

Output:

3.1.1. Botanical and fauna surveys in the areas of ecological restoration targeted by the project.

3.1.2. Monitoring systems for the areas of ecological restoration targeted by the project.

3.1.3. Laboratory tests to determine the optimal temperature and humidity conditions for seed germination, storage, and production of robust and resilient seedlings for planting.

3.1.4. Forest restoration protocols for *varzeas* and lowland *terra firme* forests of Central Amazonia, incorporating women in decision-making, improving their access to natural resources, and increasing their forest-based benefits.

3.1.5. Seedling nurseries built and in operation, involving women networks.

3.1.6 Areas ecologically restored and maintained as reference as field trainings sites in three key focal project areas (Central Amazon region, Manaus municipality and coast of Pará)

4. Awareness raising and knowledge management

Component Type	Trust Fund
Technical Assistance	GET

GEF Project Financing ($)	Co-financing ($)
100,000.00	1,507,815.00

Outcome:

Outcome 4.1. Communication and knowledge management in place.

Expected indirect beneficiaries: Number of people reached out by the project communication outputs: 200,000.

Output:

4.1.1. Participatory and gender-inclusive project's communication strategy developed and under implementation.

4.1.2. Knowledge management plan developed and implemented with a gender-sensitive approach.

M&E

Component Type	Trust Fund
Technical Assistance	GET
GEF Project Financing ($)	Co-financing ($)
200,000.00	

Outcome:

5.1. Project implemented according to results- based management (RBM) principles.

Output:

5.1.1. Project M&E system designed and operational.

5.1.2. Gender-sensitive and responsive project monitoring reports, mid-term review and terminal evaluation contribute to the successful delivery of the project.

Component Balances

Project Components	GEF Project Financing ($)	Co-financing ($)
1. Improving the enabling environment for ecosystem restoration	178,000.00	2,513,022.00
2. Strengthening capacities for ecosystem restoration	966,000.00	10,052,091.00
3. Initiation of restoration efforts in wetlands and lowland forest ecosystems	3,326,000.00	24,888,977.00
4. Awareness raising and knowledge management	100,000.00	1,507,815.00
M&E	200,000.00	

Subtotal	**4,770,000.00**	**38,961,905.00**
Project Management Cost	230,000.00	1,948,095.00
Total Project Cost ($)	**5,000,000.00**	**40,910,000.00**

Please provide justification

not applicable

PROJECT OUTLINE

A. PROJECT RATIONALE

Briefly describe the current situation: the global environmental problems and/or climate vulnerabilities that the project will address, the key elements of the system, and underlying drivers of environmental change in the project context, such as population growth, economic development, climate change, sociocultural and political factors, including conflicts, or technological changes. Describe the objective of the project, and the justification for it. (Approximately 3-5 pages) see guidance here

Global environmental significance

1. The Amazon Forest is the largest tropical forest in the world, shelters 10% of the planet's biodiversity, provides important ecosystem services, stores more than 150-200 billion tons of carbon and is essential for the direct subsistence of more than 34 million people[3][3,4][4]. Over 60% of the Amazon Forest (4.3 million km^2) is within Brazilian borders[5][5] . Adequate management of this quintessential tropical forest and its globally significant biodiversity is necessary for maintaining global climate and regional hydrological cycles and mitigating the impacts of climate change and human population growth on environmental sustainability and food security for the Indigenous Peoples and Local Communities (IPLCs)[6][6]. The Brazilian portion of the Amazon Forest is protected by 336 conservation units and 424 Indigenous Lands that protect approximately 48,7% of the regions[7][7]. Such biophysical, sociocultural, and economic importance make the conservation and sustainable management of the Amazon Forest a global priority.

2. Despite the critical ecological significance and the importance of the Amazon Forest for the maintenance of climate and for the mitigation of the negative impacts of climate change on nature and humanity, illegal deforestation, forest degradation and fires have resulted in the loss of almost 20% of this biome. The project area is characterized as follows.

Wetlands

3. Wetlands are critical ecosystems offering a multitude of essential services for both the environment and human well-being. Despite their importance, almost 90% of the world's wetlands[8][8] have been lost and continue to disappear at an alarming rate.

4. Floodplain **wetlands** represent 11% of the Amazon Basin area and are highly productive ecosystems[9][9]. The **Central Amazon floodplain** is one of the largest freshwater ecosystems in the tropics and extends over approximately 300,000 km^2 (about the area of Italy). The main plant communities in these environments yield high primary production with values of 33 tons/ha/year in forested areas and 50-100 tons/ha/year in herbaceous areas.

5. **Varzea** floodplain forests, which occur along the Amazon River and its main white-water tributaries, are characterized by an annual flood pulse that can reach over 10m. They are the most densely populated and

most endangered ecosystem in Amazonia. Due to the renewal of soil nutrients caused by the annual flood, varzeas are some of the most productive ecosystems in the Amazon and serve as an important breeding ground for fish, birds, mammals, and reptiles. To survive in this environment, both plants and animals must have a broad range of morphological, anatomical, physiological, and ethological adaptations. These wetlands play a fundamental role in the provision of environmental services, such as filtering and retaining water and sediments, recharging aquifers, regulating microclimate, and as important reserves of terrestrial carbon. It is estimated that approximately 50% of the Amazonian fish species occur in floodplain systems associated with large rivers, including most species of commercial importance.

6. The tidal varzea floodplain forest and mangroves are the inundated land in and around the estuary of the Amazon River estuary in eastern Brazil. Flooding occurs across twice a day when the ocean tide pushes a large volume of river discharge onto the landscape, elevating water level 2-3 m. The Amazon Estuary and Mangroves Ramsar Site (Site 2337)[10]10 is the largest fluvial-maritime archipelago on the planet. The site consists of a corridor of 23 conservation units with an area of over 3.8 million ha. On this stretch of coast lies one of the biggest continuous mangrove formations in the world with over 8,900 km^2 stretching over 700 km (70% of all the mangroves of Brazil). Already more than half of coastal wetlands have been lost as cities and infrastructure have expanded along coastlines.

7. **Environmental problem**: Degradation of these ecosystems puts the delivery of ecosystem services at risk: (1) provisioning services: fish and other aquatic and estuarine species, species of terrestrial fauna, construction materials, vegetable fibers, materials for construction, medicinal plants, firewood, materials for navigation, nursery for many species of fish, and pastures; (2) regulation services: water purification, aquifer recharge, water storage, river current regulation and flood mitigation, climate regulation, nutrient recycling; (3) cultural services: ecotourism, education and awareness, knowledge and understanding of wetlands ecology and biogeochemistry, aesthetic and spiritual relevance for various peoples.

Lowland Forests (*Terra Firme*)

8. The lowland forests of Amazonia are characterized by rich biodiversity and carbon storage capacity and are of vital global importance. Covering a significant portion of Amazonia, these forests support unique plant and animal species, help regulate climate patterns, and serve as natural water filters, maintaining water quality and supporting aquatic ecosystems. Additionally, they are a source of traditional medicine and play a crucial role in the cultures and livelihoods of IPLCs. Protecting and conserving these forests is essential for global climate mitigation, the preservation of biodiversity, and the well-being of local populations, making them a cornerstone of Amazonia's ecological and environmental significance.

9. **Environmental problem**: Climate change in lowlands, along with associated droughts and altered precipitation patterns, place additional pressure on these forests, potentially disrupting their delicate ecological balance. These areas are even more vulnerable to anthropogenic pressures due to their ease of access and lack of flooding. Like wetlands, the degradation of these environments results in a loss of ecosystem services, including: (1) the harvesting of plant species common in regional cuisine and medicinal plants, construction materials, and terrestrial wildlife species; (2) services associated with hydrological cycles; (3) and cultural services.

Problems to address and justification.

10. As mentioned above, the Amazon Forest is a peculiar and imperiled ecosystem which main drivers of environmental degradation and loss of biodiversity in project areas are:

11. (1) illegal deforestation for land grabbing and cattle ranching: Whereas the project will not directly address deforestation for land grabbing and cattle ranching, the improvements brought by its interventions are considered to address the driver by emphasizing sustainable land management and conservation practices. Moreover, it will develop, implement, and promote responsible land use, ensuring the protection of critical ecosystems. To do so local communities will be involved in project planning and implementation to ensure that their needs and perspectives are considered.

12. (2) inadequate agricultural practices in soil preparation and maintenance with the use of fire and the use of inappropriate pesticides and fertilizers that reduce ecosystem resilience and contaminate waterways and groundwater. These factors cause a significant loss of biodiversity and affect the livelihoods of local communities who depend on natural resources. To address this driver the project will Implement sustainable agriculture practices that promote biodiversity conservation and soil health by provide training and capacity-building programs for local farmers to adopt sustainable agricultural practices. It is important to demonstrate the benefits of such practices, both in terms of environmental conservation and improved agricultural productivity.

13. (3) Illegal and accidental fires used for land clearing are often aggravated by drier climates and soils resulting from climate change that are a major driver of deforestation and decrease in land productivity.

14. These drivers have led to the main problem identified and to be addressed with this project: the continuing destruction and degradation of the Amazon Forest has resulted in significant losses of biodiversity as well as important stocks of stored carbon to the atmosphere.

Barriers to overcome

15. Despite the unequivocal importance of the Amazon Forest and a global call for ecosystem restoration, there are important obstacles to restoration in Amazonian wetlands and lowland forest ecosystems.

Barrier 1: The scientific and technological underpinnings for successful wetland and lowland ecosystem restoration in Amazon do not exist.

16. In ***varzea*** floodplain forests there are virtually no restoration initiatives or studies, and consequently no package of interventions to comply with Brazilian restoration laws and goals.[11]11,[12]12· In **lowland forests (*Terra Firme***), the gap lies in the absence of protocols focused on the Central and Western Amazon, as these protocols are only available for the Eastern Amazon.

17. Several initiatives and strategies for ecosystem restoration are being implemented in the Brazilian Amazon. A recent study shows that, over the past 30 years, 405 restoration projects and 105 scientific studies have been carried out. Most of these initiatives were conducted in areas of lowland forests and involve planting seedlings, followed by agroforestry techniques and natural regeneration[13]13,[14]14. For these ecosystems several studies are available pertaining to different restoration strategies[15]15,[16]16,[17]17,[18]18 and few manuals[19]19 providing cost estimates and suggesting methodologies that can be implemented. These protocols were based on lowland forest areas in Eastern Amazon, which, despite being the same forest type, has different soil, floristic composition, and structure than Central Amazon, underscoring the need to build specific protocols for these different regions. Projects that consider local species help recreate healthier and more resilient ecosystems, preserve biodiversity, and promote greater long-term success.

18. Efforts are predominantly focused in areas that are easily accessible, in Eastern Amazon and upland areas. This indicates a shortage of basic and applied research to reinforce the selection of best practices for ecosystem restoration and a lack of restoration initiatives in certain regions. The selection of a restoration strategy relies on various factors, encompassing the type of existing forest cover, the extent of degradation, the potential for natural regeneration, and the goals/objectives of the restoration. Furthermore, ensuring ecosystem services and integrating these strategies with activities that have the potential to yield socioeconomic benefits is of paramount importance. Table 1 illustrates the biophysical differences between Eastern Amazon and Central-Western Amazon forests.

Table 1. Biophysical differences between Eastern Amazon and Central-Western Amazon forests

Features	Eastern Amazon forests	Central-Western Amazon forests
Soils[20]20	Haplic Gleysol	Argisol
		Haplic Gleysol
	Petroplinthic Soil	Luvisol
	Quartzarenic Neosol	
	Red-Yellow Argisol	Red-Yellow Argisol
	Red-Yellow Latosol	Red-Yellow Latosol

	Yellow Latosol	Spodosol Yellow Latosol
Main Phyto physiognomies[21]21	Alluvial Dense Rainforest, Lowland Dense Rainforest	Submontane Dense Rainforest, Alluvial Dense Rainforest, Lowland Dense Rainforest
Predominant climate[22]22	Tropical without dry season (Af)	Tropical monsoon (Am)

19. There are various initiatives worldwide in **Mangrove** restoration. The Brazilian Blue Initiative[23]23 stands as an exemplary effort centered on the conservation and restoration of mangroves in Brazilian coastal areas. Scientific studies and strategies conducted in mangrove areas30round the world[24]24,[25]25,[26]26,[27]27,[28]28 as well as in the Amazon estuary, showcase various strategies, but**,** only a **few manuals**[29]29,[30]30,[21]31, provide information on seed and propagule preparation, storage, germination, seedling planting, and area monitoring. There are no restoration intervention packages available that support multiple enabling conditions for the projects proposed area.

20. There are no well-established models of socioenvironmental restoration for Amazon wetlands. A low number of the existing initiatives are participatory models[32]32, even though there is a wide recognition of their relevance[33]33. The first protocols, although still very generic, are beginning to be elaborated for wetlands of global importance or relevance, and offer important inputs for Brazilian initiatives[34]34, although they are more focused on coastal areas of mangroves, and other permanently flooded environments, which have undergone sudden changes in their hydrological regime. Even so, the main principles and guidelines are beginning to be elaborated and will be consolidated as they are adopted by the initiatives that are carried out.

Barrier 2: Human resources gap. Absence of trained people.

21. In ***varzeas*** and **mangroves** there is no technically trained labor in critical activities such as seed collection and processing, production and planting of seeds and seedlings, and monitoring of restored areas.

22. In **lowland forests**, there is also a lack of technically trained labor in the expertise described above for wetlands.

23. The scarcity of well-established networks hampers the ability of restoration projects to access and utilize genetically similar propagules from the same ecoregions and hydrographic basins.

Barrier 3: Economic gap. Lack of commercialization and access to markets.

24. Although studies in Apuí (AM) show a satisfactory return within 10 years after restoration (revenues from agroforestry products)[36][35], rural producers struggle to commercialize sustainable products and by-products obtained in restored areas in the Amazon areas [35][36]. In the project intervention areas (see details in next Section), forest associations are unaware of how to sell their sustainable products in the regional and national markets. Intermediaries dominate the process of aggregation, and unfair prices are tendentially paid to the primary producers. Logistical problems, low level of entrepreneurial maturity, lack of knowledge of administrative aspects to access formal markets, poor understanding of existing policies related to forestry products, and the lack of technical support, prevent the development of a sustainable forest and wood[37][37] value chains (including both products and services).

Project stakeholders and beneficiaries

25. The project supports multistakeholder interactions, with integration of sectors beyond those directly involved in the value chain. Stakeholders for restoration efforts include government authorities, private sector entities, IPLCs and MSMEs (Micro, Small and Medium Entrepreneurs) from Amazonas and Pará states, as described below.

26. **Government institutions**: Federal and state environmental agencies in Brazil are responsible for upholding environmental laws, enforcing regulations, and overseeing protected areas. They also take the lead in implementing conservation and restoration policies at both national and state levels. Additionally, local governments may hold jurisdiction over land management and conservation within their respective regions, making their involvement essential. Polo BioAmazonas - Ministry of Integration and Regional Development (MIDIR), Federal Public Ministry (MPF) Manaus/Amazonas, National Foundation of Indigenous People/Tefé (FUNAI), Chico Mendes Institute for Biodiversity Conservation (ICMBIO), Municipal and State Environmental Agencies, are some of the projects partner institutions. Full list and details on engagement in Table 6 (Section D: Policy Requirements).

27. **Indigenous People and Local Communities (IPLCs)**: IPLCs living in the Brazilian Amazon are the primary custodians of these ecosystems. They possess invaluable traditional knowledge about the land and play a central role in its protection. Their sustainable land management practices and efforts to preserve cultural heritage significantly contribute to conservation of the ecosystems targeted in this project and their participation will be imperative for restoration to be possible. Miratu Indigenous Land is one of the projects IPLCs. A full social assessment will be conducted during full project preparation. It will include Free, Prior and Informed Consent (FPIC) exercises, based on FAO and GEF policies on Indigenous Peoples and Stakeholder Engagement.

28. **Non-Governmental Organizations (NGOs):** Environmental NGOs, both national and international, are actively engaged in restoration efforts. They conduct research, advocate for policy changes, and implement on-the-ground projects. These organizations often collaborate closely with local communities, working on education, capacity building, and policy development to support conservation initiatives. Rio Negro Indigenous Organizations Federation (FOIRN), Bom Jesus do Baré Community Association, Boa Esperança Community Association, Missão Community Association, Tefé National Forest, and surroundings Agroextractivist producers Association (APAFE), Maniva Agroecology Network (REMA), Amazon Entrepreneurship and Innovation Network (RAMI). Full list and details on engagement in Table 6.

29. **Private Sector:** Some logging and agriculture companies have historically contributed to deforestation, but there is a growing trend toward sustainable practices and support of restoration initiatives. Many businesses are transitioning to sustainable logging practices and promoting responsible farming, often through certification schemes like the Forest Stewardship Council (FSC) and the Roundtable on Sustainable Palm Oil (RSPO). Resources raised by companies through carbon credit are also important for the sustainability of restoration in Amazonia. Brazilian agricultural research company (EMBRAPA), Brazillian Support Service for Micro and Small Businesses (SEBRAE), Natura &Co, Beraca Institute. Full list and details on engagement in Table 6.

30. **Academia:** Scientists contribute to restoration efforts by conducting research on the biodiversity, ecology, and resilience of these ecosystems, as well as developing protocols and intervention packages. Their work provides critical data that informs restoration strategies. Amazonas Federal Institute (IFAM), Oswaldo Cruz Foundation (FIOCRUZ), Pará State Federal University (UFPA), Amazonas State University (UEA), Paulista University (UNIP), Para State Federal Institute (IFPA) are some of the projects partner institutions. Full list and details on engagement in Table 6.

31. **International donors and agencies**: International organizations, donor agencies, and development banks provide financial support and technical assistance for restoration projects in the Amazon region, helping to fund and implement critical initiatives.

Baseline initiatives and investments

32. Under this scenario the Brazilian Government has created the Action Plan for Prevention and Control of Deforestation in Legal Amazon (PPCDAm) and set the goal of **restoring** 12 million hectares of native forests by 2030. In the Amazon biome, Brazil's National Plan for the Restoration of Native Vegetation (PLANAVEG) establishes the goal of **recovering** 4.8 million hectares of native vegetation. It is important to emphasize that this is a federal government goal without allocated resources. Therefore, investments and initiatives are still required to carry this value off. It is urgent to establish the capabilities for investments and other initiatives to achieve these goals. The delivery of a package of restoration interventions involving multistakeholder interactions is a priority measure in this sense.

33. The Native Vegetation Protection Law (Brazilian New Forest Code[38][38]) is the primary legal instrument that regulates the protection and restoration of native vegetation on private rural lands, establishing two categories of preservation areas: the Permanent Preservation Areas (APP) and Legal Forest Reserves (RL)[38][39]. The Brazilian deficit of APP and RL revolves around 21 million hectares that need to be restored or reforested[40][40].
34. The National Plan for Recovery of Native Vegetation (PLANAVEG) - under the framework of the National Policy for the Recovery of Native Vegetation (PROVEG)[39][41] - regulates the coordination, integration, and promotion of policies, programs, and actions for the restoration of forests and native vegetation[41][42].
35. Brazil has committed the restoration and reforestation of 12 million hectares of forests in the Nationally Determined Contribution (NDC) and the Bonn Challenge[43][43].

36. Under the REDD+ framework (Reducing Emissions from Deforestation and Forest Degradation, Plus Conservation, Sustainable Management of Forests, and Enhancement of Forest Carbon Stocks), Brazil announced in 2015, during COP21, the National Strategy for Reducing Emissions from Deforestation and Forest Degradation, Conservation of Forest Carbon Stocks, Sustainable Forest Management, and Enhancement of Forest Carbon Stocks (ENREDD+)[42][44]. This strategy aims to mitigate climate change mitigation through the prevention and control of deforestation and forest degradation and the promotion of forest recovery and conservation based on sustainable development[45][45]. The Amazon Fund has been the largest REDD+ initiative (over US$1 billion between 2008 and 2017)[46][46], incentivizing projects aligned with the objectives of Action Plan for Prevention and Control of Deforestation in Legal Amazon (PPCDAm).

37. The National Policy for Payment for Environmental Services (PNPSA)[47][47]; the National Registry for Payment for Environmental Services (CNPSA), and the Federal Program for Payment for Environmental Services (PFPSA) aim to financially reward individuals, communities, or organizations that provide environmental services, thereby encouraging the adoption of sustainable land use practices, conservation, and ecosystem restoration.

38. Considering the states within the coverage area of the project, the state of Pará has the State Policy on Climate Change (PEMC/PA)[49][48] to develop and implement actions for the protection, management,

conservation, and restoration of ecosystems[48][49]. The State Plan for Native Vegetation Recovery (PRVN)50][50] maps restoration actions in the state of Pará and assist in the development of a state policy to drive the recovery of native vegetation[451].

39. The state of Amazon Plan (PEAA)[52][52] aims to execute strategies for the recovery of degraded areas and the promotion of measures to reduce deforestation[51][53]. It sets a target of regenerating 5.65 million hectares of vegetation by 2030.

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B. PROJECT DESCRIPTION

Project description

This section asks for a theory of change as part of a joined-up description of the project as a whole. The project description is expected to cover the key elements of good project design in an integrated way. It is also expected to meet the GEF's policy requirements on gender, stakeholders, private sector, and knowledge management and learning (see section D). This section should be a narrative that reads like a joined-up story and not independent elements that answer the guiding questions contained in the PIF guidance document. (Approximately 3-5 pages) see guidance here

40. This project is based on a Theory of Change (ToC) that describes how it will lead to the **project objective**: To restore wetland and lowland forest ecosystems and biodiversity in the Amazon mainland and coast through strengthening capacity for ecosystem restoration, improving the enabling environment, and initiating restoration in overlooked areas of the Amazon. To achieve this objective the project has been structured in four components and their outcomes, designed to overcome identified barriers. This structure is detailed below and illustrated in the Theory of Change diagram (Figure 1) presented at the end of this section.

41. **Project relevance**: This project has been selected over others because restoration is a global and national priority, and the Ministry of Science Technology and Innovation of Brazil, Mamirauá Institute and FAO are joining forces to take some of the essential steps towards restoration in overlooked areas of the Brazilian Amazonia. This project aims to restore degraded ecosystems and strengthen the connection between people and nature, involving local actors and stakeholders in restoration solutions and empowering them for responsible resource utilization. IPLCs and women networks will be engaged in this participatory endeavor.

Component 1. Improving the enabling environment for ecosystem restoration. This component will develop a strategic plan for the restoration of wetlands and lowland forest ecosystems in the Amazon, with an integrated landscape management approach.

42. Under Component 1, activities are intended to create the necessary steppingstone for the construction of a Strategic Plan for the restoration of varzea and mangroves wetlands (Output 1.1.1. Strategic Plan for the restoration of selected wetlands and lowland forest ecosystems in the Amazon).as well as to raise the necessary background information to identify priority gaps in knowledge for restoration of wetlands and lowland forests of Amazonia (Output 1.1.2. Report on the state of the art of wetlands/ lowland ecosystem restoration), This Strategic Plan will be developed in close dialogue with an interdisciplinary Scientific and Technical Advisory Panel (Output 1.1.3. New scientific and technical advisory panel (focused on wetlands and lowland forest of Amazonia and linked to CONAVEG), operational), which will be formed to help execute activities need for delivery of Output 1.1.2 and to promote its adequate implementation in Brazil. The interdisciplinary Scientific and Technical Advisory Panel will be formed by experts coming from different sectors and disciplines, it will follow a gender-sensitive approach and will incorporate and include gender experts, women's organizations, indigenous women's organizations and IPLC organizations present in the project area.

43. Ultimately, the combined efforts of the activities under Component 1 will result in the adoption of an integrated landscape management approach in overlooked areas of the Amazon (varzeas, mangroves, Terra Firme lowland forests of Central and Western Amazonia), with a gender-sensitive vision (Outcome 1.1.) and will have a direct impact on GEF Core indicator 4.4. Forest areas with avoided loss as described in Component 3 below.

Component 2. Strengthening capacities for ecosystem restoration.

44. This component will improve individual and institutional technical capacities for ecological restoration initiatives and related value chains. Under Component 2, activities will focus on training and giving technical support to target stakeholders, both necessary enabling groups of actions for the change in scenario envisioned under this component. Activities will also comprehend building networks to promote knowledge exchange.

45. The first group of actions under this Component will focus on the development and execution of technical training courses for all the key functions necessary for the implementation of restoration, encouraging entrepreneurial culture, strengthening knowledge on business management, and creating enabling conditions for restoration initiatives sustainability, and will include all relevant stakeholders, with a clear gender-sensitive approach (Output 2.1.1. A gender-sensitive capacity development program, created). The program will focus on IPLCs, and municipal, state, and national governmental agencies. Under this component, the project aims to achieve a system where IPLCs and MSMEs are qualified to implement and maintain the sustainability of restoration initiatives, as well as create enabling conditions to promote restoration related value chain.

46. Capacity building of IPLCS and MSMEs with the aim of encouraging entrepreneurial culture, strengthening knowledge on business management, and creating enabling conditions for restoration initiatives sustainability. A potential market mapping for restored forest products will be carried out and presented during courses for community organizations. Activities will focus on the difficulties that IPLCs productive collectives, responsible for socio-biodiversity value chains, have in marketing their products at a fair price. The context of economic and social development in the Amazonia is repressed by the strong concentration of income and wealth; by the low density in the regional market; by the scarcity and irregularity of electricity supply; by the fragility, diversity, and relative lack of knowledge of the different ecosystems in the region; and the predatory exploitation of natural resources[1][54]. Allied to these challenges, there are bottlenecks in most production and service chains related to the action of intermediaries who explore the IPLCSs, logistical difficulties, floodplain environments that require social technologies adapted to the place for pre- and processing with quality of products, lack of access to information and training in topics such as financial organization, management, marketing, sales, among others.

47. Also, under Component 2 will identify and strengthen restoration related Networks (Output 2.1.2. Restoration networks identified and strengthened with a gender-sensitive approach.) to guarantee sustainability of restoration initiatives, with a clear gender-sensitive approach. Courses will be taught at different levels and duration, in person and online, depending on the need and the audience to be trained. Over 300 people will be trained in community areas, and around 600 people remotely. The courses involve the stages of native seed management. This intervention package also covers the development of a network of seed collectors and the establishment of seed collection areas through participatory methods with community organizations (and other grassroots representations) for awareness raising, mobilization, productive organization, capacity building and relationship with markets that demand products (seeds) and services (collections, nurseries, planting, establishment, etc.) for the restoration of degraded areas. The network will drive discussions on local (municipal) public policies for the implementation of ecosystem restoration, and will involve the participation of municipal environmental departments, rural unions, fishing colonies, universities, and research institutions.

Component 3. Initiation of restoration efforts in wetlands and lowland forest ecosystems.

48. This component will support surveys. The development of an intervention package is imperative for conserved ecosystems, areas undergoing regeneration, secondary forests, and plantations, as this will underpin the formulation of effective restoration strategies. These tools should encompass a profound grasp of aspects such as vegetation, species diversity, ecosystem operations, phenology, floral biology, pollination, and biogeochemical cycles.

49. First, an inventory of the different forest strata per each restoration site will be generated. This will enable the selection of plant species most suitable for restoration. The inventory will also help determine matrices for seed collection that will be used in subsequent phases, and in seedling production. The phenological stages of tree species will be monitored to select the most productive parent trees and determine the optimal time for seed collection. To obtain data on structure and floristic composition, botanical plots will be determined. Furthermore, a biological monitoring system will be set up to assess restoration effectiveness and its impact on biodiversity (Output 3.1.1).

50. Component 3 will finance the use of active restoration techniques, including seed and seedling plantation, agroforestry systems, seedling technology, as well as field monitoring and geospatial technologies. The project will support monthly monitoring of fire hotspots and deforested areas, through the analysis of changes in vegetation cover using satellite data (e.g. MapBiomas[2][55]). This will provide crucial information for fire prevention and control, as well as deforestation control (Output 3.1.2). After collecting seeds from the prospective restoration areas, laboratory tests will be conducted to ascertain the optimal temperature and humidity conditions for seed germination and storage. This will enhance the efficiency of the field implementation process for natural regeneration using the *muvuca* technique and improve the production of robust and resilient seedlings for planting (Output 3.1.3). Based on this information, context-specific ecological restoration protocols will be developed for Lowland *Terra Firme* Forests, *Varzea* Floodplain

Forests and overlooked mangroves of Amazonia (Output 3.1.4). Six nurseries will be built to guarantee seedlings are adequate and available (Output 3.1.5).

51. Active restoration:

52. 400 hectares will be targeted by using six different restoration strategies: complete planting (10 ha), primarily targeting more degraded areas with exposed soil; densification (10 ha), in regions with low individual density; enrichment planting (10 ha); *Muvuca* (natural regeneration through seed dispersal – 150 ha); Natural regeneration without seed dispersal (150 ha); agroforestry techniques (70 ha) (Output 3.1.6). These areas will be covered by intensive restoration practices, which are highly expensive and labor intense.

53. Additional *extensive* restoration will be targeted. Each trained individual will have the capability to restore at least 1 hectare of his own land (totalizing 1,669 ha), applying the package of restoration strategies developed by the project.

54. Passive restoration:

55. 23,705 hectares will be restored by addressing the degradation drivers, avoiding fire use, enabling natural regeneration, and through the monitoring and replacement of land clearing practices.

56. Component 3 will also support the improved management of at least 1,869,230 hectares (agroforestry areas, agricultural areas around in former forest areas, originally forest areas now used for cattle raising). *Restoration of production areas with GEF funding has been implemented by FAO in Venezuela and Chile since GEF-7. Mamiraua Institute has started some exchanges with other FAO GEF projects in the region to learn more about passive restoration techniques. This will be further elaborated during full project preparation*.

57. Several criteria will be taken into consideration when selecting areas for restoration, associated with integrated landscape management and cost-effectiveness[3]56: 1) area accessibility; 2) land use and occupancy history; 3) the level of degradation; 4) acceptance by landowners and the local population; 5) proximity to water bodies; 6) total surface area eligible for restoration; 7) proportion and proximity to larger, contiguous forested areas; 8) proximity to settlements or protected areas; 9) climate change mitigation (quantifying carbon sequestration in tons resulting from area recovery); 10) biodiversity conservation and the reduction of species extinction risk; 11) socio-economic benefits arising from the restoration of native vegetation in the study area; 12) implementation costs depending on the situation and the required techniques; 13) opportunity cost, which represents the economic income foregone when choosing native vegetation restoration.

58. Component 3 will also generate technology and background knowledge to reduce costs and increase efficiency of restoration initiatives in Amazonian wetlands and other lowland forest ecosystems. In this process, women networks will be actively.

Component 4: Awareness raising and knowledge management

59. The communications and knowledge management approach of this project (Outcome 4.1) is aimed at following project interventions and documenting its impacts to allow replication in other areas the Amazon region. Activities carried out in Component 4 will record and document project activities and promote a continuous learning process, creating a solid foundation for project scaling, as well as fundamental knowledge for communication and policy advocacy. For this component, the project will contain two main lines of actions: (a) creation of local spaces for learning and territorial networks of knowledge management; and (b) systematization and dissemination of information, lessons, and best practices.

60. Component 4 will finance the development and the implementation of a participatory and gender-inclusive communication strategy (Output 4.1.1) and of a knowledge management plan with a gender-sensitive approach (Output 4.1.2) The objective of the communication strategy is to raise awareness about the importance of conserving Amazonia, its environmental services and its biodiversity through strategic communication pieces and publications that publicize the activities and experiences of the project. The information will be disclosed in fairs, websites and social media of the participants, and other communication vehicles and other partnerships, social media, and communication tolls. IDSM has over 200,000 followers on social media.

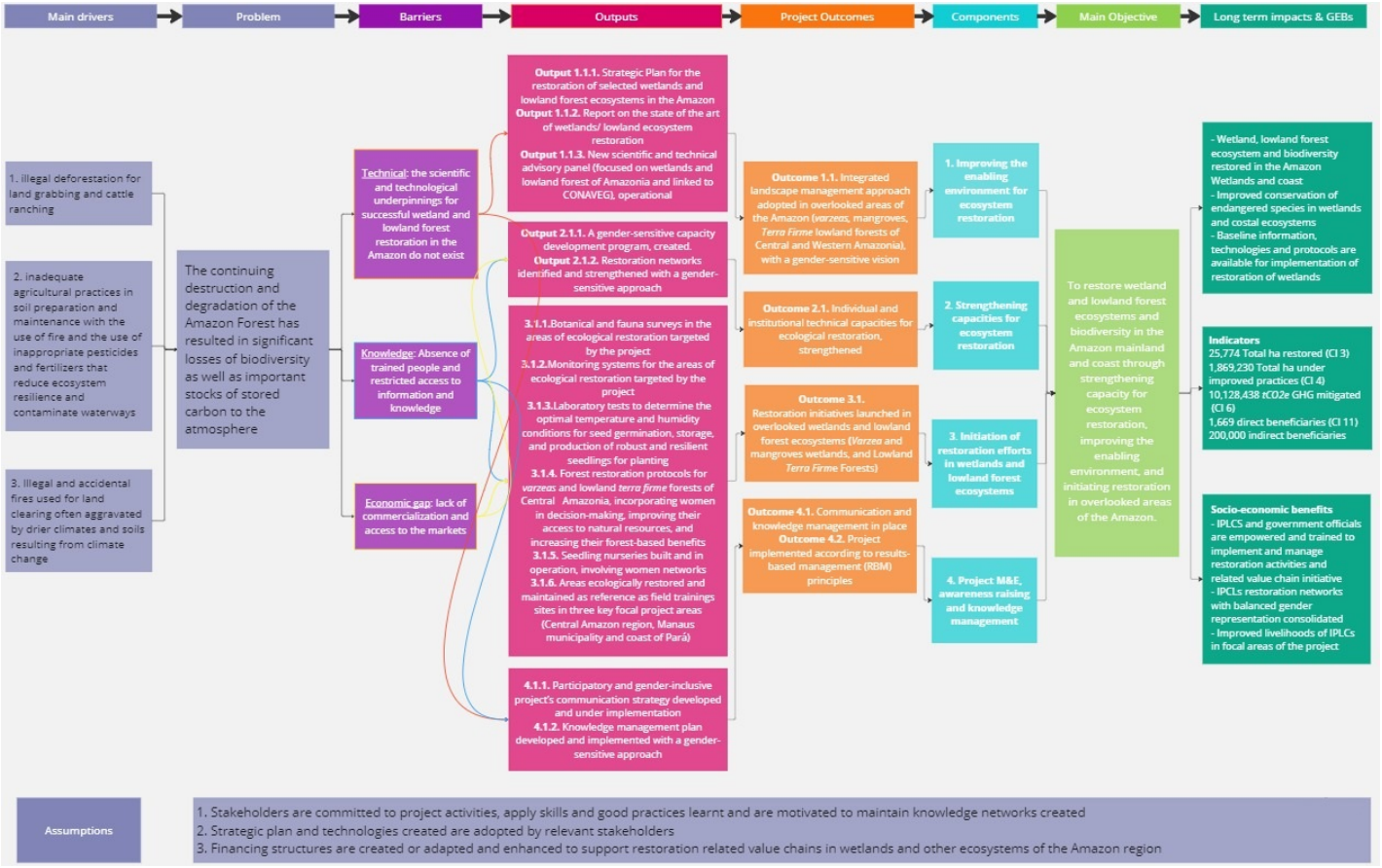
61. The project will follow a gender-sensitive communication for development approach. The communication strategy will target different audiences: a) local participatory initiatives: farmers, communities, women, young people, local organizations, cooperatives, and local development agents. Key actions will include learning communities, social networking and communication strategies managed by community young people, promotion of information capsules, producing culturally sensitive communication materials in local languages as part of a participatory approach, peer-to-peer experience sharing, national and international exchanges; b) Technicians with an integrated approach to landscape management. Actions: blended learning, community learning communities, exchange forums, use of the virtual knowledge management platform; c) Municipal, state, and federal government officials. Actions: virtual and face-to-face forums with authorities, social media outreach, press releases, digital strategies; d) private sector; e) potential consumers of biodiversity value chains; f) Potential collaboration with RedParques[4][57] as a regional knowledge exchange platform.

62. **Monitoring and Evaluation.** Project management and monitoring will be gender-sensitive and responsive, including gender-disaggregated indicators showing who is involved and whose views are represented before and during implementation. In short, gender considerations will be crosscutting in this project in terms of both its products and its processes. The project will contribute to women's equal engagement by supporting

women-driven capacity development efforts and focusing on transparency and shedding light on how women and men participate in forest management and climate change-related decision-making. The project will report and monitor on gender-specific results.

63. The project is based on the following **assumptions**: (1) Stakeholders are committed to project activities, apply skills and good practices learnt and are motivated to maintain knowledge networks created. (2) Strategic plan and technologies created are adopted by relevant stakeholders. (3) Financing structures are created or adapted and enhanced to support restoration related value chains in wetlands and other ecosystems of the Amazon region

The project ToC Diagram is illustrate below. Figure 1. Project's Theory of Change (ToC).



Project Strategy

64. The future of the Amazon Forest and global climate depend on the conservation and adequate use of biodiversity, and the ability to ecologically restore degraded landscapes. The Convention on Wetlands recognizes that the restoration of the Earth's wetlands must be a key priority for ensuring a sustainable future for the planet. However, there are no available protocols and adequate technology for effective restoration of most wetlands, as is the case for the *varzeas* of Amazonia.

65. **Solutions**:

66. Ecological restoration is one of the most important techniques for CO_2 sequestration and re-establishment of biodiversity in a large scale, also helping to promote nature-based solutions with high mitigation potential[1]. Ecological restoration can bring back forest functionality and productivity of the land, increase and expand the offer of forest products and inputs, re-establish ecosystems services, generate work and

income, and promote social well-being. Ecological restoration of forests must respect socioeconomic customs and local biodiversity[2]. The recovery and management of ecological integrity, assisted by ecological restoration, includes a critical range of variation in biodiversity, ecological processes, and structures in regional and historical context, in addition to sustainable cultural practices[3],[4].

67. Biocultural restoration is a way of reestablishing the ecological functions of the forest, productivity, diversity of products, by-products and ecosystem services, employment and income generation. It contributes to people's well-being[5][58].

68. It is imperative to promote a package of interventions for biocultural restoration to stop deforestation. Efforts to restore these forests are not only essential to safeguard the unique biodiversity of the Amazon but also to mitigate the global impact of deforestation and climate change. This project plays a pivotal role in conserving these forests by encouraging sustainable agricultural practices by delivering packages of restoration interventions such as agroforestry systems, sustainable management of agricultural areas integrated with forests, and encouragement of endemic species meliponiculture which strengthens pollination, an important environmental service for forest conservation. All of which discourage the use of fire and the expansion into new areas. These packages of restoration interventions for Amazon wetlands and lowlands contribute to the maintenance of the entire restoration value chain, including biodiversity conservation and long-term health of the Amazon biome.

69. **Restoration approach**: According to the Society for Ecological Restoration (SER), a *restored ecosystem* should present similar diversity and structure to a reference ecosystem; must use species native to the region; must pay attention to the functional groups necessary for the stable development of forest restoration; it must offer the necessary physical capacity for the reproduction of local populations; must ensure that normal community development functions are carried out; must establish a balanced relationship with the landscape in which it operates; should reduce the influence of potential external disturbances; must maximize its ability to withstand periods of stress; and must seek self-sustainability[6][59].

70. **Restoration protocols**: Restoration must be concerned with using the genetic material to be propagated from the same phytogeographic region of the altered environment, preferably from the same hydrographic basin. For this reason, it must be preceded by intense floristic surveys in different parts of the region to know the geographic distribution of the species and promote greater engagement of local communities, duly trained, to carry out the planning and execution of activities pertaining to the ecological restoration process. For this purpose, it is also crucial that the seeds and seedlings used originate from nearby regions with the same plant community. Therefore, the process of collecting, storing, and germinating these seeds, as well as the production of seedlings, is of utmost importance and should be carried out in areas close to the

restoration site. The Xingu Seeds Network[7][60] has well-defined protocols[8][61] for the storage, preservation of viability, and germination of seeds from the areas covered by the program. These protocols can be reviewed and improved for each to be restored, allowing for the propagation of genetic material from the same plant community to be restored.

Incremental cost reasoning

71. Component 1 will address Barrier 1, described in the Barriers sub-section. Through Component 1, GEF financing will promote the creation of the necessary technological background and technical support structure for restoration, making sure to support the scaling up and implementation of restoration methods developed in this project in other areas of the Amazon.

72. Component 2 will help address Barrier 2. GEF financing will strengthen restoration networks at different levels and with different actors involved, making sure to include IPLC and with a gender-sensitive approach, by carrying out different types of training and courses.

73. To address Barrier 2, it is essential for people to be trained, with a particular emphasis on including traditional people who possess knowledge and a connection to the land, and who play a fundamental role in the long-term preservation of forests, ensuring the success and sustainability of these projects. It is also imperative to create protocols for selecting the most suitable restoration techniques, considering the phyto-physiognomy and the current condition assessment of each area. This emphasis should particularly target previously overlooked regions, like Amazonian wetlands.

74. Component 3 will help address Barrier 2 and 3 described in the Barriers sub-section**.** It will support the execution of surveys, inventories, protocols, and monitoring tools to enhance the use of active restoration techniques, incorporating IPLCs and women in the decision-making and execution process.

75. The project will overcome the previously mentioned barriers by fostering cooperation among actors and aligning conservation, restoration, and rural development policies at regional, subnational, municipal and community levels. This will be ensured by promoting local communities' participation, and supporting a long-term planning vision, enabling uptake by local stakeholders (policymakers, local communities, and private sector) and ensuring scalability and long-term sustainability through tailored financial mechanisms.

76. Component 4 will help overcome Barrier 1 and 2, described in the Barriers sub-section. **GEF financing will** enhance the creation of local spaces for learning and territorial knowledge management practices to spread the awareness about restoration practices and their importance, involving IPLCs and using a gender-sensitive approach.

77. In component 4, interchanges at international level at Amazon Basin will be promoted with FAO's support, both to learn from experiences in other countries, as well as to make visible the project results and lessons learned.

The project will deliver the following **global environmental benefits**: 25,774 hectares of land restored; 1,869,230 hectares of landscapes under improved practices; 10,128,438 tCO2e of GHG mitigated in the AFOLU sector. The project will deliver **socio-economic co-benefits** for 1,669 local people (of which at least 50% women). See more details are provided in the Project Overview table.

Gender and Socioeconomic considerations

78. According to the Brazilian Institute of Geography and Statistics (IBGE), approximately 15 million women live in rural areas (47.5% of the population), and they are responsible for the administration of 18.7% of businesses outside of indigenous land and 23.43% on Indigenous land[9][62]. Women also represent 50% of the artisanal fishermen of Brazil[10][63]. Despite these very representative numbers, acknowledgement of the importance of women in biodiversity value chain and agroforestry production in Amazonia is still low, as they continue to be attributed only to domestic tasks and family care.

79. Mamirauá Sustainable Development Institute (IDSM) conducts several research projects to identify the participation of women in fisheries, use of non-timber products and agroforestry systems, and understand its importance for policies, well-being, food security and income generation. As a premise, the institute promotes actions to increase the participation of women in biodiversity management processes.

80. The design and implementation of the project will consider and respond to gender-specific differences in the access to resources, services, information, and employment opportunities for the sustainable and productive use of natural resources, and in capacity for resilience to climate change. It will promote gender-

responsive approaches and decision-making methodologies built on inclusive stakeholder consultations aiming to empower women and promotion of sustainable income-generating opportunities.

81. The project will make sure that women are engaged actively in capturing their knowledge and contributions to biodiversity conservation. Under Component 1, the project will ensure that gender experts, women's organizations and indigenous women's organizations are represented in the Interdisciplinary Scientific and Technical Advisory Panel that will be formed. Under component 2, restoration networks will be identified and strengthened using a gender-sensitive approach. Under Component 3, women networks will be actively involved to carry out trainings and workshop for the dissemination of their knowledge. Under Component 4, knowledge plan and communication strategy will be based on a gender-inclusive and sensitive approach. Under the M&E component, the project will report and monitor on gender-specific results. Moreover, under all Components, the project will target women and will ensure that their needs and requirements are met (i.e., training specifically for women, women leaders, care for children, transport costs), the projects will work to ensure that at least 50% of the participants are women, especially in training activities. A Gender Analysis and Gender Action Plan will be developed during full project preparation.

82. To define the best strategy to promote gender equality and inclusion of elders and youth, the PPG phase will use the Mapping of Gender-Sensitive Value Chain and the 'Reach, Benefit and Empower' approaches. Both adapt schedules, places, and activities to ensure the participation of women, elders, and youth (Reach); decision making instances and ensure, through monitoring, that they will have the power to choose and use the benefits achieved (Benefit). Also, discussion the importance of valuing women, elder and youth participation for a long-term change (Empower).

Innovation

83. This project is innovative in the sense of promoting knowledge exchange and therefore increased market sustainability by: (1) Bringing together multiple stakeholders along the supply chain providing enabling conditions for Amazon wet and lowlands social economic restoration sustainability; (2) Promoting integrated engagement processes with the States to encourage adherence to Environmental Restoration Programs (PRA); (3) Developing a package of interventions that simultaneously supports multiple enabling conditions which will allow Brazil to achieve its restoration goal. Cost will vary according to the ecosystem and chosen methodology allowing all MSMEs to enter legality and profit from the Amazon biodiversity restoration products and byproducts; (4) Involvement of MSMEs and IPLCSs on all activities, guaranteeing maximum participation and inclusion of women, youth and elders; (5) Capacity building program for IP and MSMEs on agroforestry Systems, meliponiculture, seed collection, handling and storage as well as entrepreneurship, to increase numbers of qualified local labor in restoration of amazon wetlands and lowlands.

84. Policy innovation: The project will promote national public policies analysis around issues to foster stakeholders' common concerns and promote constructive dialogue spaces; strengthen new policies and frameworks that support conservation and sustainable use of natural resources.

85. A broader adoption of approaches, such as we propose, refers to the sustaining, mainstreaming, replication, and/or scaling-up of project-supported technologies, practices, approaches, and enabling conditions by stakeholders. Thus, increasing success toward achieving long-term environmental impacts.

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Coordination and Cooperation with Ongoing Initiatives and Project.

Does the GEF Agency expect to play an execution role on this project?

If so, please describe that role here. Also, please add a short explanation to describe cooperation with ongoing initiatives and projects, including potential for co-location and/or sharing of expertise/staffing

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 10706 (with FAO as IA): Strengthening participatory natural resource management processes for sustainable economic development, conservation of biodiversity and maintenance of carbon stocks in Amazon Wetlands.** This project will be executed by IDSM and has the objective of strengthening participatory natural resource management processes for sustainable economic development, conservation of biodiversity and maintenance of carbon stocks in Amazon Wetlands.

The complementary between project GEF ID 10706 (GEF-7) and the proposed GEF-8 project is detailed in Table 2 below.

Table 2. Complementary between Mamiraua project GEF ID 10706 (GEF-7) and the current project proposal (GEF-8)

Focus	GEF-7 Project (GEFID 10706)	GEF-8 Project (proposed)
Technical focus	Forestry and agriculture: Agroforestry, timber, and non-timber forest products. Fisheries: Caiman, swamp ghost crab, pirarucu.	Biocultural restoration of Amazon wetlands and lowland forests. Forestry and agriculture: agroforestry system, productive backyards, non-timber products Restoration value chain identification and empowerment
Geographical scope	Central Amazon ecological corridor and Pará state inland and coastal areas. Ecosystems: 1. Varzea floodplain forests 2. Mangroves	Central Amazon ecological corridor and Pará state inland and coastal areas. Ecosystems: 1. Varzea floodplain forests 2. Mangroves 3. *Terra firme* lowland forests (non-flooded areas. High level of biodiversity)

Activities	Fair and gastronomic festivals for the crab and pirarucu production chain (in Belem, Manaus and Tefe) Crab market studies Visual identity and communication plan	Nature-based products: Seeds, seedling, agroforestry production, trade. Capacity development for 1) biocultural natural restoration methodologies; 2) entrepreneurship for restoration value chain; 3) Para taxonomy technician; 4) Identification of potential markets and for restauration products; 5) Agroforestry Systema implementation and maintenance; 6) Seed collection, handling, storage and commercialization; 7) Seedling production and commercialization.
Stakeholders	- Association of Extractive Reserves in the Mangue do Para region. - Associations of the Mamiraua & Manacapuru Sustainable Development Reserve - Federation of pirarucu production in the Mamiraua Reserve - Science Technology and Innovation Ministry (MCTI) - Ministry of Agriculture and Livestock (MAPA) - National Foundation of Indigenous People (FUNAI) - Brazilian Institute of the Environment and Renewable Natural Resources (IBAMA) - Chico Mendes Institute for Biodiversity Conservation (ICMBIO) - Amazonas Environmental Protection Institute (IPAAM)	- Ministry of Environment - Ministry of Agriculture and Livestock (MAPA) - Associations of Tefé National Forest, - Sustainable Development Reserve of Mamiraua, - Sustainable Development Reserve of Amanã, - *Terra Indigena* (TI) Miratu, - Tefé municipality and Tefé Town hall - Associations of Extractive Reserves in the Mangue do Para region. - Federation of Indigenous Organizations of the Rio Negro (FOIRN); - The Ministry of Science, Technology, and Innovation (MCTI), - SEMPA, - Institute of Agricultural and Forestry Development of State of Amazonas (IDAM), - Beraca Institute, - Brazilian Support Service for Micro and Small Businesses (SEBRAE), - Brazilian Agricultural Research Company (EMBRAPA), - Chico Mendes Institute for Biodiversity Conservation (ICMBio), - Federal Institute of Education, Science and Technology of Amazonas (IFAM), - Secretariat for the Environment and Infrastructure (SEMA),

	- State Secretariat for Agricultural and Fisheries Development (SEDAP) - Pará Federal University (UFPA) - Institute of Extension, Assistance and Rural Development (RURAP)	- State Secretariat for Environment and Sustainability (SEMAS), - Maniva Agroecology Network (REMA) - Ministry of Environment and Climate Change (MMA), - International Fresh Produce Association (IFPA), - Federal Public Ministry (MPF), - Amazon Innovation and Entrepreneurship Network (RAMI), - Amazonas State University (UEA), - Paulist University (UNIP), - Federal Government Integration and Regional Development Agency (MIDIR) - Oswaldo Cruz Foundation (FIOCRUZ) *Full list with details available in Table 6 (Section D. Policy Requirements / Stakeholder Engagement)

- **GEFID 10198 (World Bank): Amazon Sustainable Landscapes Program - Phase II (ASL-II).** The ASL IP seeks to improve integrated landscape management and conservation of ecosystems of targeted areas in the Amazon region. The proposed GEF-8 is aimed to improve the sustainable use of biodiversity and local livelihoods in coastal areas, outside protected areas, and in protected areas not covered by ASL-II. Potential coordination entry points with ASL II and III are detailed in Table 3.

Table 3: Cooperation points between ASL Integrated Programme (phases 2 and 3) and the proposed GEF-8 Project

Focus	**ASL Integrated Programme (phases 2 and 3) – Brazil child projects**	**GEF-8 Project (proposed)**
Technical focus	Improve integrated landscape management and conservation of ecosystems in targeted areas in the Amazon region.	Restoration of wetlands and lowland forests.
Geographical scope	Central Amazon ecological corridor and Pará state inland and coastal areas. Ecosystems: Terra Firme	Ecosystems: 1.Terra firme lowland forests (non-flooded areas. High level of biodiversity) 2. Varzeas (seasonally flooded) 3. Mangroves: Central Amazon ecological corridor and Para state inland and coastal areas.

	Varzeas Mangroves	
Activities	Capacity development for Restoration practices Entrepreneurship for value chain Tools for sustainable land and water management Knowledge exchange platform on nature-based products through trainings (RedParques) Enhance already established participatory mechanisms and mobilization of local actors.	Nature-based products: Seeds, seedling, agroforestry production, trade. Capacity development for 1) restoration methodologies 2) entrepreneurship for restauration value chain 3) Para taxonomy technician Identification of potential markets and for restauration products
Stakeholders	- Ministry of Environment: - Ministry of Agriculture and Livestock (MAPA); - Federation of Indigenous Organizations of the Rio Negro (FOIRN); - Coordination of Indigenous Organizations of the Brazilian Amazon (COIAB); - State Environmental Secretariats of the States of the Amazon, - Instituto Chico Mendes de Conservação da Biodiversidade (ICMBio); - Brasilian Forest Service (SFB); - The Brazilian Institute of Environment and Renewable Natural Resources (IBAMA); - National Foundation of Indigenous People (FUNAI); - Managers and Councils Managers of Conservation Units, - RAMSAR Sites and Biosphere Reserves.	- Ministry of Environment - Ministry of Agriculture and Livestock (MAPA) - Associations of Tefé National Forest, - Sustainable Development Reserve of Mamiraua, - Sustainable Development Reserve of Amanã, - Terra Indigena (TI) Miratu, - Tefé municipality and Tefé Town hall - Associations of Extractive Reserves in the Mangue do Para region - Federation of Indigenous Organizations of the Rio Negro (FOIRN); - The Ministry of Science, Technology and Innovation (MCTI), - Municipal Production Department (SEMPA) - Institute for Sustainable Agricultural and Forestry Development of the State of Amazonas (IDAM), - Rede RHISA, - Inst. Beraca, - Brazilian Support Service for Micro and Small Businesses (SEBRAE), - Brazilian Enterprise of Agricultural Research (EMBRAPA),

		- Instituto Chico Mendes of Biodiversity Conservation (ICMBio), - Federal Institute of Education, Science and Technology of Amazonas (IFAM), - Secretariat for the Environment and Infrastructure (SEMA), - State Secretariat for Environment and Sustainability (SEMAS), - Maniva Agroecology Network (REMA), - Ministry of Environment and Climate Change (MMA), - International Fresh Produce Association (IFPA), - Federal Public Ministry (MPF), - Amazon Innovation and Entrepreneurship Network (RAMI), - Amazonas State University (UEA), - Paulist University (UNIP), - Federal Government Integration and Regional Development Agency (MIDIR) - Oswaldo Cruz Foundation (FIOCRUZ) *Full list with details available in Table 6 (Section D. Policy Requirements / Stakeholder Engagement)

- **GEFID 10660 (IADB): 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. The proposed GEF-8 project will coordinate actions with the Inter-American Development Bank (IADB) to promote private investment in IPLCs bioeconomy enterprises and gender sensitive restoration networks supported by this project, as well as to guarantee sustainability of capacity building in the region.

- **GEFID 10531 (World Bank): Integrated watershed management of the Putumayo-Içа 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. MSDI 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) 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 -Agroforestry System products (AFS). The proposed GEF-8 will adopt lessons learned on NTFP and AFS.

In addition, the proposed project will build on lessons learned and shared experiences of projects currently under implementation or recently completed: 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.

Other projects and initiatives

The project will seek collaboration with the **Latin American Network for Technical Cooperation in National Parks, other Protected Areas, Wild Flora and Fauna (RedParques)**. RedParques is a technical mechanism made up of public and private institutions and specialists from the region's member countries that have been working on the issue of protected areas and wildlife since 1983. Its objective is to progressively increase technological and management capacity, based on the exchange of experiences and knowledge among members, using their own technical, human and financial resources. The project will seek collaboration in the knowledge and management area. Its secretariat is hosted by FAO.

Core Indicators

Indicator 3 Area of land and ecosystems under restoration

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
25774	0	0	0

Indicator 3.1 Area of degraded agricultural lands under restoration

Disaggregation Type	Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
Cropland	25,374.00			

Indicator 3.2 Area of forest and forest land under restoration

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
400.00			

Indicator 3.3 Area of natural grass and woodland under restoration

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

Indicator 3.4 Area of wetlands (including estuaries, mangroves) under restoration

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

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)
1869230	0	0	0

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)
12,230.00			

Indicator 4.2 Area of landscapes under third-party certification incorporating biodiversity considerations

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 or other forest loss avoided

Disaggregation Type	Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
High Conservation Value Forest	1,857,000.00			

Indicator 4.5 Terrestrial OECMs supported

Name of the OECMs	WDPA-ID	Total Ha (Expected at PIF)	Total Ha (Expected at CEO Endorsement)	Total Ha (Achieved at MTR)	Total Ha (Achieved at TE)

Documents (Document(s) that justifies the HCVF)

Title

Indicator 6 Greenhouse Gas Emissions Mitigated

Total Target Benefit	(At PIF)	(At CEO Endorsement)	(Achieved at MTR)	(Achieved at TE)
Expected metric tons of CO_2e (direct)	10128438	0	0	0
Expected metric tons of CO_2e (indirect)	0	0	0	0

Indicator 6.1 Carbon Sequestered or Emissions Avoided in the AFOLU (Agriculture, Forestry and Other Land Use) sector

Total Target Benefit	(At PIF)	(At CEO Endorsement)	(Achieved at MTR)	(Achieved at TE)
Expected metric tons of CO_2e (direct)	10,128,438			
Expected metric tons of CO_2e (indirect)				
Anticipated start year of accounting	2025			
Duration of accounting	20			

Indicator 6.2 Emissions Avoided Outside AFOLU (Agriculture, Forestry and Other Land Use) Sector

Total Target Benefit	(At PIF)	(At CEO Endorsement)	(Achieved at MTR)	(Achieved at TE)
Expected metric tons of CO_2e (direct)				
Expected metric tons of CO_2e (indirect)				
Anticipated start year of accounting				
Duration of accounting				

Indicator 6.3 Energy Saved (Use this sub-indicator in addition to the sub-indicator 6.2 if applicable)

Total Target Benefit	Energy (MJ) (At PIF)	Energy (MJ) (At CEO Endorsement)	Energy (MJ) (Achieved at MTR)	Energy (MJ) (Achieved at TE)
Target Energy Saved (MJ)				

Indicator 6.4 Increase in Installed Renewable Energy Capacity per Technology (Use this sub-indicator in addition to the sub-indicator 6.2 if applicable)

Technology	Capacity (MW) (Expected at PIF)	Capacity (MW) (Expected at CEO Endorsement)	Capacity (MW) (Achieved at MTR)	Capacity (MW) (Achieved at TE)

Indicator 11 People benefiting from GEF-financed investments

	Number (Expected at PIF)	Number (Expected at CEO Endorsement)	Number (Achieved at MTR)	Number (Achieved at TE)
Female	835			
Male	834			
Total	**1669**	**0**	0	**0**

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

GEF Core indicator 3: The total area that will be restored by the project using different methods is 25,774 ha: 400 ha of intensive restoration (10 ha planting; 10 ha enrichment; 10 ha densification; 150 ha of natural regeneration with muvuca ; 150 ha of natural regeneration without muvuca, 70 ha with the implementation of sustainable agroecological management practices, agroforestry systems with meliponiculture and improved management in areas of agricultural use); and 25,374 ha of extensive restoration (1,669 ha - each trained individual will restore at least 1 hectare of his own land); and 23,705 ha of areas where fire practices will be monitored and replaced with non-fire land cleaning practices, allowing for the natural regeneration of the area). According to recent studies, restoration costs may vary from R$180.00 to R$22,178.00 depending on the ecosystem conditions and applied methodology.

GEF Core indicator 4: This is considering the area connected to the ecologically restored areas that the project will impact. Project target is 1,869,230 hectares. Sub indicator 4.1 Area of landscapes under improved management to benefit biodiversity: 12,230 ha, areas of agriculture where biodiversity will be enhanced through a change in land management and use. Sub indicator 4.4. Other forest loss avoided: 1,857,000 ha, conserved forest area that will be maintained according to best practices (Figure 2).

GEF Core indicator 6.1: The above-mentioned activities will result in the capture and avoided emissions of approximately -10.1 million tons of CO2-eq. (19.65 t/ha per year/per hectare - regenerated in 25,774 hectares over 20 years). Emissions mitigated were calculated using the EX-Act tool.

Intensive restoration (active restoration type): Planting, densification, enrichment

Average carbon captured per hectare = 436.87 tCO2e /ha. 330 ha x 436.87 = 144,167 tCO2e

Agroforestry: Average carbon captured per hectare = 241.77 tCO2e/ha. 70 ha x 241.77 = 16,924 tCO2e

Passive restoration: Fire practices will be monitored and replaced with non-fire land cleaning practices, allowing for the natural regeneration. Average carbon captured per hectare = 392.81 tCO2e/ha. 25,374 ha x 392.82 = 9,967,346 tCO2e

GEF Core indicator 11: The number of direct beneficiaries will be refined at PPG stage during the participative elaboration of the full project. At this stage it is estimated a figure of 1,669 people participating in all proposed activities with the participation of at least 50% of women in each.

Risks to Project Preparation and Implementation

Summarize risks that might affect the project preparation and implementation phases and what are the mitigation strategies the project preparation process will undertake to address these (e.g. what alternatives may be considered during project preparation-such as in terms of consultations, role and choice of counterparts, delivery mechanisms, locations in country, flexible design elements, etc.). Identify any of the risks listed below that would call in question the viability of the project during its implementation. Please describe any possible mitigation measures needed. (The risks associated with project design and Theory of Change should be described in the “Project description” section above). The risk rating should reflect the overall risk to project outcomes considering the country setting and ambition of the project. The rating scale is: High, Substantial, Moderate, Low.

Risk Categories	Rating	Comments
Climate	High	Risk description: At the country level, observed climate hazards in the present (droughts, floods, and

		hurricanes) are likely to intensify and gain in frequency into the future under a high-emission scenario. As a result, indigenous communities along the coast and in the central Amazonas are expected to be adversely exposed to increasing extreme weather events. Mitigation actions: The project will include actions to integrate climate-related topics in training, to introduce climate risk-based financial instruments such as Payment for Ecosystem Services (PES) among the stakeholders, and to use climate data for climate impact assessment in the forestry sector to diminish the risk. All these will be further explored during PPG.
Environment and Social	Moderate	Risk description: Weak involvement and lack of IPLCs and small-scale producers' commitment and low numbers of women beneficiaries. Mitigation actions: The project will ensure that seeds' collection and genetic resources handling are carried out in areas close to the restoration site; assess environmental risks related to the construction of six seeds nurseries and other primary or secondary infrastructures that may be built; assess potential impacts of restoration activities on voluntary, temporary or permanent, full or partial physical displacement of people in the project area, and whether activities are expected to lead, even unintentionally, to the loss of ownership of, use of, or access rights to resources (physical and economic displacement); consider and preserve sustainable cultural practices and traditional knowledge of IPLCs. Moreover, the PPG will carry out a socio-economic assessment as well as stakeholder

		and gender action plans to minimize social risks. The project will follow FPIC procedures as outlined by FAO and the Government of Brazil.
Political and Governance	Moderate	Risk description: Changes in public policies and staff of public institutions may impact project schedule and activities. Mitigation actions: The proposed project approach will act as a mitigation measure. At Prodoc stage, this will be also detailed in the institutional arrangements, their Terms of Reference, and operational rules of the project steering & technical committees. Education and technical capacity-building activities will help to prevent such conflicts, emphasizing the advantages of combining all interests to achieve the best results.
Macro-economic	Low	The sustainability of native seedling value chain depends on successful consolidation of this chain, which is not under the control of this project
Strategies and Policies		
Technical design of project or program		
Institutional capacity for implementation and sustainability	Low	MSDI has vast experience and technical capacity in project execution with local stakeholders in Amazonia
Fiduciary: Financial Management and Procurement	Low	MSDI has a strong capacity of financial and procurement record
Stakeholder Engagement	Moderate	Detailed mapping and a stakeholder engagement plan will be developed during project preparation
Other	Moderate	Covid-19 may have impact on project implementation, although we expect that given vaccination efforts in Brazil and the prevalence of strains of low virulence the impact will be low/moderate. A specific

		Covid-19 strategy will be developed during the project preparation phase
Financial Risks for NGI projects		
Overall Risk Rating	Moderate	Please refer to the agency risk screening document uploaded in the portal

C. ALIGNMENT WITH GEF-8 PROGRAMMING STRATEGIES AND COUNTRY/REGIONAL PRIORITIES

Describe how the proposed interventions are aligned with GEF- 8 programming strategies and country and regional priorities, including how these country strategies and plans relate to the multilateral environmental agreements.

Confirm if any country policies that might contradict with intended outcomes of the project have been identified, and how the project will address this.

For projects aiming to generate biodiversity benefits (regardless of what the source of the resources is - i.e., BD, CC or LD), please identify which of the 23 targets of the Kunming-Montreal Global Biodiversity Framework the project contributes to and explain how. (max. 500 words, approximately 1 page)

Alignment with GEF9 Programming.

The project is aligned with the GEF-8 Biodiversity and Climate Change focal areas as follows:

- Biodiversity Focal Area. The project is directly aligned with objective 1 of the Biodiversity Focal area which is "*to improve conservation, sustainable use, and restoration of natural ecosystems"*. Component 1, 2 and 3 will be implemented in highly-significant biodiversity areas (Amazon and coastal areas), aimed at promoting the three sub-objectives of BD FA (i.e. conservation of forests and wetlands; sustainable management of agricultural areas in or around degraded forests and wetlands, and restoration of varzeas, lowland forests and mangroves).

- Climate Change Focal Area. The planned actions will contribute directly to objective 1.4. of Pillar I of the GEF-8 Climate Change focal area, which is to *"Promote Nature-Based Solutions with high mitigation potential"*. Components 1, 2 and 3 will contribute to the reduction of GHG emissions through both avoidance of further carbon emissions from degraded and lost forests, and carbon sequestration through enhancement of forest areas and soil organic carbon (i.e. restoration).

The project will deliver GEBs measurable through core indicators 3, 4 and 6, and 11 as detailed in the GEF core indicators table.

Alignment with National Priorities

The project is aligned with the National Policy for the Recovery of Native Vegetation (PROVEG), through Decree No. 8.972, of January 23rd, 2017. PROVEG aims to articulate, integrate and promote policies, programs and actions for the recovery of forests and other types of native vegetation. It also aims to boost the environmental regularization of rural properties in Brazil, pursuant to Law No. 12,651, of May 25th, 2012. PROVEG's main implementation instrument is the National Plan for Native Vegetation Recovery (Planaveg), launched through Inter-ministerial Ordinance No. 230, of November 14th, 2017.PLANAVEG's goal is to expand and strengthen public policies, financial incentives, markets, good agricultural practices and other

measures necessary for the recovery of native vegetation of at least 12 million hectares by 2030, especially in permanent preservation areas (APP) and Legal Reserve (RL), but also in areas degraded with low productivity.

The project is aligned with the Strategy and National Action Plans for Biodiversity (NBSAP), which has the objective of protecting biodiversity and natural ecosystems of Brazil. The main objective of NBSAP 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 NBSAP 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 NBSAP. The NBSAP Action Plan foresees that government collegiate bodies and organized civil society will be involved in the formulation and execution of training plans 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 safeguarding traditional knowledge are defined and agreed upon by the residents of the communities involved.

Executing agency: MSDI 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 all use of natural resources is equitable and ecologically sustainable.

The project is also aligned with the United Nations Sustainable Development Goals (SDGs) 2, 6, 13, 14, 15. This project is also aligned with the UN Decade on Ecosystem Restoration 2021-2030, the Ramsar Convention on Wetlands.

The project is aligned with the GBF targets 1,2,3, 10 and 22.

D. POLICY REQUIREMENTS

Gender Equality and Women’s Empowerment:

We confirm that gender dimensions relevant to the project have been addressed as per GEF Policy and are clearly articulated in the Project Description (Section B).

Yes

Stakeholder Engagement

We confirm that key stakeholders were consulted during PIF development as required per GEF policy, their relevant roles to project outcomes and plan to develop a Stakeholder Engagement Plan before CEO endorsement has been clearly articulated in the Project Description (Section B).

Yes

Were the following stakeholders consulted during project identification phase:

Indigenous Peoples and Local Communities: Yes

Civil Society Organizations: Yes

Private Sector: Yes

Provide a brief summary and list of names and dates of consultations

#	Stakeholder	Date	Means of Engagement	Topics Discussed	People involved
1	Rio Negro Indigenous Organizations Federation (FOIRN)	16/09/2019	Participation in the design and implementation of the project activities, particularly on participatory planning, implementation of field activities and knowledge dissemination	Demands for workshops to be held in the Rio Negro region, in São Gabriel da Cachoeira, with registration of demand for meliponiculture and SAF workshops	Juvêncio Cardoso (Liderança Baniwa) Executive Secretary of the Organization "Baniwa e Koripako" and Nátalia Campos Pimenta (ISA)
2	Amazonas Federal Institution (IFAM) - Tefé	21/01/2022	Participation in the design and implementation of the project activities, particularly on participatory planning, implementation of field activities and knowledge dissemination	Development of actions to structure a local seed bank in association with local communities (during GEF 7 validation seminar)	Helder Frazão, IFAM
3	Bom Jesus do Baré Community Association	28/11/2022	Participation in the design and implementation of the project activities, particularly on participatory planning, implementation of field activities and knowledge dissemination	Actions to continue and expand agroecological production areas using agroforestry restoration	Local comunity residents (Dona Maria Tavares, local leader), President of "Organização de Controle Social - OCS Bom Jesus do Baré"(Ian Santos)

4	Boa Esperança Community Association	28/11/2022	Participation in the design and implementation of the project activities, particularly on participatory planning, implementation of field activities and knowledge dissemination	Actions to continue and expand agroecological production areas using agroforestry restoration	Local comunity residents (Jesuy Tavares, local leader), President of "Organização de Controle Social - OCS Boa Esperança" (Weneson Paulo Araújo de Freitas)
5	Missão Community Association	30/11/2022	Participation in the design and implementation of the project activities, particularly on participatory planning, implementation of field activities and knowledge dissemination	Actions to continue and expand agroecological production areas using agroforestry restoration	Local comunity residents (Bernadete de Araujo, local leader), President of "Organização de Controle Social - OCS Missão"
6	Santa Margarida de Alacoque Mother Club	30/11/2022	Participation in the design and implementation of the project activities, particularly on participatory planning, implementation of field activities and knowledge dissemination	Actions to continue and expand agroecological production areas using agroforestry restoration	Local community residents (Bernadete de Araujo, local leader), President of "Organização de Controle Social - OCS Missão"
7	Tefé National Forest and Surroundings Agroextractivists producers Association (APAFE)	01/12/2022	Participation in the design and implementation of the project activities, particularly on participatory planning, implementation of field activities and knowledge dissemination	Actions to continue and expand agroecological production areas using agroforestry restoration	Local community residents, Manoel Neto (President of Organização de Controle Social - OCS APAFE", Francisco Dárcio Falcão e Edna Rocha (local leaders)
8	Brazilian support service for micro and small businesses (SEBRAE) - Manaus	07/02/2023	Market mapping and support in identifying entrepreneurs	Market mapping and support in identifying entrepreneurs interested in participating in the courses. Support in the organization and local articulation in carrying out courses in	Wanderléia Franco Silva, SEBRAE Manaus

				communities and online.	
9	Amazon Entrepreneurship and Innovation Network (RAMI)	10/02/2023	Support in the methodology of the entrepreneurship course	Support in the methodical development of courses and market mapping and potential partners	Jorge Garcia Jane Moura (President and overseer of RAMI)
10	Oswaldo Cruz Foundation (FIOCRUZ) Redesfito Marapuama Center	26/02/2023	Potential market mapping of restored forest products	Market mapping and support in identifying entrepreneurs interested in participating in the courses	Jane Moura (RAMI), Jefferson Pereira and Vitor Gomes Cardoso (RedesFito), Mariana Cohen (Casa do Rio) and Wanderléia Franco Silva (SEBRAE)
11	Brazilian support service for micro and small businesses (SEBRAE) - Tefé	10/03/2023	Market mapping and support in identifying entrepreneurs	Market mapping and support in identifying entrepreneurs interested in participating in the courses. Support in the organization and local articulation in carrying out courses in communities and online.	Manoel Erinelson Medim (SEBRAE Tefé)
12	Polo BioAmazonas - Ministry of Integration and Regional Development (MIDIR)	14/03/2023	Market mapping and partners	Market mapping and support in identifying entrepreneurs interested in participating in the courses	Glauco Villas Bôas (FioCruz), Milena Costa (SEDECTI), Jorge Porto (INPA)
13	Brazilian support service for micro and small businesses (SEBRAE) - Belém	15/03/2023	Market mapping and support in identifying entrepreneurs	Market mapping and support in identifying entrepreneurs interested in participating in the courses. Support in the organization and local articulation in carrying out courses in communities and online.	Vera Lúcia Rodrigues Menezes (SEBRAE Belém)

14	Federal Public Ministry (MPF) - Manaus/Amazonas	23/03/2023	Support and guidance for conducting activities in the Miratu indigenous territory	Guidance on conflict mediation in Miratu indigenous territory to carry out agroecology actions, socialization of sustainable management demands to be carried out (management practices without the use of fire, promotion of agroecology for restoration)	Pedro (anthropologist), Fernando Merloto (Federal Prosecutor)
15	Miratu Indigenous Land	09/05/2023	Participation in the design and implementation of the project activities, particularly on participatory planning, implementation of field activities and knowledge dissemination	Socialization of village demands regarding agroecology activities to be carried out in the indigenous territory in the Miratu Braga, Caetana and Miratu-APIAM villages; meeting between representatives of the villages to prepare a letter of demand for necessary activities	Indigenous leaders of towns (Tuxaua Almir e Professor Patrícia), Caetana (Tuxaua Juscelino), Miratu-APIAM (Tuxaua Marialdo e Senhor Valdé)
16	National Foundation of Indigenous People (FUNAI) - Tefé	06/06/2023	Consent and guidance for conducting activities in the Miratu indigenous territory	Guidance, consent and authorization of access to areas of the Miratu indigenous territory to carry out agroecology actions, and meet sustainable management demands	Silvio Bastos, FUNAI
17	Maniva Agroecology Network (REMA)	16/09/2023	Participation in the design and implementation of the project activities, particularly on participatory planning, implementation of field activities and knowledge dissemination	Identification of areas and regions of traditional communities and indigenous territories with demands for agroecological management actions for restoration (Tarumã Mirim Settlement in Manaus; Verdum	Márcio Menezes (Technical Advisor of CECANE/CATRAPOA), Fernanda Viana (IDSM), Juliana Oler (IDSM)

				and Jauari Communities in Manicoré; Renascer Organic Producers Association at Ramal do Cobra in Careiro da Várzea; Madeira River, Lago do Puruzinho in Borba; indigenous community of Nossa Senhª Auxiliadora - São Gabriel da Cachoeira) coordination with local leaders and institutions in the regions where REMA operates to agree on activities and access authorizations to the areas.	
18	Pará Federal University (UFPA)	16/10/2023	Application of online entrepreneurship courses	Partner for applying the online entrepreneurship course	Edna Alencar, UFPA
19	Amazonas State University (UEA)	19/10/2023	Application of online entrepreneurship courses	Partner for applying the online entrepreneurship course	Macário Lopes de Carvalho Júnior, UEA
20	Universidade Paulista (UNIP)	19/10/2023	Application of online entrepreneurship courses	Partner for applying the online entrepreneurship course	Viviane Marcos, UNIP
21	Amazonas Federal Institute (IFAM) - Tefé	19/10/2023	Application of online entrepreneurship courses	Partner for applying the online entrepreneurship course	Martinho Correa Barros, IFAM
22	Alliance for Restoration in the Amazon	06/11/2023	Participation in the design and implementation of the project activities, particularly on participatory planning, implementation of field activities and knowledge dissemination	Actions for structuring and implementing the project, as well as providing support in local organization and coordination for conducting courses in communities and online	Marlúcia Bonifácio Martins (MPEG); Amanda Paiva Quaresma (Aliança pela Restauração da Amazônia)

23	Museu Paraense Emílio Goeldi (MPEG)	06/11/2023	Participation in the design and implementation of the project activities, particularly on participatory planning, implementation of field activities and knowledge dissemination	Actions for structuring and implementing the project, as well as providing support in local organization and coordination for conducting courses in communities and online	Marlúcia Bonifácio Martins (MPEG); Amanda Paiva Quaresma (Aliança pela Restauração da Amazônia
24	Tefé Municipal Environmental Secretariat (SEMA)	08/11/2023	Participation in the design and implementation of some project activities, particularly monitoring and replacing land clearing practices without the use of fire	Actions for structuring and implementing the project, as well as providing support in local organization and coordination for conducting courses in communities and online	Denivaldo Cordeiro de Carvalho (SEMA)
25	Amazonas Federal Institute (IFAM) - Manaus/AM	Sept 2nd and Oct 19th 2022	Application of online entrepreneurship courses	Improve and empower IFAMs graduated forest technicians' knowledge on restoration; continued capacity building; IFAMs responsibilities on the project	IFAM representative

(Please upload to the portal documents tab any stakeholder engagement plan or assessments that have been done during the PIF development phase.)

Private Sector

Will there be private sector engagement in the project?

Yes

And if so, has its role been described and justified in the section B project description?

Yes

Environmental and Social Safeguard (ESS) Risks

We confirm that we have provided indicative information regarding Environmental and Social risks associated with the proposed project or program and any measures to address such risks and impacts (this information should be presented in Annex D).

Yes

Overall Project/Program Risk Classification

PIF	CEO Endorsement/Approval	MTR	TE

Medium/Moderate

E. OTHER REQUIREMENTS

Knowledge management

We confirm that an approach to Knowledge Management and Learning has been clearly described in the Project Description (Section B)

Yes

ANNEX A: FINANCING TABLES

GEF Financing Table

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

GEF Agency	Trust Fund	Country/ Regional/ Global	Focal Area	Programming of Funds	Grant / Non-Grant	GEF Project Grant($)	Agency Fee($)	Total GEF Financing ($)
FAO	GET	Brazil	Biodiversity	BD STAR Allocation: BD-1	Grant	3,500,000.00	332,500.00	3,832,500.00
FAO	GET	Brazil	Climate Change	CC STAR Allocation: CCM-1-4	Grant	1,500,000.00	142,500.00	1,642,500.00
Total GEF Resources ($)						**5,000,000.00**	**475,000.00**	**5,475,000.00**

Project Preparation Grant (PPG)

Is Project Preparation Grant requested?

true

PPG Amount ($)

150000

PPG Agency Fee ($)

14250

GEF Agency	Trust Fund	Country/ Regional/ Global	Focal Area	Programming of Funds	Grant / Non-Grant	PPG($)	Agency Fee($)	Total PPG Funding($)
FAO	GET	Brazil	Biodiversity	BD STAR Allocation: BD-1	Grant	100,000.00	9,500.00	109,500.00

FAO	GET	Brazil	Climate Change	CC STAR Allocation: CCM-1-4	Grant	50,000.00	4,750.00	54,750.00
Total PPG Amount ($)						**150,000.00**	**14,250.00**	**164,250.00**

Please provide justification

Sources of Funds for Country Star Allocation

GEF Agency	Trust Fund	Country/ Regional/ Global	Focal Area	Sources of Funds	Total($)
FAO	GET	Brazil	Biodiversity	BD STAR Allocation	3,942,000.00
FAO	GET	Brazil	Climate Change	CC STAR Allocation	1,697,250.00
Total GEF Resources					**5,639,250.00**

Indicative Focal Area Elements

Programming Directions	Trust Fund	GEF Project Financing($)	Co-financing($)
BD-1-3	GET	3,500,000.00	28637000
CCM-1-4	GET	1,500,000.00	12273000
Total Project Cost		**5,000,000.00**	**40,910,000.00**

Indicative Co-financing

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Investment Mobilized	Amount($)
Recipient Country Government	Ministry of Science, Technology and Innovation (MCTI	Public Investment	Investment mobilized	16000000
Recipient Country Government	Ministry of Science, Technology and Innovation (MCTI	In-kind	Recurrent expenditures	300000
Recipient Country Government	Brazilian Development Bank (BNDES)	Public Investment	Investment mobilized	9000000
Recipient Country Government	National Fund for Scientific and Technological Development (FNDCT)	Public Investment	Investment mobilized	15000000

GEF Agency	FAO	Grant	Investment mobilized	460000
GEF Agency	FAO	Grant	Investment mobilized	150000
Total Co-financing				**40,910,000.00**

Describe how any "Investment Mobilized" was identified

The Ministry of Science, Technology and Innovation will provide Mobilized Investments through Programs, such as the Biodiversity Research Program (PPBio) and Long-Term Ecological Program (PELD), financed by MCTI, and MCTI structuring projects, such as the Brazilian Biodiversity Information System (SIBBr) and the Amazon System of Satellite Laboratories (SALAS), financed by BNDES and FNDCT.

FAO is implementing a project funded by the Green Climate Fund (GCF), in the Readiness modality aimed at setting up an online, open, and interoperable Platform for promoting the transparency and environmental sustainability of the value chains for beef and soybean in the legal Amazon of Brazil. The main purpose of the Platform is to combat illegal deforestation in the Amazon through positive market incentives for those farmers and ranchers who comply with the national legislation in force which prohibits deforestation. As the project will succeed in such an effort, a decrease of deforestation also in the wetland areas covered by the GEF-8 initiative, is to be expected. The project is going to elaborate a concept note for a much larger GCF project (approx. 50 M USD) in the same domain and regional coverage.

FAO Regional Office in Latin America and the Caribbean will launch a Technical Cooperation Project (TCP) in 2024-26, support the implementation of Kunming-Montreal Framework in selected countries, including Brazil, and the UN Decade of Restoration. The component of Knowledge Management and Exchange will co-finance the proposed GEF-8 project.

All figures will be confirmed during full project preparation.

ANNEX B: ENDORSEMENTS

GEF Agency(ies) Certification

GEF Agency Type	Name	Date	Project Contact Person	Phone	Email
GEF Agency Coordinator	Jeffrey Griffin	4/12/2023	Valeria Gonzalez Riggio		valeria.gonzalezriggio@fao.org

Record of Endorsement of GEF Operational Focal Point (s) on Behalf of the Government(s):

Name	Position	Ministry	Date (MM/DD/YYYY)
Livia Farias Ferreira de Oliveira	General Coordinator for Sustainable Finance	Ministry of Finance	11/14/2023

ANNEX C: PROJECT LOCATION

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

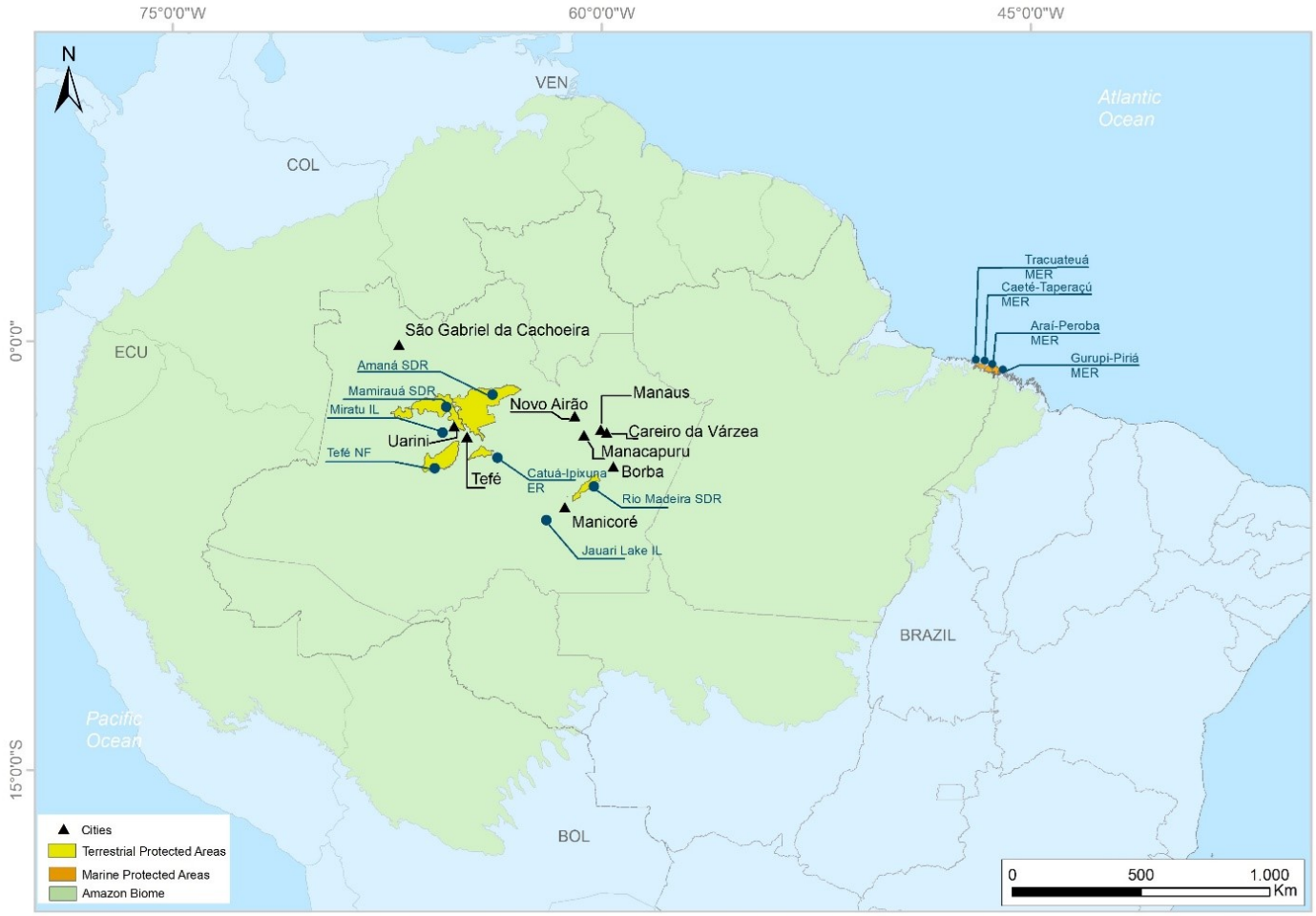

Figure 3. Project focal areas, covering RAMSAR sites Amazon Estuary and its Mangroves (Site 2337); Rio Negro (Site 2335) and Mamirauá (Site 623).

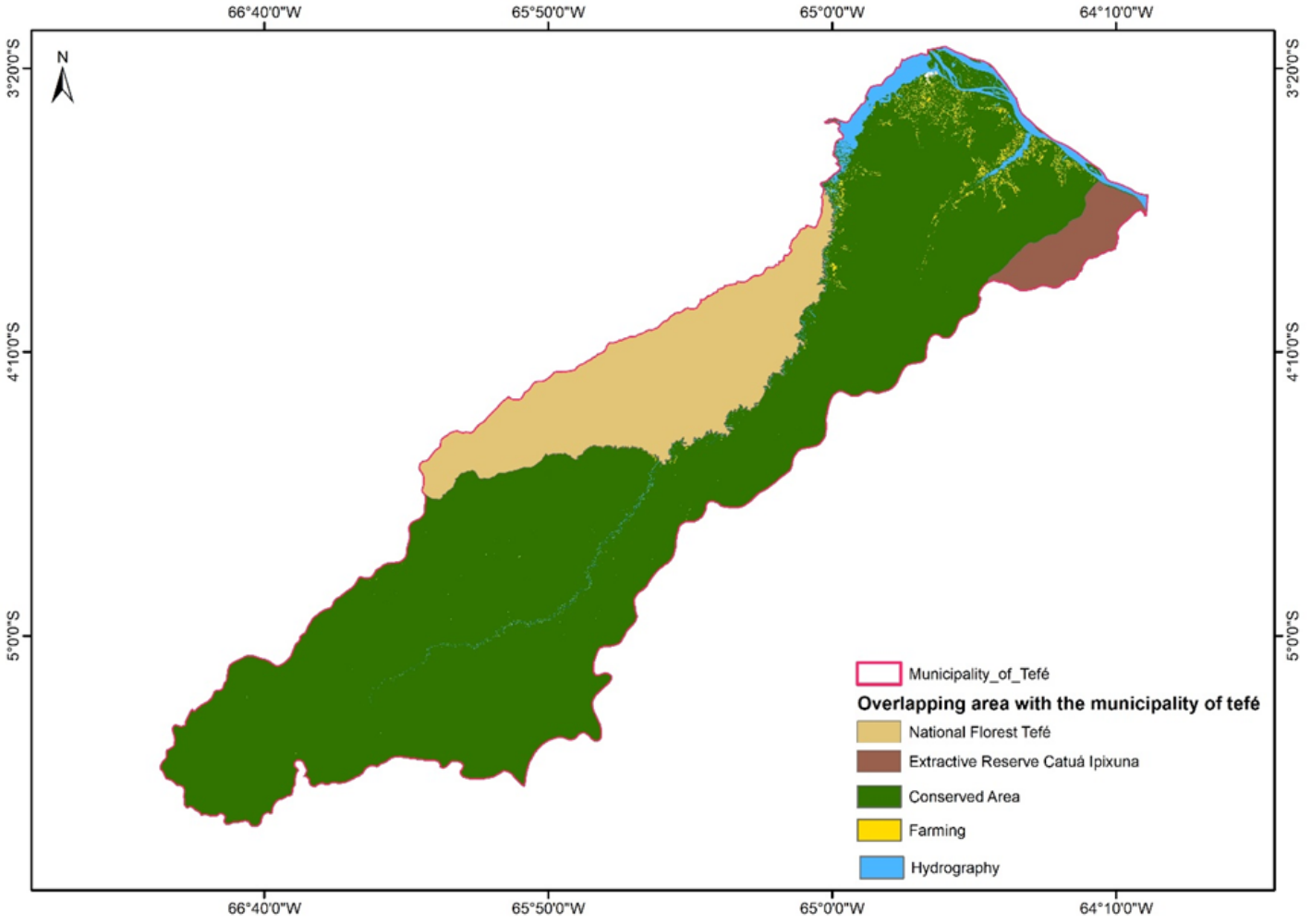

Figure 2. Tefé municipality area, with the farming zone highlighted in yellow, as addressed in Core Indicator 4.1 (landscapes under improved management to benefit biodiversity), and the conserved vegetation area, excluding protected areas, in green, as considered in Core Indicator 4.4 (Area of High Conservation Value Forest loss avoided).

table 7

Project focal area	State	Coordinates
Tracuateua Marine Extractivist Reserve	Pará	0.836°S 46.893°W
Caeté-Taperaçu Marine Extractivist Reserve	Pará	0.900362°S 46.722265°W
Araí-Peroba Marine Extractivist Reserve	Pará	0.991169°S 46.448117°W
Gurupi-Piriá Marine Extractivist Reserve	Pará	1.003363°S 46.223133°W
Catuá-Ipixuna Extractivist Reserve	Amazonas	3.864424°S 64.179585°W
Amanã Sustainable Development Reserve (RDSA)	Amazonas	2.403°S 64.447°W
Mamirauá Sustainable Development Reserve (RDSM)	Amazonas	2°16′S 65°41′W

Tefé National Forest (FLONA Tefé)	Amazonas	4°09′56″S 65°37′14″W
Tefé Municipality	Amazonas	03°21′14″S 64°42′39″W
Manaus municipality	Amazonas	3°7′8″S 60°1′18″W
Miratu Indigenous Land (TI Miratu)	Amazonas	3°01'31.6'S 65°13'47.8'W
Borba municipality	Amazonas	7°20'55.9'S 63°05'01.2'W
Madeira Sustainable Development Reserve (RDS rio Madeira) and surroundings	Amazonas	5°04′33″S 60°29′31″W
Mancapuru municipality	Amazonas	3° 17′ 59″ S 60° 37′ 14″ W
Novo Airão municipality	Amazonas	2° 37′ 15″ S 60° 56′ 38″ W
Lago do Jauari Indigenous Land (TI Lago do Jauari)	Amazonas	6°12'45.3'S 61°57'30.6'W
São Gabriel da Cachoeira municipality	Amazonas	0° 7′ 48″ S 67° 5′ 20″ W
Careiro da Várzea muncipality	Amazonas	3° 13′ 15″ S 59° 49′ 33″ W

ANNEX D: ENVIRONMENTAL AND SOCIAL SAFEGUARDS SCREEN AND RATING

(PIF level) Attach agency safeguard screen form including rating of risk types and overall risk rating.

Title
ESS Risk Certification

ANNEX E: RIO MARKERS

Climate Change Mitigation	Climate Change Adaptation	Biodiversity	Land Degradation
Significant Objective 1	Significant Objective 1	Principal Objective 2	Significant Objective 1

ANNEX F: TAXONOMY WORKSHEET

ANNEX F: TAXONOMY WORKSHEET

Level 1	Level 2	Level 3	Level 4	Level 5
Influencing Models	Deploy innovative financial instruments			

	Convene multi-stakeholder alliances			
	Demonstrate innovative approach			
Stakeholders	Communications	Behavior change		
	Civil society	Community Based Organization		
		Non-Governmental Organization		
	Indigenous People			
	Type of engagement	Partnership		
	Local communities			
Capacity, Knowledge and Research	Knowledge generation	Training		
		Professional development		
	Learning	Indicators to measure change		
Gender Equality	Gender Mainstreaming	Beneficiaries		
	Gender Results area	Access and control over natural resources		
		Knowledge generation and exchange		
		Capacity Development		
Focal Area/Them	Forest	Forest	Amazon	
	Biodiveristy	Protected Areas and Landscapes	Community Based Natural Resource Mngt	
			Terrestrial Protected Areas	
	Biomes	Tropical Rain Forest		