

GEF-8 WORLD BANK PCN STAGE/GEF DATA SHEET

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General Project Information

Project Title

Madagascar Science-based management of Biodiversity and Natural Resources for Economic Development Project

Region

Madagascar

GEF Project ID

11694

Country(ies)

Madagascar

Type of Project

FSP

GEF Agency(ies):

World Bank

GEF Agency ID

Executing Partner

Ministry of Environment and Sustainable Development

Executing Partner Type

Government

GEF Focal Area (s)

Multi Focal Area

Submission Date

9/17/2024

Project Sector (CCM Only)

Taxonomy

Type of Engagement, Stakeholders, Capacity, Knowledge and Research, Coastal and Marine Protected Areas, Protected Areas and Landscapes, Biodiversity, Terrestrial Protected Areas, Restoration and Rehabilitation of Degraded Lands, Sustainable Land Management, Land Degradation, Marine Protected Area, Gender Mainstreaming, Gender Equality, Productive Seascapes, Partnership, Private Sector, SMEs, Local Communities, Innovation, Focal Areas, Climate Change, Climate Change Adaptation, Community-based adaptation, Least Developed Countries, Ecosystem-based Adaptation, Climate resilience, International Waters, Coastal

Type of Trust Fund

MTF

Project Duration (Months)

72

GEF Project Grant: (a)

17,247,759.00

GEF Project Non-Grant: (b)

2,752,294.00

Agency Fee(s) Grant: (c)

1,552,296.00

Agency Fee(s) Non-Grant (d)

247,706.00

Total GEF Financing: (a+b+c+d)

21,800,055.00

Total Co-financing

162,300,000.00

PPG Amount: (e)

275,179.00

PPG Agency Fee(s): (f)

24,766.00

PPG total amount: (e+f)

299,945.00

Total GEF Resources: (a+b+c+d+e+f)

22,100,000.00

Project Tags

CBIT: No NGI: Yes 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)

Project Summary:

The project seeks to address the interconnected issues of biodiversity conservation, climate change adaptation, and sustainable development in Madagascar. By leveraging innovative financing mechanisms like the Lemur Bond and promoting integrated landscape/seascape approaches the project aims to generate multiple benefits, including improved livelihoods, enhanced climate resilience, and significant contributions to global environmental benefits.

The project seeks to improve protection of biodiversity and integrated landscape and seascape management by promoting ecotourism development to support alternative livelihoods, reducing dependency on traditional farming and helping conserve natural resources. The project will introduce an innovative market facing instrument in the form of the lemur bond, which will provide a financial stream for biodiversity conservation and climate resilience in the targeted areas during the life of the bond, as well as create a financing model for potential scale up. The project will also support communities around the protected areas with technical training and materials for them to pursue sustainable agricultural practices that enhance productivity and environmental stewardship. The project will support reforestation and habitat restoration as they are essential for reconnecting fragmented habitats and ensuring the survival of lemur populations. The process will be implemented with effective communications and engagement with local communities.

The Project Management Unit (PMU) within the Ministry of Environment and Sustainable Development (MEDD) will lead this effort in collaboration with other relevant ministries, including the Ministry of Agricultural Development and Trade (MDAT), Ministry of Public Works and Energy (MPEB), and Ministry of Tourism and Antiquities (MTA). A Steering Committee comprising suitable representatives will oversee the project's coordination with national, governorate, and local institutions. A comprehensive communication plan will be established to facilitate timely and effective information sharing among all stakeholders, ensuring transparency, building trust, and fostering collaboration. Additionally, a robust monitoring and evaluation framework will be implemented to systematically track project progress and assess outcomes, allowing for continuous improvement and ensuring the project's goals are met efficiently and effectively.

The primary Project Development Objective (PDO) is to enhance integrated landscape and seascape management, improve livelihoods of local beneficiaries in targeted areas around Protected Areas, and conserve globally significant biodiversity. This will be achieved through a transformative approach focusing on inclusivity, climate resilience, and biodiversity conservation.

The PDO will be measured by the following core indicators:

- Terrestrial and aquatic areas under enhanced conservation and management: This will be assessed by summing up restored landscapes and seascapes within and around PAs, areas under alternative energy source tree reforestation, restored mangrove areas, and co-managed fisheries zones. [Indicator 1: Terrestrial protected areas created or under improved management - 712,133ha; Indicator 2: Marine protected areas created or

under improved management - 328,216ha; Indicator 3: Area of land and ecosystems under restoration - 20,300ha; Indicator 4: Area of landscapes under improved practices (hectares; excluding PAs) - 5000ha; Indicator 5: Area of marine habitat under improved practices to benefit biodiversity - 2000ha]

- Increased people with enhanced resilience to climate risks: The number of people with improved resilience will be disaggregated by gender. [Target: 260,000 people, 50% Women - 80,000 direct beneficiaries, 50% Women]
- Reduction of Greenhouse Gas (GHG) emissions: Measured in tons of CO₂ equivalent [Target: 7,975,238 tCO₂eq]
- Outcome-based Lemur Bond system established: A binary indicator to determine if the Lemur Bond system has been established.

The main beneficiaries include local communities, especially women, youth, and vulnerable groups, local associations, private firms, and various regional and national government departments. The project will target key areas in Boeny, Sofia, and Diana regions, encompassing several PAs.

Detailed Project Background and Description

Country Context

1. **Madagascar is one of the earth's thirty-six biodiversity hotspots**[\[1\]](#). Madagascar is home to 11,698 flora species and 417 fauna species, with endemism rate of 89 percent, and much of which is considered threatened with extinction. The entire 112 species of lemurs in Madagascar are endemic, and 103 species (93.6 percent) are either critically endangered, endangered or vulnerable. The Island's diverse ecosystems, from rainforests and mangroves to spiny forests, support highly specialized species. Such Madagascar's rich biodiversity is not only of ecological importance but also holds scientific, genetic, and conservation value. It can be considered a global public good (GPGs) and its protection is important for global environmental benefits (GEBs).
2. **In addition, Madagascar is endowed with the longest coastline in Africa and an extensive Exclusive Economic Zone (EEZ) which nurture marine biodiversity and coastal ecosystems.** While Madagascar is the fourth largest island in the world of 587,000 km², its EEZ is more than twice as large the land area with 1.2 million km². Fisheries account for approximately 7 percent of Gross Domestic Product (GDP), with total capture production of approximately 130-160,000 tons per annum[\[2\]](#). More than 250,000 hectares of mangroves, close to half a million hectares of coral reefs and seagrasses beds provide nurseries for fish and marine fauna, coastal protection, and ecotourism base as well as source of wood and carbon storage.
3. **Despite unique assets of biodiversity and nature along both landscape and seascape, Madagascar remains among the poorest countries in the world.** Madagascar is one of the few countries globally where poverty has risen over the last two decades. With a GDP per capita of US\$522, Madagascar ranks among the lowest (162 out of 189) on the Human Development Index (HDI, United Nations Development Program (UNDP) 2019). In 2022, an estimated 75.2 percent of the national population, which is nearly 22 million people, lived in poverty - 79.9 percent in rural and 55.5 percent in urban areas. The quality of life of rural population needs to be improved and there should be more diversified offer on sustainable and inclusive jobs in landscape and seascape areas. The rural poverty has been resulted in unsustainable practices of slash and burn agriculture, logging, and fuelwood extraction, leading to deforestation, further endangering the many endemic species.

Sectoral and Institutional Context

4. **Madagascar is marred by continued natural capital degradation, contributing to a vicious cycle of impoverishment (Figure 1 left).** Madagascar's forest area has declined from 29 percent to 21 percent from 2000 to 2020, similarly, mangrove coverage is lost for more than 40 percent of original coverage since the 1950s. Large-scale reforestation presents a catalytic opportunity to bridge ecological and socioeconomic gaps and restore degraded landscapes and mangrove areas, to supply woods, to protect biodiversity, and to transition to sustainable energy systems for communities to be more climate resilient. Timber production is around 15 million m³ annually, with 75% sourced from natural forests and 25% from plantations. However, local demand far exceeds supply, with an estimated 26.7 million m³ of wood required annually. This demand is driven by energy needs: 21 million m³ for fuelwood and charcoal and 5.7 million m³ for construction, service, and industrial wood creating an annual deficit of 11.7 million m³. Without large-scale reforestation intervention, the growing population and reliance on wood for energy will exacerbate deforestation, threatening biodiversity and livelihoods. Economic loss from landscape and seascape degradation are significant, and it is estimated that losses in crop production due to erosion and land deterioration over a 30-year period worth US\$4.1B, with a yearly average of US\$141.4 million[3], and such figures will be even higher if the damage to biodiversity, environment and ecosystem services are added.

5. **There are 123 Protected Areas (PAs), including 101 terrestrial and 22 marine PAs,[4] but many of them are not well managed, and the surrounding landscape and seascape continue to be degraded.** PAs are intended as a legal response to landscape and seascape protection, but currently this model of PA designation is not translating into enhanced environmental protection and climate action. This is due to multiple factors: limited financial and human capacity to develop and implement the PA management plans; weak community involvement in addressing deforestation; pressures placed on landscapes by the unsustainable extraction of natural resources including fuel wood harvesting and charcoal; aggravated deforestation linked to in-migration[5]; limited productivity of local agriculture, causing environmental degradation and limited value-chains for the support of forest-protective livelihoods. Marine PAs also face challenges including habitat destruction and overfishing. The growing locally managed marine areas (LMMAs) must demonstrate both economic and biodiversity benefits for long-term sustainability.

6. **Madagascar is highly vulnerable to climate shocks.** Due to its location, topography, and socioeconomic conditions, it is highly exposed to extreme weather events, especially cyclones, flooding, and drought. The island country's extensive coastline and location in the Indian Ocean make it especially prone to cyclones. The 2019 World Risk Report[6] ranked Madagascar at 17 out of 171 countries in terms of exposure to natural disasters. A catastrophe risk modeling study estimated that Madagascar faces average annual losses of US\$100 million from cyclone and flood combined hazards and that every year, there is a 10 percent probability that damages will exceed US\$240 million and a 5 percent probability that they will exceed US\$600 million.[7] Growing fragility of ecosystems and depletion of the country's natural resource base amplifies the country's vulnerability.

7. **Climate change is expected to increase the frequency and intensity of hydrometeorological disasters with adverse effects livelihoods and biodiversity and the resilience and adaptation of local communities.** Climate change scenarios predict, under the optimistic scenario (RCP 4.5), Madagascar's mean surface air temperature is expected to increase from 23.14°C to 24.93°C by 2050. The pessimistic scenario (RCP 8.5) projects a more severe rise to 27.32°C by 2050. Increased temperatures will likely lead to more frequent and intense heatwaves, which can cause heat stress among humans and wildlife and exacerbate drought conditions. Changes in rainfall patterns are projected all along the country. Models tend to predict an increase in average precipitation over the west coast and a decrease in the northern, central and eastern regions of the country.[8] Reduced precipitation, over the central and east coastal regions, is accompanied by increased length of dry spells. The duration of dry spells is projected to increase by 70 days a year (median value) in a moderate climate change scenario (RCP 4.5).[9] Projections show that the intensity of cyclones may increase by 46 percent and their trajectory would tend to move northward.[10] According to

Madagascar's 2016 National Determined Contributions (NDC)[11] and the 2021 National Adaptation Plan (NAP),[12] climate change generates significant impacts on water, land, ecosystems, biodiversity, infrastructure and agriculture and rural livelihoods.

8. **In addition, climate change has been intensifying environmental pressures on landscape and seascape, including accelerating displacement and migration.** Madagascar experiences an average of three cyclones annually, causing widespread damage and migration. Between 2011 and 2021, approximately 811,000 individuals were displaced due to storms, floods, and droughts[13]. Many migrants, particularly from drought-affected southern regions, move northwest in search of better economic opportunities and resources, adding pressure on the natural resources in the places where they settle. Under pessimistic scenario, climate models project intensified cyclones, prolonged droughts, and coastal erosion, which make adaptation by local communities more difficult and destruction of livelihoods and biodiversity more likely[14]. Some research shows direct link between climate change and the reproductive success of several lemur species[15]. Addressing the interconnected issues of climate change and migration requires integrated strategies including environmental conservation, economic development with sustainable financing mechanism, social resilience, and improved regional planning. Wildfires are another significant climate hazard linked to rising temperatures and changing precipitation patterns. The increase in temperature and prolonged dry periods will enhance the incidence and severity of wildfires across Madagascar, threatening both natural habitats and human settlements. Specifically, less rainfall during critical dry seasons, such as September and October, will create conditions conducive to wildfires, which can devastate vast areas of forests and grasslands, impair air quality, and contribute to further biodiversity loss.

9. **There is an urgent need for a paradigm shift in natural resources management in Madagascar (Figure 1 right).** A comprehensive paradigm shift towards transformative, sustainable, inclusive, climate-resilient, biodiversity-centered ecosystem-based development would help to leap-frog development in Madagascar and generate multiple benefits in all dimensions including biodiversity conservation, reduced negative impacts on the neighboring environment, together with economic growth and improvement in peoples' livelihoods.

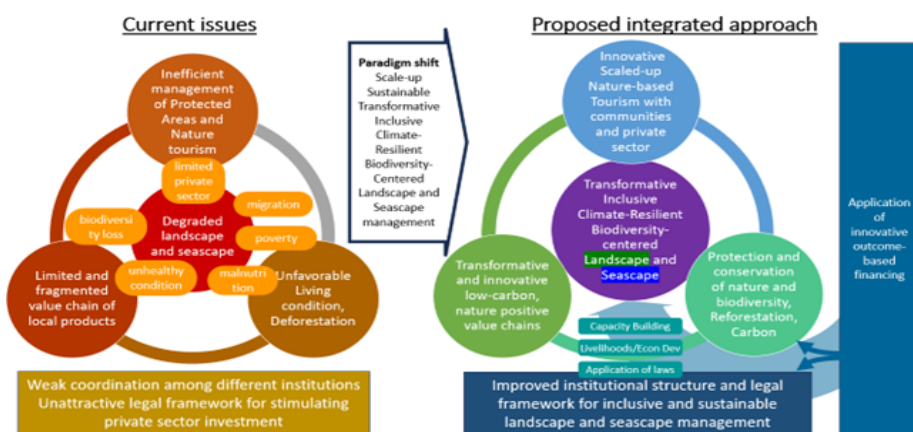


Figure 1: Required Paradigm shift for Landscape and Seascape Management with Innovative Financing

10. **New financing and resource bases are required to sustain this paradigm shift.** While the Madagascar Protected Areas and Biodiversity Fund (FAPBM), a pioneer conservation trust fund (CTF), or Tany Meva, another CTF in the country, provide efficient ways to transform donor funding into sustainable financing for PAs, its current endowment, which is intermittent and unreliable, needs to be greatly strengthened to meet the challenges of PA management. More use could be made of nature-based tourism (NbT) revenue, especially when working with the local communities. By integrating Madagascar's rich

history, culture, traditions, and culinary experiences with its unique biodiversity, NbT can create a more diverse and appealing products and services, attracting a broader range of visitors and generating greater economic benefits. To encourage private finance in NbT, an inter-ministerial agreement was approved for securing land around ecotourism areas within PA buffer zones. Implementing this agreement could be a game changer in protective, innovative and income-generating ecotourism if implemented as part of the overall PA management. Potential larger scale private sector investment can be explored with the International Finance Corporation (IFC)[16].

11. **As part of innovative financing, species outcome-based financing of Lemur Bond can be issued and implemented.** There are already many exemplary cases of species outcome-based financing, including the Rhino Bond in South Africa, Coral Bond in Indonesia, and the upcoming Chimp Bond in Rwanda. The Government of Madagascar (GoM) as well as lemur scientists and conservation managers are keen to explore such innovative outcome-based financing in line with the Kunming-Montreal Global Biodiversity Framework target 19 of resource mobilization for biodiversity, stimulating innovative schemes and optimizing co-benefits and synergies of finance targeting the biodiversity and climate crises, enhancing the role of collective actions, including those by local communities, enhancing the effectiveness, efficiency and transparency of resource provision and use.

12. **Madagascar's reforestation imperative presents a catalytic opportunity to bridge ecological and socioeconomic gaps.** Large-scale reforestation is needed to restore degraded landscapes, to supply woods, to protect biodiversity, and to transition to sustainable energy systems especially for communities to be more climate resilient. Timber production is around 15 million m³ annually[17], with 75% sourced from natural forests and 25% from plantations[18]. However, local demand far exceeds supply, with an estimated 26.7 million m³ of wood required annually. This demand is driven by energy needs 21 million m³ for fuelwood and charcoal and 5,7 million m³ for construction, service, and industrial wood creating an annual deficit of 11.7 million m³. [19] Without large-scale reforestation intervention, the growing population and reliance on wood for energy will exacerbate deforestation, threatening biodiversity and livelihoods[20].

13. **There is more to do on the implementation of environmental protection laws.** The Law of Protected Areas (COAP), the Forest Law and the Environment Charter[21], including provisions for Community-based Natural Resource Management (CBNRM), are in place for environmental protection, however the country faces constraints in implementing their adherence through regular surveillance and controls[22]. Environment Laws and COAP lack cascaded regulations and management plans as well as do the legal frameworks for marine spatial planning and the national framework for the blue economy[23]. Law enforcement, including preventing Illegal, Unreported and Unregulated (IUU) fishing, poaching, logging, and mining, remains inconsistent.

14. **Natural resources management, especially in applying an innovative approach is one of the highest priorities of the Government of Madagascar (GoM).** The Project is aligned with key national and international frameworks adopted by the GoM, reinforcing its commitment to biodiversity action and landscape-seascape management. The National Biodiversity Strategy and Action Plan (NBSAP), operationalizes the Convention on Biological Diversity (CBD) and advances the Kunming-Montreal Global Biodiversity Framework (GBF)[24] through targets of restoring degraded ecosystems and mainstreaming biodiversity into sectoral planning. Under the UN Framework Convention on Climate Change (UNFCCC), the National Adaptation Plan for Climate Change (NAP, 2021) prioritizes ecosystem-based adaptation, directly supporting Madagascar's Nationally Determined Contributions (NDC2, 2022; NDC3 forthcoming) in forest preservation, climate resilience, and sustainable land management. The National Action Plan to Combat Desertification (PAN-LCD 2008–2018), aligned with the UN Convention to Combat Desertification (UNCCD), synergizes with the Forest Policy 2016–2030, which combats deforestation through landscape restoration, sustainable wood-energy practices, and strengthened forest governance. These efforts are reinforced by the Environment Charte, mandating ecological restoration and participatory natural resource management.

15. **Diverse sources of funding will finance the Project.** The main source of funding of this project is International Development Association (IDA) Global Regional Operations Window (IDA GROW). Lemur

in Madagascar cannot be found anywhere else in the world, and protection of those precious species is GPG. In addition, the Government is willing to use the Global Environment Facility (GEF) financing to cover part of the proposed activities. Indeed, through the GEF-8 current cycle, an endorsement of US\$22.1 million has been provided to support the Science-based management of Biodiversity and Natural Resources for Economic Development. US\$4million grant resources from the Trust Fund from Enhancing Access to Benefits while Lowering Emissions (EnABLE) will be used for enhancing the inclusion of marginalized communities in benefits from carbon emission reduction. A trust fund of the Accelerating the Implementation of REDD+ in Africa (AccelREDD+) of US\$3million will be used for emission reduction related activities. Other donors and partners are already financing multiple activities of biodiversity conservation and natural resource management at landscape and forest level in Madagascar and could potentially be approached for co-financing.

Proposed Project Development Objective(s)

16. **The proposed project development objective (PDO) is to enhance integrated landscape and seascape management, improve livelihoods of local beneficiaries in targeted areas around PAs, and conserve globally significant biodiversity.** The project will apply an integrated approach of transformative, inclusive, climate-resilient and biodiversity-centered landscape and seascape management together with the first-time ever in Madagascar's Lemur Bond operation, targeting the inter-linked positive results in both biodiversity and local vulnerably human populations for them to be more climate adaptative and resilient.

Key Results

17. The PDO will be measured by the following set of indicators:
- Terrestrial and aquatic areas (Ha) under enhanced conservation and management (Corporate Scorecard)[\[25\]](#)
 - Increased people with enhanced resilience to climate risks (Number, disaggregated by women and men) (Corporate Scorecard) (with special support to insertion of women, youth and vulnerable)
 - Reduction of Greenhouse Gas (GHG) emission (tons of CO2 equivalent) (Corporate Scorecard)
 - Outcome-based lemur bond system established (Yes/No)

Description

18. **The project will strengthen integrated landscape and seascape management landscape and seascape management of target PAs with an aim to reduce biodiversity loss, to restore degraded ecosystems, and improved climate resilience as well as adaptation in selected areas.** The project aims to improve the management of target PAs, contributing to restoration of the degraded ecosystems inside and around the PAs, and to effective conservation with application of innovative financing through a market facing outcome-based bond. The project will also support to apply biodiversity friendly practices, such as sustainable intensification, agroecological and other innovative approaches. The aim is to contribute to the resilience and long-term efficiency and productivity of these production systems, and to food security, while conserving and restoring biodiversity and maintaining nature's contributions to people, including ecosystem functions and services. The Project will enhance the role and ownership of local communities in PA management by improving the systems and platforms for their involvement and through ensuring that they gain direct economic benefits from landscape protection and changed practices.

19. **The project will support the efforts of the Government of Madagascar (GoM) and its partners to improve sustainable, inclusive, climate-resilient and biodiversity-centered landscape and seascape management.** MEDD is in charge of PAs and National Forest Domains (DFNs)[\[26\]](#), while MDA T

oversees territorial management. MEDD and MNP have been working with local partners and beneficiaries towards more effective PAs management plans, and this project will support this process. The project will support the active involvement of women, youth and marginalized in decision-making process related to landscape and seascape management with special attention for women and youth. Extensive data will be collected and the Management Effectiveness Tracking Tool (METT) for PA management will be used to monitor the progress of PA management change. The Project will scale up existing good practice by offering dedicated capacity building in the target communes by ensuring that structures at national and local level are able to interface with community opinions and to incorporate community priorities into wider planning and prioritization platforms.

20. **The project will support a species outcome-based Lemur Bond.** This bond will be a first of its kind for Madagascar and has been discussed in various occasions, with strong interest from the Government. The Lemur Bond design and operation will consider climate adaptation and resilience of the lemurs, their habitats, and the surrounding communities' socio-economic conditions. Under the Lemur Bond, the Government could choose to structure financing to effectively mobilize private institutional finance for conservation goals through capital markets transactions.

Beneficiaries

21. **The main project beneficiaries will be** (i) local communities, local associations and private firms working in and around protected areas by applying innovative environment and natural resources management including those promoting private-sector involving reforestation, nature-based tourism, community-led natural resources management, sustainable value-chain of natural products, improved climate resilience as well as adaptation, and those local beneficiaries of women, youth and vulnerable will be prioritized; (ii) at the sub-national level: various regional departments will work together as well as regional and communal organizations notably Community Association (COBA or VOI), Locally Managed Marine Area (LMMA) Associations, Communities; and (iii) at the national level also various sector departments will work together with the leadership of The Ministry of Environment and Sustainable Development (MEDD). Surrounding industries and agglomerations will benefit from ecosystem services strengthened by the improvement of landscape and seascape management. The project will partner with local actors, including communities and local governments, to foster inclusion and reduce vulnerability. Financing local communities is crucial as they are the first responders to climate change, and most knowledgeable of the immediate needs during crises. Financially empowered communities can implement localized solutions to climate resilience and adaptation, ensuring quicker responses and more sustainable outcomes, while fostering innovation and ownership. Investing in locally managed natural resources can unlock nature-based economies that sustain and generate returns from natural resource use, while leading to long-term sustainable management and conservation outcomes, including protection of biodiversity, improved livelihoods, goods and service provision, local enterprises, and benefits to society.

22. **The key target areas will be one in Boeny which includes 5 PAs, another in Sofia and Diana 7 PAs[27] as well as Lemur Bond targeted PAs,** while there is continued engagement in rain forest in east as described in Annex 3 Maps. The first step of target area selection was to identify the World Bank and other partners implementation areas in landscape and seascape management and avoid overlapping and explore more synergies. The second step is to identify the key biodiversity areas (KBAs) connecting unique landscape to seascape; to have a special attention to be more climate-resilient as receiving climate-migrants according to the predictions; having potential for innovative ecotourism and business opportunities in value-chain from landscape and seascape products; with close coordination and collaboration with local community partners and beneficiaries. Within the target areas, the aim will be to target marginalized and socially excluded communities through specific selection criteria. The two key target areas already host unique different flora and fauna[28], requires special consideration to balance ecology and socioeconomics.

Project Components

(please see Annex 4 of the PCN for more detailed component description)

23. **The Component 1 will focus on strengthening the integrated institutional structure and implementation of an integrated environmental protection laws.** The Law of Protected Areas (COAP), the Forest Law and the Environment Charter[29], including provisions for Community-based Natural Resource Management (CBNRM), are in place for environmental protection, however the country faces constraints in implementing their adherence through regular surveillance and controls[30]. These Laws lack cascaded regulations and management plans as well as do the legal frameworks for marine spatial planning and the national framework for the blue economy[31]. Law enforcement, including preventing Illegal, Unreported and Unregulated (IUU) fishing, poaching, logging, and mining, remains inconsistent.
24. **Community involvement is well enshrined in the environmental laws and in theory many community-based institutions and structures exist to guide participatory landscape and seascape management.** A range of governance structures and frameworks exist to ensure local participation and ownership over landscape and seascape management, that encourage a participatory and consultative process, as explained in Annex 5[32]. In the seascape space, Marine Spatial Planning (MSP) has been developed, considering the coastal biodiversity, marine species and resources conservation, involving various stakeholders from the government, local communities, private sector and various partners. But currently there is much fragmentation and many gaps in the community engagement, planning and implementation, often depending on the involvement of external facilitation agents, such as NGO and Conservation agencies, with a weak involvement of local government. Besides building up these governance structures, educating and training local communities about sustainable management practices is crucial. Information dissemination ensures that communities are part of the conversation around[33], communities are more likely to participate in conservation efforts.
25. **The Components 2a and 2b will scale-up innovative approach in nature-based solution (NbS) in both landscape and seascape, integrating biodiversity conservation with improvement of quality of life and creation of jobs.** The project will establish a mechanism to start-up or to build further alternative livelihoods, enabling communities to transition towards forestry, agricultural, fishery, tourism, mariculture and seaweed practices that are less destructive of the natural environment and have potential for climate adaptation and mitigation. The focus will be on community insertion into all stages of low-carbon value chains. The Project will support the realization of fuller land rights for communities living in the target communes, to strengthen these value chains. Because of high demand of timber, fuel woods and charcoal are the key drivers of landscape and seascape degradation, the project will promote large-scale reforestation efforts to restore biodiversity while creating economic opportunities. The project will contain special outreach measures to ensure that vulnerable and isolated groups of beneficiaries are fully included in all activities.
26. **Exemplary models of integrated natural resources management with communities can be scaled up through this project.** Some responsible private entities are leading efforts in ecotourism in Madagascar with careful consideration of the surrounding biodiversity. They have been helping local communities to improve their quality of life and providing jobs and economic development opportunities. In the coastal area, the number and the area of locally managed marine areas (LMMAs) have been increasing constantly [34]. Seaweed production and business is also promising in Madagascar, as there is strong demand, while seaweed offers opportunities to sink carbon, sustain marine biodiversity, and employ women[35]. Additionally, blue carbon – the carbon sequestered by coastal and ocean ecosystems such as mangroves, seagrasses, and seaweed – has gained international attention for its potential to mitigate climate change, where Madagascar already has a model of “Tahiri Honko”[36]. These ecosystems not only capture significant amounts of CO2 but also provide numerous ecological benefits, making them a valuable nature-based solution.
27. **An integrated spatial planning approach is applied in both landscape and seascape.** For Landscape, the investment ideas are developed from the regional plans then communal plans. For Seascape,

different zoning in the ocean is applied based on the existing marine spatial plans that explain where the synergies in the investment of a specific areas would be. The project will support the implementation of existing sea/coastal use plans and the refinement of marine spatial planning (MSP) by providing technical assistance (including reviewing the current situation and prioritizing actions), digital mapping tools, and ecosystem monitoring for sustainable marine resource management. At the same time, the project will enhance community-led protection and restoration of critical coastal ecosystems like mangroves, directly contributing to integrated management at the crucial land-sea interface. A key element of the approach involves strong collaboration between land and sea governance entities to improve the coherence and effectiveness of integrated plans.

28. **The Component 3 will support a species outcome-based Lemur Bond for conservation of specific lemurs and ecosystem-based climate adaptation.** This bond will be a first of its kind for Madagascar and has been discussed in various occasions, with strong interest from the Government^[37]. Under the Lemur Bond, the Government could choose to structure financing to effectively mobilize private institutional finance for conservation goals through capital markets transactions^[38]. There are already many exemplary cases of species outcome-based financing, including the Rhino Bond in South Africa and the upcoming Coral Bond in Indonesia and the Chimp Bond in Rwanda. The GoM as well as lemur scientists and conservation managers are keen to issue and implement such innovative outcome-based financing in line with the Kunming-Montreal Global Biodiversity Framework target 19 of resource mobilization for biodiversity, stimulating innovative schemes and optimizing co-benefits and synergies of finance targeting the biodiversity and climate crises, enhancing the role of collective actions, including those by local communities and tourism sector, enhancing the effectiveness, efficiency and transparency of resource provision and use. The Lemur Bond design and operation will consider climate adaptation and resilience of the lemurs, their habitats, and the surrounding communities' socio-economic conditions.

29. The Lemur Bond addresses systemic funding gaps by linking private capital to verifiable conservation outcomes. Income generated through the bond is reinvested in habitat protection and community initiatives, creating a self-sustaining cycle where lemur recovery drives further investment. The bond targets area may be geographically distinct areas from the initial target area of the project but will focus in area with robust lemur population data and established monitoring systems (see potential Lemur Bond Sites section for species-specific criteria).

30. In order to ensure an effective design of Lemur Bond, science-based impact needs to be demonstrated. Having a local research institute or local presence of the supporting entities have shown positive results in conservation and effective in local data collection and engagement with local communities. In this regard, the Lemur Bond idea will start around the areas where there are already existing data and research centers, therefore the potential target sites are Site/Area 1.1 - Ranomafana National Park - MNP formally manages the site with focus on Greater Bamboo Lemur (*Prolemur simus*) - ~12 individuals; Site/Area 1.2 - Kianjavato Classified Forest with focus on Greater Bamboo Lemur (*Prolemur simus*) - 107 individuals; Site/Area 2 - Andasibe National Park - Analamazaotra - MNP formally manages the site with focus on Indri (*Indri indri*) - Currently unsure of the number of individuals, but to be clarified; Site/Area 3 - Andrafiomena - Andavakoera Harmonious Protected Landscape with focus on Perrier's sifaka (*Propithecus perrieri*) - 230 individuals; Site/Area 4 - Beza Mahafaly Special Reserve - MNP formally manages the site. Focus is Ring-tailed lemur (*Lemur catta*) - 109 individuals; Site/Area 5 - Antrema with Couronné sifaka (*Propithecus coronatus*); Site/Area 6 - Tsimembo with Decken sifaka (*Propithecus deckenii*). The financing flows can be explored around FAPBM, Tany Meva, or other options, and it will be defined through the project preparation.

31. Lemurs are a diverse and charismatic group of primate species endemic to Madagascar, with over 90% of the 112 lemur taxa currently considered either Critically Endangered, Endangered, or Vulnerable by the IUCN Red List. Madagascar is also number one on the list of the top five biodiversity hotspots for endemic families of plants and vertebrates, having a total of 21 endemic families while all others on the list

have seven or less (Mittermeier et al., 2023). Among them, the 112 lemur taxa (across five taxonomic families) are the most well-known compared to other Madagascar fauna, with each lemur species fulfilling critically important ecological roles in the ecosystems they inhabit. For example, they are the primary seed dispersers and pollinators, and are essential for maintaining the island's unique forests; their loss would likely trigger extinction cascades (Razafindratsima & Dunham, 2015). Recovering lemur numbers is an indication of broader ecosystem and biodiversity health, as well as the ability of the forest ecosystem to provide ecosystem services to local population that is good for climate resilience, including habitat conservation and restoration, improvement of water quantity and quality, sustainable and inclusive economic activities and livelihoods improvement including ecotourism development and improvement of local products' production and the value-chain improvement. Lemur populations increase can be considered as a proxy of healthy ecosystem, biodiversity, and climate resilience increase of local population. Further in-depth analysis will be conducted during the project preparation. The objective here is not only conserving a limited lemur species but preserving and recovering the healthy ecosystems that such proxy lemurs can live in better harmonized environment with the local communities.

32. Lemur reproduction is highly seasonal and strongly linked to temporal predictability (i.e., regularity) of the inter-annual variation in resource availability and photoperiodic patterns (Heldstab et al., 2020). Lemur interbirth intervals are typically 1 year, that is, adults may reproduce offspring annually, with females first giving birth at three years of age (Mittermeier et al., 2023). Single births are the norm; however, lemurs are unique in that they possess a bicornuate uterus, making them capable of producing twins regularly. Unfortunately, there are some examples of stochastic weather events (e.g., cyclones) that have disrupted typical tree fruiting phenological patterns and resulted in lemurs delaying reproduction, sometimes for up to several years; however, this extreme scenario is limited to frugivores (Paige et al., 2025). In contrast and by design, all of the lemur species being targeted in the Lemur Bond are known to be either strict folivores (i.e., *Prolemur simus*) or rely on a mix of leaves and fruits, thus have a more generalized, flexible diet (i.e., *Lemur catta* and *Propithecus* spp.; Mittermeier et al., 2023). This ecological flexibility allows for these species to be less constrained by temporal resource patterns and habitat structure (Eppley et al., 2020). Thus, taken together, we would expect that under stable environmental conditions (i.e., adequate habitat protection and reduced hunting/natural resource extraction), all lemur species at these sites would observe increased population sizes.

33. The effectiveness of lemurs as ecological indicators has been well-documented, underscoring their ability to signal changes in forest health and biodiversity. Morelli et al. (2020) specifically examined the ruffed lemur genus as proxies for healthy rainforest habitat in eastern Madagascar. Their study demonstrated that the presence and population dynamics of ruffed lemurs could effectively reflect the overall health of the rainforest ecosystems, providing crucial information for conservation strategies. Similarly, the WWF Conservation Report (2020) emphasized the role of lemur populations in indicating the state of forest health. The report underscored how fluctuations in lemur populations correlate with changes in biodiversity and forest conditions, making them vital for monitoring and managing conservation efforts in Madagascar's unique forest landscapes. Studies have shown that lemurs play a crucial role in maintaining the ecological balance of their habitats, acting as keystone species and influencing various ecological processes (Jones et al., 2018; Kremen et al., 2019). As keystone species, lemurs contribute significantly to seed dispersal, which is essential for forest regeneration and maintaining plant diversity. Furthermore, the relationship between lemur populations and forest health is complex and influenced by various factors. Habitat fragmentation, deforestation, and climate change can all impact lemur populations and, consequently, the accuracy of using lemurs as ecological indicators (WWF, 2020).

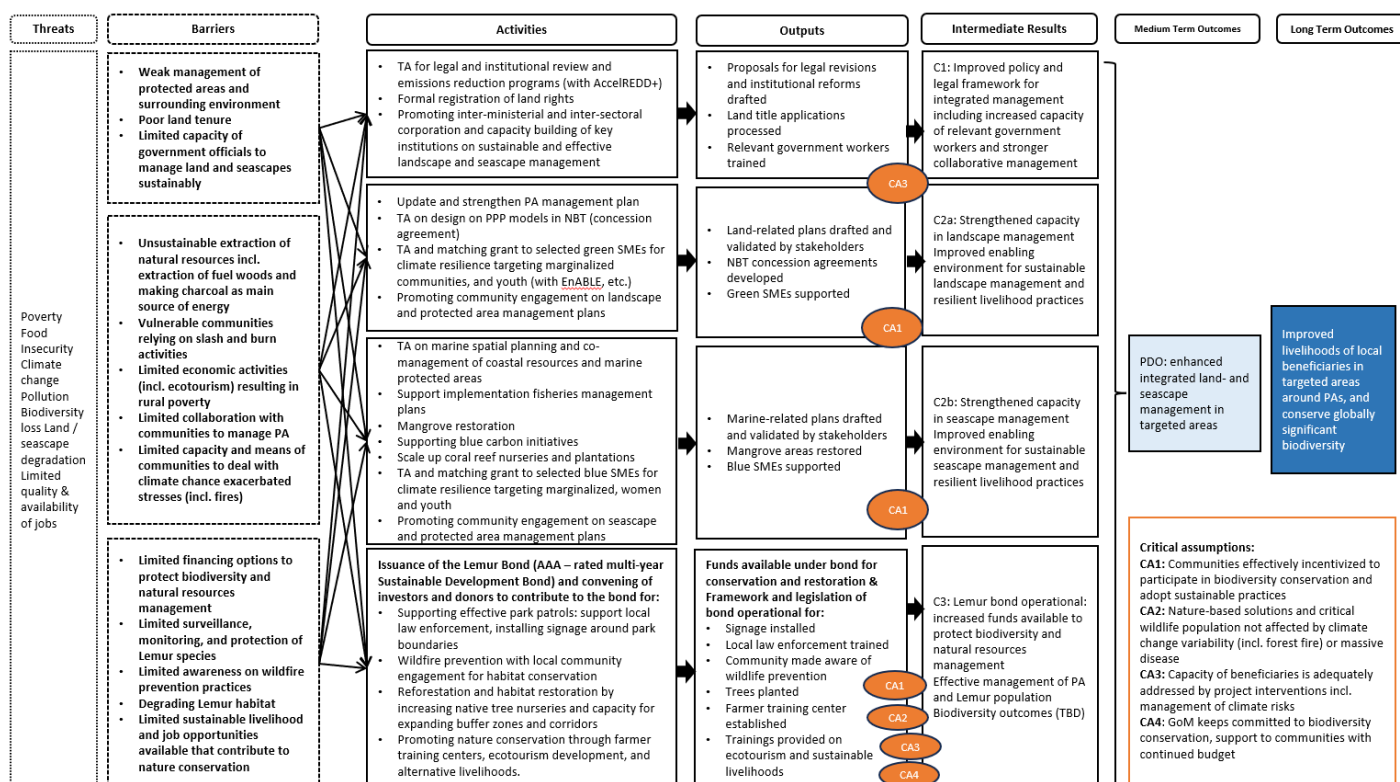
34. Therefore, while lemur population dynamics provide crucial information, they must be considered within a broader context that includes other ecological indicators and comprehensive environmental assessments. Kremen et al. (2019) highlighted the ecosystem services provided by Madagascar's forests, which are intricately linked to the presence of lemurs. These services include carbon sequestration, water

regulation, and nutrient cycling, all of which contribute to climate resilience and biodiversity. The Lemur Bond's strategic approaches address interconnected challenges through ecotourism development, protection of habitats, reforestation, community engagement, reducing reliance on illegal resource extraction, and enhanced agriculture. By promoting ecotourism and improving infrastructure, fostering community involvement in habitat protection, restoring degraded ecosystems, and providing sustainable alternatives for local communities, the Lemur Bond aims to create a comprehensive and sustainable framework for conserving lemur populations and their habitats.

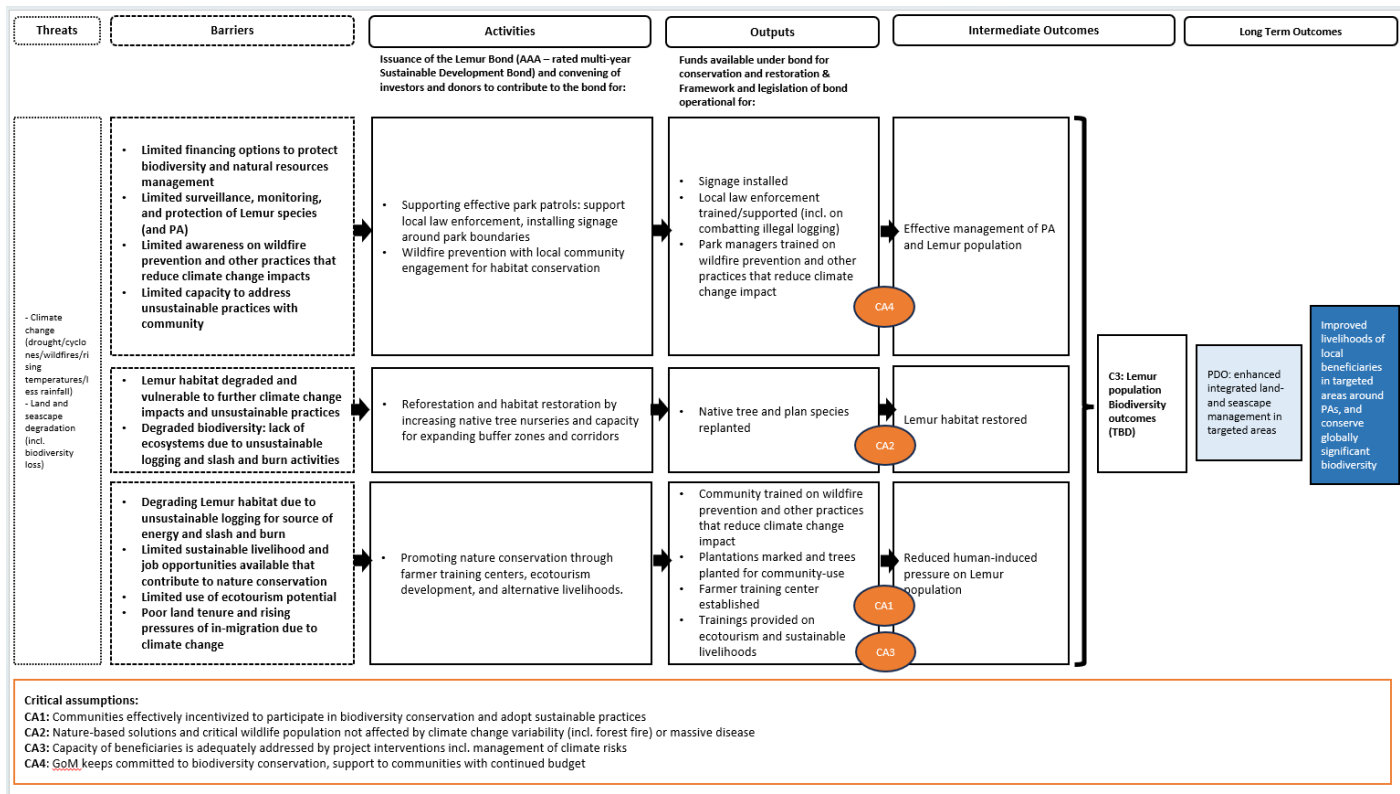
Components/Sub-Components	Illustrative Activities
Component 1: Improving legal and institutional arrangements for transformative, inclusive, climate-resilient biodiversity-centered landscape and seascape management (IDA-GROW:US\$10M - To be confirmed (TBC); GEF:US\$1.5M; AccelREDD+:US\$3M; and others, to be confirmed later)	
1.1 Strengthening the capacity for a more coordinated legal framework and institutional arrangements for inclusive landscape and seascape management	<ul style="list-style-type: none"> Align national landscape and seascape tools with relevant global biodiversity, land degradation and climate change mitigation frameworks; Promote inter-ministerial and inter-sectoral corporation and capacity building of key institutions^[39] Develop and operationalize an information management system for project related activities Support to communes and local communities for participatory preparation of land registration process with special attention to women and vulnerable.
1.2 Supporting and accelerating emission reduction programs (with AccelREDD+)	<ul style="list-style-type: none"> Expanding the mapping of National Forest Domains and Technical assistance in supporting the updating and implementation of the protected areas and marine protected areas management plans Technical assistance in scaling up the emission reduction programs with the integrated institutional arrangements
Component 2a: Transformative, inclusive, climate-resilient, biodiversity-centered Landscape management (IDA-GROW:US\$20M - To be confirmed (TBC); GEF:US\$6,237,770M; Enable:US\$4M; and others, to be confirmed later)	
2a.1 Strengthening PA management and scaling up innovative nature-based tourism and protected areas management	<ul style="list-style-type: none"> Supporting update and strengthening implementation of the PA management plans Expanding communities-based PA management and operations Support to develop innovative marketing practices to attract additional national and international visitors Re-assessing and implementing NbT benefit-sharing arrangements with local communities
2a.2 Building local engagement in low carbon, nature-positive value chains, with special support to insertion of women, youth and vulnerable (EnABLE and other financing sources)	<ul style="list-style-type: none"> Identifying and supporting relevant transformative and innovative low-carbon, climate adaptive and resilient, nature positive, value chains for the livelihoods of local communities including large scale reforestation, and engagement of private operators, and local authorities Micro loan or matching grant funding for various stakeholders to start-up or expand livelihoods and businesses linked to these value chains Developing business models and expanding results-based financing for massive reforestation and ecosystem restoration^[40]

Component 2b: Transformative, inclusive, climate-resilient, biodiversity-centered Coastal and Seascape management (IDA-GROW:US\$20M - To be confirmed (TBC); GEF:US\$1.5M and others, to be confirmed later)	
2b.1 Strengthening the implementation of marine protected areas management, co-management and community-led management regulations and plans of coastal resources	<ul style="list-style-type: none"> · Strengthening the implementation of the marine spatial planning, co-management and Community-based management plans on coastal areas and coastal resources · Support mangrove reforestation and blue carbon initiatives to generate carbon credit sales for conservation and community development · Support to scale up coral reef nurseries and plantation
2b.2 Building local engagement in low carbon, nature-positive fisheries, mariculture, aquaculture value chain, with special support to insertion of women, youth and vulnerable	<ul style="list-style-type: none"> · Support to implement regions fisheries management plans · Identifying and supporting relevant blue food value-chain, including demand-driven, sustainable, low-carbon, climate adaptive and resilient, nature positive, seaweed, oyster, and other production and value-chain development · Applying social protection and productive inclusion in fisheries and aquaculture, applying the global framework
Component 3: Multi-phased outcome-based lemur bond operation for conservation of specific lemurs and ecosystem-based climate adaptation and resilience (GEF-STAR:US\$5M, GEF-LDCF:US\$1,834,863, GEF-NGI: US\$2,752,294)	
3.1 Conservation of specific lemurs and associate ecosystem, and ecosystem-based climate adaptation and resilience at specific sites	<ul style="list-style-type: none"> · Improve the protection of the targeted parks by supporting effective park patrols; providing support to local law enforcement; and installing signage around park boundaries · Wildfire prevention with local community engagement for habitat conservation and ecosystem service provision · Reforestation and habitat restoration by increasing native tree nurseries and capacity for expanding buffer zones and corridors · Enhanced agriculture aimed at improving food availability and quality by creating farmer training centers, ecotourism development and promotion to strengthen alternative livelihoods and nature conservation
Component 4: Project Management, Monitoring and Communication (IDA-GROW:US\$5M - To be confirmed (TBC); GEF: US\$1,175,126, and others, to be confirmed later)	
4.1 Project management, monitoring and communication	<ul style="list-style-type: none"> · Project Management Unit (PMU) in the Ministry of Environment and Sustainable Development (MEDD), partnering with other relevant ministries including MDAT, MPEB, MTA and others · Coordination with National, Governorate and Local institutions, Steering Committee made up of suitable representatives · Establish a comprehensive communication plan to ensure timely and effective information sharing among all stakeholders · Implement a robust monitoring and evaluation framework to systematically track project progress and assess outcomes.

Results Chain



Additional graph on Lemur Bond (Component 3)



[1] The Madagascar and Indian Ocean Islands Hotspot Ecosystem Profile Summary, the Critical Ecosystem Partnership Fund (CEPF).

https://www.cepf.net/sites/default/files/cepf_madagascar_profile_summary_eng.pdf

[2] Annual fish catch amount fluctuates depending on year and the data source. This range is put based on FAO FishStat database, SeaAroundUs, Fisheries Transparency Initiative.

<https://www.seaaroundus.org/data/#/eez/450?chart=catch-chart&dimension=taxon&measure=tonnage&limit=10>; https://www.mpeb.mg/wp-content/uploads/2023/12/FiTI_MDG_FiTIRreport_20231215.pdf

[3] Link to Madagascar Country Environmental Analysis (CEA) – Promoting Green, Resilient, and Inclusive development, The World Bank, 2022.

<https://documents1.worldbank.org/curated/en/099635010242211316/pdf/P17701803653a407f0bbd80a9da77fa6f51.pdf>

[4] FAPBM, 2023 <https://www.fapbm.org/en/nature-conservation-in-madagascar-through-protected-areas/>

[5] Madagascar's extraordinary biodiversity: Threats and opportunities, Dec 2022, urges conservation of unique biodiversity of the country which is a unique global asset that needs saving.

<https://www.science.org/doi/10.1126/science.adf1466>

[6] Eckstein, D., Kunzel, V., Schafer, L., & Wings, M. 2019. Global Climate Risk Index 2020. Who Suffers Most from Extreme Weather Events? Weather-Related Loss Events in 2018 and 1999 to 2018. Bonn: Germanwatch.

[7] World Bank. 2016. Disaster Risk Profile: Madagascar. Washington, DC: World Bank.

[8] Government of Madagascar, 2021. National Adaptation Plan.

[9] IMF, 2022. Technical Assistance Report: Climate Macroeconomic Assessment Program. IMF Country Report No. 22/342.

[10] Government of Madagascar, 2016. National Determined Contributions (NDC); and GFDRR, 2011. Vulnerability, Risk Reduction, and Adaptation to Climate Change.

[11] Government of Madagascar, NDC, 2016. Available at:

<https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Madagascar%20First/Madagascar%20INDC%20Eng.pdf>

[12] Government of Madagascar, 2021. National Adaptation Plan.

[13] Internal Displacement Monitoring Centre (IDMC). "Madagascar," 2022. <https://www.internal-displacement.org/countries/madagascar>

[14] Weiskopf, S. R., J. A. Cushing, T. Morelli, and B. J. E. Myers. 2021. Climate change risks and adaptation options for Madagascar. Ecology and Society 26(4):36. <https://doi.org/10.5751/ES-12816-260436>

[15] Lemur Conservation Network, How Climate Change is Impacting Madagascar

<https://www.lemurconservationnetwork.org/learn/conservation-threats-and-solutions-for-lemurs/how-climate-change-is-impacting-madagascar/>

- [16] The innovative ecotourism development is proposed in the IFC's Country Private Sector Diagnostic (CPSD), Creating Markets in Madagascar, December 2021.
<https://www.ifc.org/content/dam/ifc/doc/mgrt/cpsd-madagascar-summary.pdf> While the larger scale attraction will be promoted by IFC's engagement, this project will support the alignment with the national framework with more engagement with local beneficiaries.
- [17] FAO data base provide the estimated production of wood fuel for Madagascar <https://www.fao.org/faostat/en/#data/FO>
- [18] Meyers, D., Ramamonjisoa, B., Sève, J., Razafindramanga, M. & Burren, C. (2009) Étude sur la consommation et la production en produits forestiers ligneux à Madagascar, Rapport de Projet d'appui à la gestion durable de l'environnement et des écosystèmes forestiers à Madagascar (Jariala, Minenvef, IRG, N° 687-C-00-04-00155-00), Madagascar, IRG, p. 101.
- [19] Stratégie Nationale d'Approvisionnement en Bois Energie (SNABE), 2018, Ministère de l'Energie et des Hydrocarbures, Ministère de l'Environnement de l'Ecologie et des Forêts. https://indriconnect.info/public/images/documents/pdf_1728942002.pdf
- [20] GoM sets ambitious targets: (i) progressive reforestation reaching 40,000 hectares annually by 2030, and (ii) meeting 50% of wood demand through legal and sustainable forest resources by 2030.
- [21] There are the Environment Charter (Charte de l'Environnement, Law 2015-003) and The Law of Protected Areas (COAP, Loi-2015-005)., Forest Law of Madagascar (Law No. 97-017 of 8 August 1997)
- [22] Existing laws and regulations need to be harmonized including secured locale management law (GELOSE, Gestion Locale Securisee) which is a legal Framework for the transfer of natural resources management rights to local communities.
- [23] Madagascar's legal framework for marine spatial planning is primarily based on Loi N°2018-025, which focuses on maritime zones and tasks the Ministry in charge of the Sea with coordinating activities and promoting integrated management for the blue economy. Decret N°2017-936 establishes a national framework for the blue economy. Marine Spatial Planning (MSP) is the main tool for ocean governance and blue economy implementation, supported by participatory and collaborative legal instruments.
- [24] Among the Kunming-Montreal Global Biodiversity Framework (GBF) 23 targets, the government's priorities that are relevant to this project are target 2: restore degraded ecosystems; target 3: conserve land, waters and seas; 10: enhance biodiversity and sustainability in agriculture, aquaculture, fisheries and forestry; 19: mobilize monetary resources for biodiversity from all sources including through international finance.
- [25] This is the main World Bank Corporate Scorecard indicator that the project aims to contribute. Detail of the indicator will be defined during the project preparation, possibly summing up the areas of (i) restored landscapes and seascapes within the PAs; (ii) restored landscapes and seascapes with around and near the PAs; (iii) hectares under climate resilience management; (iv) alternative energy source tree reforested management areas where communities agreed to stop extraction from the neighboring PAs and utilize these alternative energy source; (v) restored mangrove area; (vi) co-managed fisheries zones; etc (to be updated).
- [26] There are Regional Land Use Plans (SRAT) in each region. Starting from SRATs in Boeny, Sofia, Diana regions, the project is narrowing the landscape and seascape related activities support.
- [27] Boeny Landscape Seascape Target Area will cover from Ankarafantsika PA (136.513 ha) through Namoroka (22.227 ha), Mahavavy Kinkony (302.000 ha), Antrema (20.620 ha), Bombetoka Belemboke PAs (71.943 ha); while Sofia and Diana Landscape Seascape Target Area will cover from Sahamalaza (26.035

ha), Manongarivo (568 ha), Ampasindava (91.790 ha), Galoko-Kalobinono (74.205 ha), Nosy Tanikely (180 ha), Lokobe (862 ha), Ankarana PAs (18.225 ha) (FAPBM, <https://www.fapbm.org/la-protection-de-la-nature-a-madagascar-par-les-aires-protegees/>). The precise intervention areas will be identified through the project preparation and through the engagement with various stakeholders.

[28] Madagascar National Parks (MNP) has some baseline information of each PA's flora and fauna. Starting from those databases, the project will assess the key species for ecosystem restoration. <https://www.parcs-madagascar.com>

[29] There are the Environment Charter (Charte de l'Environnement, Law 2015-003) and The Law of Protected Areas (COAP, Loi-2015-005)., Forest Law of Madagascar (Law No. 97-017 of 8 August 1997)

[30] Existing laws and regulations need to be harmonized including secured locale management law (GELOSE, Gestion Locale Securisee) which is a legal Framework for the transfer of natural resources management rights to local communities.

[31] Madagascar's legal framework for marine spatial planning is primarily based on Loi N°2018-025, which focuses on maritime zones and tasks the Ministry in charge of the Sea with coordinating activities and promoting integrated management for the blue economy. Decret N°2017-936 establishes a national framework for the blue economy. Marine Spatial Planning (MSP) is the main tool for ocean governance and blue economy implementation, supported by participatory and collaborative legal instruments.

[32] There is a proven link between lack of land rights and landscape and seascape degradation in Madagascar; as without secure land title and legal document (land title or certificate), communities are at risk of dispossession of their natural resources under pressure from extractive companies. In addition, land rights encourage communities to see themselves as key stakeholders in landscape and seascape planning processes and give them the land asset security they need to make investments in alternative livelihoods, which may break the cycle of poverty and have positive environmental protection benefits as well.

[33] Such economic incentives will include eco-tourism, sustainable agriculture, processing and value-addition to the local products, production and marketing of local handicrafts that can provide income without depleting resources.

[34] Various entities in Madagascar have some good example cases, and those approaches can be scaled up through this project. Such examples include those of (i) Protected Areas and Biodiversity Fund (FAPBM); (ii) Tany Meva (communities support around the protected areas); (iii) Bondy (performance-based reforestation), (iv) Fanamby (community-based conservation and nature-based tourism with partnership with private sector), (v) Sahanala (sustainable and environment-friendly production of black pepper, cashew, mango etc and value-addition with professionalized local communities), (vi) Tontolosy kajy (starting from GIS and remote sensing-based land management, to sustainable landscape management and agroforestry promotion), (vii) Blue venture (mangrove restoration and conservation with local communities and the technical advisor in first blue carbon initiative in Madagascar); (viii) Mihari (Promoting and uniting LMMA association); (ix) Conservation International, (x) Wildlife Conservation Society, (xi) World Wildlife Fund, and others.

[35] The World Bank's publication of Global Seaweed New and Emerging Market Report highlights the global benefit of seaweed production. <https://openknowledge.worldbank.org/entities/publication/4ac8c40c-cc4d-4f38-90a9-01b7bbaad3eb>

Seaweed production in Madagascar has been tested with the Economic Transformation for Inclusive Growth Project (PIC3, P174684), which is series of growth pole projects. There is potential for scale it up further through this project especially targeting in northwest of the country. <https://projects.banquemoniale.org/fr/projects-operations/project-detail/P174684>

[36] “Tahiry Honko” means ‘preserving mangroves’ in local language. With Blue Venture support, degraded mangrove area in south-west Madagascar is restored and now over 1,200 ha of mangrove area is sustainably managed with strong involvement of local communities. Through the Plan Vivo’s support, over 1,300 tons of CO2 per year emission reduction is certified. <https://www.planvivo.org/tahiry-honko>

[37] Below joint press release shows that WBG and the GEF are considering a lemur bond to raise funds for nature conservation and climate resilience. <https://www.imf.org/en/News/Articles/2024/11/14/pr-24420-madagascar-launches-country-platform-for-clim-fin-through-international-partnership>

[38] In order to ensure an effective design of Lemur Bond, science-based impact needs to be demonstrated. Having a local research institute or local presence of the supporting entities have shown positive results in conservation and effective in local data collection and engagement with local communities. In this regard, the Lemur Bond idea will start around the areas where there are already existing data and research centers, therefore the potential target sites are Site/Area 1.1 - Ranomafana National Park - MNP formally manages the site with focus on Greater Bamboo Lemur (*Prolemur simus*) - ~12 individuals; Site/Area 1.2 - Kianjavato Classified Forest with focus on Greater Bamboo Lemur (*Prolemur simus*) - 107 individuals; Site/Area 2 - Andasibe National Park - Analamazaotra - MNP formally manages the site with focus on Indri (*Indri indri*) - Currently unsure of the number of individuals, but to be clarified; Site/Area 3 - Andrafiomena - Andavakoera Harmonious Protected Landscape with focus on Perrier's sifaka (*Propithecus perrieri*) - 230 individuals; Site/Area 4 - Bezà Mahafaly Special Reserve– MNP formally manages the site. Focus is Ring-tailed lemur (*Lemur catta*) – 109 individuals; Site/Area 5 – Antrema with Couronné sifaka (*Propithecus coronatus*); Site/Area 6 – Tsimembo with Decken sifaka (*Propithecus deckenii*).

[39] This includes an inter-ministerial committee on the environment (CIME) which has been revitalized through the policy reform.

[40] Massive ecosystem restoration with local species will be targeted in and around the PAs, and this is the main objective of the project. In parallel, the project aims to have reforestation in degraded landscape so that fuel wood and charcoal production associations can shift from depending on natural species to reforested species. For example, acacia trees can be harvested after three or five years after reforestation, and those trees can substitute to the current fuel woods from the natural forest. Reforestation can be done at different scale (i) Large scale private reforestation; (ii) Commune reforestation; or (iii) Community reforestation. Individual small-scale reforestation may not be cost-effective.

Indicative Project Overview

Project Objective

The proposed project development objective (PDO) is to enhance integrated landscape and seascape management, improve livelihoods of local beneficiaries in targeted areas around protected areas, and conserve globally significant biodiversity. The project will apply an integrated approach of transformative, inclusive, climate-resilient and biodiversity-centered landscape and seascape management together with the first-time ever in Madagascar’s Lemur Bond operation.

Project Components

Component 1: Improving legal and institutional arrangements for transformative, inclusive, climate-resilient biodiversity-centered landscape and seascape management

Component Type	Trust Fund
Technical Assistance	GET

GEF Project Financing (\$)	Co-financing (\$)
1,500,000.00	5,500,000.00

Outcome:

1.1 Strengthening the capacity for a more coordinated legal framework and institutional arrangements for inclusive landscape and seascape management

1.2 Supporting and accelerating emission reduction programs (with AccelREDD+)

Output:

1.1 Strengthening the capacity for a more coordinated legal framework and institutional arrangements for inclusive landscape and seascape management

- Align national landscape and seascape tools with relevant global biodiversity, land degradation and climate change mitigation frameworks;
- Promote inter-ministerial and inter-sectoral corporation and capacity building of key institutions, including inter-ministerial committee on the environment (CIME) which has been revitalized through the policy reform
- Develop and operationalize an information management system for project related activities
- Support to communes and local communities for participatory preparation of land registration process with special attention to women and vulnerable.

1.2 Supporting and accelerating emission reduction programs (with AccelREDD+)

- Expanding the mapping of National Forest Domains and Technical assistance in supporting the updating and implementation of the protected areas and marine protected areas management plans
- Technical assistance in scaling up the emission reduction programs with the integrated institutional arrangements

Component 2a: Transformative, inclusive, climate-resilient, biodiversity-centered Landscape management

Component Type	Trust Fund
Investment	GET
GEF Project Financing (\$)	Co-financing (\$)
6,237,770.00	30,000,000.00

Outcome:

2a.1 Strengthening PA management and scaling up innovative nature-based tourism and protected areas management

2a.2 Building local engagement in low carbon, nature-positive value chains, with special support to insertion of women, youth and vulnerable (EnABLE and other financing sources)

Output:

2a.1 Strengthening PA management and scaling up innovative nature-based tourism and protected areas management

- Supporting update of and strengthening implementation of the PA management plans
- Expanding communities-based PA management and operations
- Introducing innovative marketing practices to attract additional national and international visitors
- Re-assessing and implementing NbT benefit-sharing arrangements with local communities

2a.2 Building local engagement in low carbon, nature-positive value chains, with special support to insertion of women, youth and vulnerable (EnABLE and other financing sources)

- Identifying and supporting relevant transformative and innovative low-carbon, nature positive, value chains for the livelihoods of local communities, and engagement of private operators, and local authorities
 - Micro loan or matching grant funding for various stakeholders to start-up or expand livelihoods and businesses linked to these value chains
- Developing business models and expanding results-based financing for massive reforestation and ecosystem restoration

Component 2b: Transformative, inclusive, climate-resilient, biodiversity-centered Coastal and Seascape management

Component Type	Trust Fund
Investment	GET
GEF Project Financing (\$)	Co-financing (\$)
1,500,000.00	7,100,000.00

Outcome:

2b.1 Strengthening the implementation of marine protected areas management, co-management and community-led management regulations and plans of coastal resources

2b.2 Building local engagement in low carbon, nature-positive fisheries, mariculture, aquaculture value chain, with special support to insertion of women, youth and vulnerable

Output:

2b.1 Strengthening the implementation of marine protected areas management, co-management and community-led management regulations and plans of coastal resources

- Strengthening the implementation of the marine protected areas, co-management and Community-based management plans on coastal areas and coastal resources
- Support to scale up mangrove reforestation, including scaling up the blue carbon initiatives
- Support to scale up coral reef nurseries and plantation

2b.2 Building local engagement in low carbon, nature-positive fisheries, mariculture, aquaculture value chain, with special support to insertion of women, youth and vulnerable

- Support to implement regions fisheries management plans

- Identifying and supporting relevant blue food value-chain, including demand-driven sustainable seaweed production and value-chain development
- Applying social protection and productive inclusion in fisheries and aquaculture, applying the global framework

Component 3: Multi-phased outcome-based lemur bond operation for conservation of specific lemurs and ecosystem-based and climate adaptation and resilience

Component Type	Trust Fund
Investment	GET
GEF Project Financing (\$)	Co-financing (\$)
7,752,294.00	9,467,432.00

Outcome:

3.1 Conservation of specific lemurs and associated ecosystem, and ecosystem-based climate adaptation and resilience at specific sites

Output:

Component 3: Multi-phased outcome-based lemur bond operation for conservation of specific lemurs and ecosystem-based climate adaptation and resilience

Component Type	Trust Fund
Investment	LDCF
GEF Project Financing (\$)	Co-financing (\$)
1,834,863.00	6,532,568.00

Outcome:

Duplicate of Comp 3 above to account for financing from LDCF

3.1 Conservation of specific lemurs and associated ecosystem, and ecosystem-based climate adaptation and resilience at specific sites

Output:

Component 3: Multi-phased outcome-based lemur bond operation for conservation of specific lemurs and ecosystem-based climate adaptation and resilience

Component Type	Trust Fund
Investment	GET
GEF Project Financing (\$)	Co-financing (\$)
	50,000,000.00

Outcome:

Bond issuance [100 – 175] million. Please see component 3

Output:

Component 3: Multi-phased outcome-based lemur bond operation for conservation of specific lemurs and ecosystem-based climate adaptation and resilience

Component Type	Trust Fund
Investment	LDCF
GEF Project Financing (\$)	Co-financing (\$) 50,000,000.00

Outcome:

Duplicate of Bond issuance [100 – 175] million to account for LDCF. Please see component 3

Output:

M&E

Component Type	Trust Fund
Technical Assistance	GET
GEF Project Financing (\$)	Co-financing (\$) 223,126.00 1,000,000.00

Outcome:

Project management, monitoring and communication

Output:

- Coordination with National, Governorate and Local institutions
- Establish a comprehensive communication plan to ensure timely and effective information sharing among all stakeholders
- Implement a robust monitoring and evaluation framework to systematically track project progress and assess outcomes

Component Balances

Project Components	GEF Project Financing (\$)	Co-financing (\$)
Component 1: Improving legal and institutional arrangements for transformative, inclusive, climate-resilient biodiversity-centered landscape and seascape management	1,500,000.00	5,500,000.00
Component 2a: Transformative, inclusive, climate-resilient, biodiversity-centered Landscape management	6,237,770.00	30,000,000.00
Component 2b: Transformative, inclusive, climate-resilient, biodiversity-centered Coastal and Seascape management	1,500,000.00	7,100,000.00
Component 3: Multi-phased outcome-based lemur bond operation for conservation of specific lemurs and ecosystem-based and climate adaptation and resilience	7,752,294.00	9,467,432.00
Component 3: Multi-phased outcome-based lemur bond operation for conservation of specific lemurs and ecosystem-based climate adaptation and resilience	1,834,863.00	6,532,568.00

Component 3: Multi-phased outcome-based lemur bond operation for conservation of specific lemurs and ecosystem-based climate adaptation and resilience		50,000,000.00
Component 3: Multi-phased outcome-based lemur bond operation for conservation of specific lemurs and ecosystem-based climate adaptation and resilience		50,000,000.00
M&E	223,126.00	1,000,000.00
Subtotal	19,048,053.00	159,600,000.00
Project Management Cost	952,000.00	2,700,000.00
Total Project Cost (\$)	20,000,053.00	162,300,000.00

Please provide justification

Coordination and Cooperation with Ongoing Initiatives and Project

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

No

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

- Key lessons learned from the previous natural resources management projects highlight the importance of integrated approach in all levels. Simplifying processes, aligning planning with investments, and focusing on capacity building and knowledge are crucial. While complex designs can be advantageous and adaptable to field necessities, they also pose a risk of delays if not matched with the existing capacity in the implementation context. A balance between complexity and practicality is essential to ensure timely and effective project execution. It is also very important to strengthen institutions and capacity building of government staff, communities. It is also clear that the Payment for Ecosystem Services (PES) component was overly complex and ambitious, resulting in delayed payments beyond the project's duration and causing imbalances between upstream and downstream communities. Future projects should consider a reasonable timeframe to sustain stakeholder interest and ensure timely payments.
- The proposed project will capitalize on experiences from ongoing and completed WB projects focusing on landscape and seascape management. The Madagascar Sustainable Landscape Management Project (P154698) which completed with successful experience in implementing an integrated landscape management approach, aiming at improving food production, biodiversity/ecosystem conservation, and rural livelihoods by applying participatory, supporting adaptive, collaborative management. Building on this, the project will ensure the active participation of local communities in governance structures to strengthen conservation outcomes^[1]. For the tourism related activities in protected areas, apart from the need to reassess and to implement benefit-sharing arrangements with local communities, the proposed project will capitalize on the result of Local-Economy Wide Impact Evaluation (LEWIE) survey^[2] which shows the possibility of creating additional benefits for local communities through complementary interventions that

increase local sourcing of goods and services and employment of local workers. Within the seascape, the Southwest Indian Ocean Fisheries Governance and Shared Growth Project – Madagascar SWIOFish2 (P153370) accumulated various lessons learned, especially in importance of taking an integrated approach and engaging local communities. There are also synergies with ongoing projects of Atiala Atsinanana REDD+ Emission Reduction Program (ERPA, P167725), the Support for Resilient livelihoods in the South of Madagascar Project (MIONJO), the Food Systems Resilience Program (FSRP, P178566) for Eastern and Southern Africa in several regions with total 15,000ha of small-scale watershed management and the Rural Livelihoods Productivity and Resilience Project (RizPlus, P175269) in the region of Alaotra Mangoro, Sofia with the improvement of watershed management.

3. Furthermore, the project will apply lessons learned from the past and ongoing GEF funded projects. There is a GEF7 funded project of evaluation of Natural Capital to Support Land Use Planning, Improved management effectiveness of Terrestrial Protected Areas, deployment of SLM practices and Creation of Eco-Villages in Central Madagascar. This project will apply lessons learned of this project using community-centered approaches for protected areas and land management. Another project with GEF8 funding project to strengthening Ecosystem Restoration Investments in Madagascar has also good synergy points to align ecosystem restoration in more integrated and efficient manner. There is already a good coordination platform through MIONJO in South, therefore that platform will be utilized for further coordination with (a) GEF7 funded Integrated Landscape Management for a zero-deforestation coffee and rice value chains in the Central South and Eastern coast of Madagascar; (b) GEF8 Clean and Healthy Ocean Integrated Program; (c) Sustainable Financing and Inclusive Management to Perpetuate Madagascar's Locally Managed Marine Areas (WWF) which will facilitate sustainable financing solutions and effective and inclusive management practices in Locally Managed Marine Areas across three seascapes in Western Madagascar (Diana, Manambolo-Tsiribihina, Mahafaly); (d) Transforming the Global Biodiversity Framework into Tangible Action in Madagascar - BioTAct (IUCN) which is to work on conservation action in high-priority KBAs, including AZE sites triggered by lemurs, that are potentially overlapping with the landscapes, are activities proposed in this project. This project builds on these initiatives by strengthening coordination between terrestrial and marine conservation efforts. Unlike BioTAct, which focuses on species conservation in KBAs, this project integrates biodiversity conservation with sustainable land and seascape management. It also bridges gaps between land-use planning, biodiversity conservation, and community-based resource management, ensuring a more integrated approach. These contributions will be reflected in the coordination matrix to demonstrate complementarity and avoid duplication. In addition, as the Evaluation of Community-Based Approaches at the Global Environment Facility report^[3] explains, it is critical that the community selected livelihoods activities supported by the project in collaboration with a nongovernmental organization that connects local producers to national and international markets.

Table. List of the projects that this project will coordinate/collaborate with for enhanced benefits

	Project Name	Coordination areas
	GEF ID 11802 - Sustainable Financing and Inclusive Management to Perpetuate Madagascar's Locally Managed Marine Areas (WWF)	Partner with WWF to expand MPA coverage and management in Diana and Boeny, leveraging their sustainable financing models. The Project can provide additional resources for large-scale mangrove reforestation around MPAs (e.g., Mahavavy-Kinkony), enhancing marine biodiversity. Diana (Near Manongarivo PA :

		Anorontsangana), Boeny : Antrema, Mahavavy-Kinkony
	GEF ID 11775 - Transforming the Global Biodiversity Framework into Tangible Action in Madagascar - BioTAct (IUCN)	Coordinate with IUCN to integrate landscape-level PA management in Mahavavy-Kinkony, aligning with BioTAct's biodiversity action plans. The New LS Project can lead reforestation efforts in adjacent degraded areas, supporting IUCN's goals.
	AFR 100 for sustainable land management and food security with FAO and BMZ	The Project can enhance PA management in peripheral areas and introduce livelihood programs linked to reforestation products. Area of intervention for FAO : Ankarafantsika, Marovoay, the project can target other area outside FAO's area.
	Diana Seascape initiative for marine conservation, sustainable fishing climate adaptation (WWF)	Align with WWF's seascape efforts in Ambilobe and Ambaro Bay to enhance MPA management and marine conservation. The Project can support mangrove restoration and coastal reforestation, complementing WWF's sustainable fishing initiatives. Area of intervention: Ambilobe, Ambaro bay
	GIZ – PADDI for sustainable use of natural resources and value chain	The Project can enhance PA management in peripheral areas and introduce livelihood programs linked to reforestation products (e.g., timber, fruits). Area of intervention: Boeny, Diana
	GIZ – Forests4Future for reforestation, mangrove restoration and agroforestry	The project should work in other area of intervention of Forest4Future (Boeny) or build a collaboration for livelihood program.
	GIZ – ProPFR for land governance, forest landscape restoration and capacity building	The project can use ProPFR land governance framework to secure land and build capacity of local authority within MDAT and regional directorate. Area of intervention: Diana – Boeny
	KfW – PLAE for anti-erosion efforts and sustainable natural resource management	The Project can link anti-erosion benefits to livelihood improvements or share approach for reforestation and work in areas other than PLAE's site. PLAE work both in Boeny and Diana.
	AFD – Projet KOBABI for strengthening protected areas and local development	Coordinate with Projet Kobaby to enhance PA management across its extensive sites, particularly in Diana. The project can introduce large-scale reforestation and livelihood programs (e.g., ecotourism), building on AFD's local development focus. Area of intervention of Kobaby: Montagne des Français, Ambodivahibe, Oronjia, Ankarea, Ankivonjy, Andrafiarena-Andavakoera, Montagne d'Ambre, Lokobe, Ankarana,

[1] Importance of local communities' involvement for HAFABI Project https://gret.org/wp-content/uploads/2021/10/151018_Rapport-Hafafi-final.pdf

[2] Local-Economy Wide Impact Evaluation (LEWIE) survey was funded by PROGREEN and PROBLUE Trust Funds.

[3] <https://www.gefio.org/evaluations/community-based-approaches>

Core Indicators

Indicator 1 Terrestrial protected areas created or under improved management

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
712133	0	0	0

Indicator 1.1 Terrestrial Protected Areas Newly created

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

Name of the Protected Area	WDPA ID	IUCN Category	Total Ha (Expected at PIF)	Total Ha (Expected at CEO Endorsement)	Total Ha (Achieved at MTR)	Total Ha (Achieved at TE)
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Indicator 1.2 Terrestrial Protected Areas Under improved Management effectiveness

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Total Ha (Achieved at MTR)	Total Ha (Achieved at TE)
712133	0	0	0

Name of the Protected Area	WDPA ID	IUCN Category	Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Total Ha (Achieved at MTR)	Total Ha (Achieved at TE)	METT score (Baseline at CEO Endorsement)	METT score (Achieved at MTR)	METT score (Achieved at TE)
Ampasindava	555697894	Protected Landscape/Seascape	91,790.00						
Analamazotra	5021	National Park	874.00						
Andrafiameana Andavakoera	555697910	Protected Landscape/Seascape	73,319.00						
Ankarafansika	1299	National Park	136,513.00						
Ankarana	5024	National Park	18,225.00						

Beza Mahafaly	10634	National Park	4,200.00						
Bombetoka Beloboka	555697914	Protected Landscape/Seascape	71,943.00						
Complexe Tsimembo Manombolomaty	166880	Protected Landscape/Seascape	62,745.00						
Galoko Kalobinono	555697895	Protected Landscape/Seascape	74,205.00						
Kianjavato	555697881	Protected Landscape/Seascape	90,492.00						
Lokobe	2311	National Park	862.00						
Manongarivo	5026	National Park	568.00						
Ranomafana	20287	National Park	43,550.00						
Site Bioculturel d'Antrema	555624666	Protected Landscape/Seascape	20,620.00						
Tsingy de Namoroka	2309	National Park	22,227.00						

Indicator 2 Marine protected areas created or under improved management

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
328216	0	0	0

Indicator 2.1 Marine Protected Areas Newly created

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

Name of the Protected Area	WDPA ID	IUCN Category	Total Ha (Expected at PIF)	Total Ha (Expected at CEO Endorsement)	Total Ha (Achieved at MTR)	Total Ha (Achieved at TE)
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Indicator 2.2 Marine Protected Areas Under improved management effectiveness

Total Ha (Expected at PIF)	Total Ha (Expected at CEO Endorsement)	Total Ha (Achieved at MTR)	Total Ha (Achieved at TE)
328216	0	0	0

Name of the Protected Area	WDPA ID	IUCN Category	Total Ha (Expected at PIF)	Total Ha (Expected at CEO Endorsement)	Total Ha (Achieved at MTR)	Total Ha (Achieved at TE)	METT score (Baseline at CEO Endorsement)	METT score (Achieved at MTR)	METT score (Achieved at TE)
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Complexe Zones Humides MahavavyKinkony	352248	Protected Landscape/Seascape	302,001.00						
Nosy Tanikely	555697919	Protected Landscape/Seascape	180.00						
Sahamalaza	352254	Protected Landscape/Seascape	26,035.00						

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)
20300	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)

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)
10,000.00			

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)
Woodlands	10,000.00			

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)
300.00			

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

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
5000	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)

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)
5,000.00			

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)

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 5 Area of marine habitat under improved practices to benefit biodiversity (excluding protected areas)

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
2,000.00			

Indicator 5.1 Fisheries under third-party certification incorporating biodiversity considerations

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

Type/name of the third-party certification

Indicator 5.2 Large Marine Ecosystems with reduced pollution and hypoxia

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

LME at PIF	LME at CEO Endorsement	LME at MTR	LME at TE

Indicator 5.3 Marine 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)
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Indicator 6 Greenhouse Gas Emissions Mitigated

Total Target Benefit	(At PIF)	(At CEO Endorsement)	(Achieved at MTR)	(Achieved at TE)
Expected metric tons of CO₂e (direct)	7975238	0	0	0
Expected metric tons of CO₂e (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 CO₂e (direct)	7,975,238			
Expected metric tons of CO₂e (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 CO₂e (direct)				
Expected metric tons of CO₂e (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)
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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	130,000			
Male	130,000			
Total	260,000	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)

There are 46 National Parks that are managed by the Madagascar National Parks (MNPs) while there are almost the same amount of other types of protected areas that are mostly managed by international organizations. Among the 46 MNPs, about five are profitable with the most visited MNPs. These are Andasibe-Mantadia National Park (155,000 ha); Ranomafana National Park (416,000 ha); Isalo National Park (815,400 ha); Montan d'Ambre National Park (182,000 ha) and Nosy Tanikely Marine Protected National Park. The first four terrestrial MNPs, which will be more than 1,500,000 ha in total, have potential to try to scale it up biodiversity and nature-based tourism services.

In addition, below is a list of Protected Areas (PAs) lacking management and conservation efforts. Some need protection status as the process toward their definitive protection were interrupted. In addition, since 2022, Western Forest relics are part of UNESCO World Heritage Site and need therefore additional efforts. KBA and AZE sites are increasing in number as well. We would like to propose that the exact sites for project interventions need to be defined exactly during PPG phase, based on scientific evidence and complementarity with ongoing actions.

Using the ExACT calculations, the project is estimated to reduce approximately 7,975,238 tCO₂e over 20 years (ExACT tool included in the roadmap).

With documentation, the burn rate in Madagascar's protected areas is estimated at approximately 8–9.6% per year, rounded to 8.8% for input for FAO ExACT calculations of greenhouse gas (GHG) emissions. This estimate is derived from data indicating Madagascar's total annual burned area ranges from 121,000–147,000 km² (Fernández-García et al., 2024) and that protected areas, covering 62,333 km² (10.8% of the total land area of 581,540 km², FAPBM), experience a fire frequency 58–65% lower than surrounding regions (Frappier-Brinton & Lehman, 2022). Assuming protected areas burned at the national average rate, approximately 14,365 km² would be affected annually. Adjusting for the reduced fire frequency, this drops to 5,028–6,033 km², yielding the 8–9.6% burn rate of the protected area. This calculation assumes burned area scales proportionally with fire frequency, though variations in fire size and intensity may affect precision. We hypothesize that with project intervention, the rate will decrease to 5%. The area considered in the calculation is hypothetical, comprising approximately 85% of the PAs area for moist deciduous forest and rainforest, and 50% of dry forest. The total area of the PAs does not reflect the total area of forest.

Fernández-García, V., Franquesa, M., & Kull, C. A. (2024). Madagascar's burned area from Sentinel-2 imagery (2016–2022). *Science of the Total Environment*, 914, Article 169929. <https://doi.org/10.1016/j.scitotenv.2024.169929>

Frappier-Brinton, T., & Lehman, S. M. (2022). The burning island: Spatiotemporal patterns of fire occurrence in Madagascar. *PLOS One*, 17(3), e0263313. <https://doi.org/10.1371/journal.pone.0263313>

A detailed document outlining indicator selection and targets had been uploaded in the roadmap.

META INFORMATION – LDCF

LDCF true	SCCF-B (Window B) on technology transfer false	SCCF-A (Window-A) on climate Change adaptation false
Is this project LDCF SCCF challenge program? false		
This Project involves at least one small island developing State(SIDS). false		
This Project involves at least one fragile and conflict affected state. true		
This Project will provide direct adaptation benefits to the private sector.		

false

This Project is explicitly related to the formulation and/or implementation of national adaptation plans (NAPs).

false

This project will collaborate with activities begin supported by other adaptation funds. If yes, please select below

Green Climate Fund	Adaptation Fund	Pilot Program for Climate Resilience (PPCR)
false	false	false

This Project has an urban focus.

false

This project will directly engage local communities in project design and implementation

true

This project will support South-South knowledge exchange

true

This Project covers the following sector(s)[the total should be 100%]: *

Agriculture	0.00%
Nature-based management	40.00%
Climate information services	20.00%
Coastal zone management	10.00%
Water resources management	0.00%
Disaster risk management	0.00%
Other infrastructure	0.00%
Tourism	30.00%
Health	0.00%
Other (Please specify comments)	0.00%
Total	100.00%

This Project targets the following Climate change Exacerbated/introduced challenges: *

Sea level rise	Change in mean temperature	Increased climatic variability	Natural hazards
false	false	true	false
Land degradation	Coastal and/or Coral reef degradation	Groundwater quality/quantity	
true	true	false	

CORE INDICATORS – LDCF

	Total	Male	Female	% for Women
CORE INDICATOR 1 Total number of direct beneficiaries	80,000	40,000.00	40,000.00	50.00%
CORE INDICATOR 2 (a) Area of land managed for climate resilience (ha) (b) Coastal and marine area managed for climate resilience (ha)	295,800.00 0.00			
CORE INDICATOR 3 Number of policies/plans/ frameworks/institutions for to strengthen climate adaptation	5.00			
CORE INDICATOR 4 Number of people trained or with awareness raised	3,750	1,875.00	1,875.00	50.00%

CORE INDICATOR 5

Number of private sector enterprises engaged in climate change adaptation and resilience

50.00

NGI (only): Justification of Financial Structure

Please describe the financial structure and include a graphic representation. This description will include the financial instrument requested from the GEF and terms and conditions of the financing passed onto the Beneficiaries.

To mobilize the Lemur Bond, the project aims to attract investors with mandates to support conservation and Environmental, Social, and Corporate Governance (ESG) objectives. There is sufficient market depth to mobilize the targeted amount from investors keen on demonstrating impact through their investments. The Lemur Bond seeks to unlock new capital sources for biodiversity conservation, creating an enabling environment for future scaling up.

The proposed Lemur outcome bond transaction uses an innovative model for conservation financing that was first tested in the GEF supported Wildlife Conservation Bond. This outcome bond model allows capital market investors to take risks in a sector not historically considered investable by private sector bond investors.

The exact outcome metrics and target outcome results are still to be determined ahead of CEO endorsement. The KPIs will aim for ecosystem-wide impacts beyond individual species, following the GEF Secretariat's Working Paper 'Guidance on GEF support to Outcome Payment conservation bonds' issued in July 2024.

Use of Bond proceeds: IBRD will issue an outcome bond and retain the proceeds to support IBRDs general sustainable development (SDG) purposes, as with all other IBRD bonds. The bond proceeds will be used by IBRD to finance 'Eligible Sustainable Development Projects' through loans to, or guaranteed by, its members.

The Lemur Bond introduces an additional outcome payer from the private sector and focuses on terrestrial and marine protected areas through an ecosystem-based bond rather than a species-based bond. Through this innovative financing structure, the Lemur Bond aims to create a sustainable and impactful model for conserving Madagascar's unique biodiversity while generating positive returns for investors.

Please see NGI termsheet for more details.

Key Risks

	Rating	Explanation of risk and mitigation measures
CONTEXT		
Climate	Substantial	Madagascar is highly exposed to climate risks, and these are being exacerbated by climate change. The country experiences an average of three

		<p>to four cyclones per year, which cause widespread coastal flooding, loss of life, and damage to infrastructure and livelihoods. Inland heavy rainfall also contributes to gully erosion, flooding in urban areas, and loss of connectivity. These impacts are expected to become more severe over the course of the century due to climate change. The proposed activities in landscape and seascape would be affected with climate change and consecutive impacts as listed above, while restoring such ecosystems would help to mitigate the climate impacts as well as help the communities to be more adaptive and resilient to climate change.</p>
Environmental and Social	Substantial	<p>There will be many environmental and social benefits from the project such as improved forest and mangrove landscape management considerations integrated, reduced area of annual deforestation and forest degradation; reduced greenhouse gas emissions, enhanced biodiversity protection, enhanced and safer access to forests and natural habitats, improved health and safety due to improved forest and mangrove landscape management, improvement of livelihoods through creation of job opportunities from forest-based activities like nature based tourism, improved value chain of non-timber forest products and agriculture products around forestry, enhanced enabling environment through establishment of natural resources management academy in collaboration with universities and non-governmental groups with focus on women and youth, capacity building activities with focus on gender, and establishment of a gender responsive monitoring and evaluation system. The project will also develop a strategic communication and outreach plan to communicate with relevant stakeholders and groups on implementation progress and with particular focus on women and youth. Some adverse social impacts may result due to ineffective communication and consultations to include all identified stakeholders and particularly the more vulnerable communities affected by the project and a weak grievance mechanism. The best practices from the Benefit Sharing Plan of the Atiala-Atsinanana REDD+ Emission Reduction Program (P167725, ERPA) will be scaled up, while lesson learned will be reflected in this project's communication plan. The project may also be associated with some risks of sexual exploitation and abuse/sexual harassment (SEA/SH) due to female workers/beneficiaries working in close proximity to male workers/beneficiaries (low). These social risks can be readily and effectively mitigated through continuous and inclusive consultations sessions, a robust grievance mechanism with multiple uptake channels that are widely and effectively disseminated, awareness raising sessions on prevention and control of SEA/SH, signing of codes of conduct and strengthened project GM which is sensitive to SEA/SH complaints. During the preparation stage, the project management unit which will be set up in the MEDD will prepare a Stakeholder Engagement Plan (SEP), Labor Management Procedures (LMP), the Environmental and Social Commitment Plan (ESCP) and an Environmental and Social Management Framework (ESMF). All instruments will be cleared and disclosed by the appraisal stage.</p>

Political and Governance	Substantial	Political and Governance risk rating is Substantial. Between 2009 and 2014, Madagascar experienced the last of several political crises that severely weakened its institutions and governance. With the democratic transition of power in 2019, Madagascar has further reinforced a stabilized political environment conducive to continued development efforts, though the country still suffers from poor governance. Political risks have abated following the completion of presidential elections (November 2023) and the Legislatives (May 2024), while governance risks remain substantial. Risk mitigations include the reforms promoting PFM transparency and efficiency, complemented by other instruments of the Bank and other donor projects.
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INNOVATION

Institutional and Policy	Substantial	Institutional and policy risk is Substantial. The proposed design of the project encompasses complementary and focused activities that add value to each other but can be complex to coordinate and implement. The proposed project is technically sound as it is integrating lessons learned from previous and ongoing landscape management projects in terms of technological, operational, and institutional arrangement. The Project management and M&E will be ensured by a new Project Management Unit (PMU), hosted within the Ministry of Environment and Sustainable Development (MEDD) in close collaboration with the Ministry of Fisheries and Blue Economy (MFBE). The MEDD and MFBE has been showing strong capacity in safeguards policy in previous and ongoing bank financed operations.
Technological	Moderate	Technological risk is Moderate. The project is comprehensive and will implement a diverse set of activities that will require spatial coordination and careful sequencing
Financial and Business Model	Moderate	Financial and Business Model risk is Substantial. The project aims to private sector financing mobilization and enabling, and some of the activities may be new and challenging to think out of box approach in financial and business models. The project will learn from other countries exemplary models in biodiversity, landscape and seascape management to mitigate the potential risks.

EXECUTION

Capacity	Substantial	Capacity for Implementation risk is Substantial. The implementing agencies do not have enough resources, human capacity, budget and financing capacity. The project will strengthen the institutions implementing capacity
Fiduciary	Substantial	The Financial Management and procurement risk levels are deemed Substantial mainly due to the nature of activities and the level of decentralization in the project. This operation continues to support the implementing ministries and agencies' efforts to strengthen the performance of the transformative, inclusive and climate-resilient landscape and seascape management, including consideration of sustainable financing flow options to support such management. The project's fiduciary aspects will include possible simplification and modernization of budget execution process, the

		improvement in financing system for local service delivery, enhanced transparency of the public procurement, and more direct support to the communities that are guarding the unique and precious landscape and seascape of Madagascar.
Stakeholder	Moderate	Stakeholders risk is Moderate. Stakeholders preliminarily identified (i) at the national level: the relevant institutions and their personnel including the Ministry of Environment and Sustainable Development (MEDD), Ministry of Fisheries and Blue Economy (MPEB), National Office of Environment (ONE), Madagascar National Parks (MNP), The National Office for Climate Change, Carbon and the Reduction of Emissions from Deforestation and Forest Degradation (Le Bureau National des Changements Climatiques, du Carbone et de la Réduction des Emissions dues à la Déforestation et Dégradation des Forêts, BNCCREDD+), Protected Areas and Biodiversity Fund (Fondation pour les Aires Protégées et la Biodiversité de Madagascar, FAPBM,); (ii) at the sub-national level: regional departments of environment and sustainable development (DREDD), regional departments of fisheries and blue economy (DPEB), Community Association (COBA) and Vondron'Olonia Ifotony, (VOI), Locally Managed Marine Area (LMMA) Associations, Communities; and (iii) non-governmental organizations and private sector entities working in innovative natural resources management including those promoting private-sector led reforestation and nature-based tourism. Most importantly, the project aims to target vulnerable and marginalized communities and households to be involved in sustainable development of the unique landscapes and seascapes of Madagascar. Several engagements have been taking place and will be continued.
Other	Substantial	<p>1. Technical design of the project is Substantial. The proposed design of the project encompasses complementary and focused activities that add value to each other but can be complex to coordinate and implement. The proposed project is technically sound as it is integrating lessons learned from previous and ongoing landscape management projects in terms of technological, operational, and institutional arrangement. The risk is ranked as substantial due to the limited operational experiences and capacities in an integrated manner by different departments and institutions in and around MEDD. The technical risk would be mitigated by working with an PMU with ample experience working on projects under limited government capacities, both in terms of personnel and budget, while at the same time, strengthening the same.</p> <p>2. Macroeconomy risk rating is Moderate. Madagascar has been historically characterized by low levels of public revenues affecting the government's ability to deliver basic services, foster development efforts and maintain sufficient levels of investment. Limited resources may affect the government's capacity to sustain the results of the proposed efforts and provide the necessary funding to maintain investments going forward. The country remains vulnerable to endogenous, including political, and exogenous shocks. The country is also prone to natural disasters that, despite</p>

		fiscal provisions, have at times affected budgetary and macroeconomic balance, impacting mainly the agricultural sector on which the country heavily relies. Nonetheless, the government has engaged on reforms to improve revenue mobilization and enhance public financial management, and these reforms are expected to continue.
Overall Risk Rating	Substantial	<p>There will be many environmental and social benefits from the project such as improved forest and mangrove landscape management considerations integrated, reduced area of annual deforestation and forest degradation; reduced greenhouse gas emissions, enhanced biodiversity protection, enhanced and safer access to forests and natural habitats, improved health and safety due to improved forest and mangrove landscape management, improvement of livelihoods through creation of job opportunities from forest-based activities like nature based tourism, improved value chain of non-timber forest products and agriculture products around forestry, enhanced enabling environment through establishment of natural resources management academy in collaboration with universities and non-governmental groups with focus on women and youth, capacity building activities with focus on gender, and establishment of a gender responsive monitoring and evaluation system. The project will also develop a strategic communication and outreach plan to communicate with relevant stakeholders and groups on implementation progress and with particular focus on women and youth. Some adverse social impacts may result due to ineffective communication and consultations to include all identified stakeholders and particularly the more vulnerable communities affected by the project and a weak grievance mechanism. The best practices from the Benefit Sharing Plan of the Atiala-Atsinanana REDD+ Emission Reduction Program (P167725, ERPA) will be scaled up, while lesson learned will be reflected in this project's communication plan. The project may also be associated with some risks of sexual exploitation and abuse/sexual harassment (SEA/SH) due to female workers/beneficiaries working in close proximity to male workers/beneficiaries (low). These social risks can be readily and effectively mitigated through continuous and inclusive consultations sessions, a robust grievance mechanism with multiple uptake channels that are widely and effectively disseminated, awareness raising sessions on prevention and control of SEA/SH, signing of codes of conduct and strengthened project GM which is sensitive to SEA/SH complaints. During the preparation stage, the project management unit which will be set up in the Ministry of Environment will prepare a Stakeholder Engagement Plan (SEP), Labor Management Procedures (LMP), the Environmental and Social Commitment Plan (ESCP) and an Environmental and Social Management Framework (ESMF). All instruments will be cleared and disclosed by the appraisal stage.</p>

A. 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)

The proposed project is aligned with the programming directions of the Biodiversity, Climate Change and Land Degradation Focal Areas. The project aligns with (1) the Biodiversity objectives of (BD-1-1) improving conservation, sustainable use, and restoration of natural ecosystems, specifically (BD-1-1) Financial sustainability, effective management, and ecosystem coverage of protected area systems and (BD-1-3) Ecosystem restoration: which will be achieved through the improved management of the protected area system and species protection under the Lemur Bond; (BD-1-4) Biodiversity mainstreaming in priority sectors; (2) the Climate Change objectives of (CCA-1) Supporting implementation of climate change adaptation solutions in priority themes; (CCA-2) Scaling up finance for adaptation; (CCA-3) Strengthening innovation and private sector engagement; Fostering partnership for inclusion and whole of society approach; (3) Land Degradation Focal Areas objectives of (LD-1) Avoid and reduce land degradation through sustainable land management (SLM) and (LD-2) Reverse land degradation through landscape restoration.

The proposed project intends to contribute to some targets of 23 indicators of the Kunming-Montreal Global Biodiversity Framework¹ as below table shows. Below table shows an initial conceptual idea for the project's possible contribution to various targets. It will be narrowed and focused during the project preparation and development. Among the Kunming-Montreal Global Biodiversity Framework (GBF) 23 targets, the government's priorities that are relevant to this project are target 2: restore degraded ecosystems; target 3: conserve land, waters and seas; 10: enhance biodiversity and sustainability in agriculture, aquaculture, fisheries and forestry; 19: mobilize monetary resources for biodiversity from all sources including through international finance.

	Target Aim	The Project's Possible Contributions
Target 2	Ensure that by 2030 at least 30 per cent of areas of degraded terrestrial, inland water, and marine and coastal ecosystems are under effective restoration, in order to enhance biodiversity and ecosystem functions and services, ecological integrity and connectivity.	The project's components 2 and 3 are targeting the degraded terrestrial, marine and coastal ecosystems to be under effective restoration program, so that the enhanced biodiversity and ecosystem functions and services, ecological integrity and connectivity to be observed and confirmed. The first target indicator of the project clearly states that the main objective of this project is to increase the corporate scorecard indicator of the terrestrial and aquatic areas under enhanced conservation and management.
Target 3	Ensure and enable that by 2030 at least 30 per cent of terrestrial and inland water areas, and of marine and coastal areas, especially areas of particular importance for biodiversity and ecosystem functions and services, are	The project aims to increase the terrestrial and of marine and coastal areas that are particular importance for Madagascar's unique biodiversity, lemurs, and ecosystem functions and services. The project aims to support to

	effectively conserved and managed through ecologically representative, well-connected and equitably governed systems of protected areas and other effective area-based conservation measures, recognizing indigenous and traditional territories, where applicable, and integrated into wider landscapes, seascapes and the ocean, while ensuring that any sustainable use, where appropriate in such areas, is fully consistent with conservation outcomes, recognizing and respecting the rights of indigenous peoples and local communities, including over their traditional territories.	conserve and manage those areas through ecologically representative, well-connected and equitably governed systems of protected areas and surrounding areas by applying integrated landscapes and seascapes approach.
Target 10	Ensure that areas under agriculture, aquaculture, fisheries and forestry are managed sustainably, in particular through the sustainable use of biodiversity, including through a substantial increase of the application of biodiversity friendly practices, such as sustainable intensification, agroecological and other innovative approaches, contributing to the resilience and long-term efficiency and productivity of these production systems, and to food security, conserving and restoring biodiversity and maintaining nature's contributions to people, including ecosystem functions and services.	The project aims to build local engagement in low carbon, nature-positive value chains, with special support to insertion of women, youth and vulnerable, and such value chain products will possibly include agriculture, aquaculture, fisheries, forestry, agroforestry products. The project will apply biodiversity friendly practices, such as sustainable intensification, agroecological and other innovative approaches, contributing to the resilience and long-term efficiency and productivity of these production systems, and to food security, conserving and restoring biodiversity and maintaining nature's contributions to people.
Target 19	Substantially and progressively increase the level of financial resources from all sources, in an effective, timely and easily accessible manner, including domestic, international, public and private resources, in accordance with Article 20 of the Convention, to implement national biodiversity strategies and action plans, mobilizing at least \$200 billion per year by 2030, including by: (a) Increasing total biodiversity related international financial resources from developed countries, including official development assistance, and from countries that voluntarily assume obligations of developed country Parties, to developing countries, in particular the least developed countries and small island developing States, as well as countries with economies in transition, to at least \$20 billion per year by 2025, and to at least \$30 billion per year by 2030;	The project will support an innovative approach of the species outcome-based Lemur Bond. This is inline with this indicator of substantially and progressively increase the level of financial resources from all sources, in an effective, timely and easily accessible manner, including domestic, international, public and private resources. The lemur bond will be a first of its kind for Madagascar and has been discussed in various occasions, with strong interest from the Government ² . Under the Lemur Bond, the Government could choose to structure financing to effectively mobilize private institutional finance for conservation goals through capital markets transactions ³ . There are already many exemplary cases of species outcome-based financing, including the Rhino Bond in South Africa, Coral Bond in Indonesia, and the upcoming Chimp Bond in Rwanda. The Government of Madagascar as well as lemur scientist and conservation managers are keen to explore such innovative

	<p>(b) Significantly increasing domestic resource mobilization, facilitated by the preparation and implementation of national biodiversity finance plans or similar instruments according to national needs, priorities and circumstances;</p> <p>(c) Leveraging private finance, promoting blended finance, implementing strategies for raising new and additional resources, and encouraging the private sector to invest in biodiversity, including through impact funds and other instruments;</p> <p>(d) Stimulating innovative schemes such as payment for ecosystem services, green bonds, biodiversity offsets and credits, and benefit-sharing mechanisms, with environmental and social safeguards;</p> <p>(e) Optimizing co-benefits and synergies of finance targeting the biodiversity and climate crises;</p> <p>(f) Enhancing the role of collective actions, including by indigenous peoples and local communities, Mother Earth centric actions¹³ and non-market-based approaches including community based natural resource management and civil society cooperation and solidarity aimed at the conservation of biodiversity;</p> <p>(g) Enhancing the effectiveness, efficiency and transparency of resource provision and use.</p>	<p>outcome-based financing in line with the Kunming-Montreal Global Biodiversity Framework target 19 of resource mobilization for biodiversity, stimulating innovative schemes and optimizing co-benefits and synergies of finance targeting the biodiversity and climate crises, enhancing the role of collective actions, including those by local communities, enhancing the effectiveness, efficiency and transparency of resource provision and use.</p>
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The Project is aligned with several United Nations Conventions to which the Government of Madagascar is a signatory and ratified.

United Nations Framework Convention on Climate Change (UNFCCC): Nationally Determined Contribution (NDC): Madagascar's report for its Nationally Determined Contribution (NDC) was submitted in 2016 (NDC1), updated in 2022 (NDC2), then submitted and archived at the United Nations Climate Change in January 2024.^{[1]⁴} According to NDC2, the Madagascar aims to reduce around 37,809 Gg eq. CO₂ from the Land Use, Land Use Change and Forestry, and this project will contribute significantly to this target and the NDC by covering part of GHG reductions in northern regions. The third NDC (NDC3) is planned to be

prepared in coming months in 2024-2025. The proposed project is aligned with NDCs especially in improving land use, land use change and preserving forestry and biodiversity.

United Nations Convention on Biodiversity (UNCBD): Global Biodiversity Framework (GBF) and National Biodiversity Strategy and Action Plan (NBSAP): The NBSAP of Madagascar 2015-2025,^{[2]⁵} presents a framework for biodiversity across multi-sectoral activities including agriculture, fisheries, forestry, tourism and mining, climate change mitigation and adaptation, land degradation, and waste management. These actions include sustainable ecosystem management, green infrastructure, conservative production systems targeting agriculture, water resources, energy and circular economy. As current NBSAP will expire in 2025, the new NBSAP preparation is starting, and this project will coordinate with the process. Within the current NBSAP, the project will contribute to many of the target objectives, particularly to the Objective 1 of continued awareness raising of the values of biodiversity and the steps they can take to protect and sustainably use; Objective 2 of biodiversity values, opportunities and benefits of conservation and sustainable use, to be recognized and integrated into the country's socio - economic development activities; Objective 4 for all the stakeholders to take appropriate steps to implement sound management plans of resources and maintain the impact of the use of natural resources within ecological limits secure; Objective 5 to reduce degradation, fragmentation and loss of habitats or ecosystems; Objective 7 for areas under agriculture, aquaculture and forestry to be managed according to the plan of sustainable production, ensuring an integrated approach to biodiversity conservation; Objective 11 of the areas of particular importance for biodiversity and ecosystem services, to be adequately preserved in ecologically representative systems of protected areas and are efficiently managed by different strategic approaches; Objective 12 the extinction of threatened species is reduced and their conservation status improved, especially those of lemurs; Objective 15 ecosystem resilience and the contribution of terrestrial, freshwater and marine mitigation and adaptation to climate change are strengthened, including restoration of degraded ecosystems and the fight against desertification; Objective 17 by supporting the central and regional government to adopt political and legal instruments for the implementation of national biodiversity strategy and effective action plans; Objective 20 the human and financial capital for the implementation of the convention to increase at sufficient levels, especially by applying an innovative financing model of lemur bond. The project aims to contribute to some targets of 23 indicators of the Kunming-Montreal Global Biodiversity Framework (GBF). It is imperative to implement the GBF in Madagascar given the island nation's exceptional levels of biodiversity and endemism.

United Nations Convention to Combat Desertification (UNCCD): National Action Plan to Combat Desertification (NAPCD): Since Madagascar ratified UNCCD in 1997, several activities have taken place including development of the NAPCD that defines the main factors contributing to desertification in these areas and determines necessary priority actions. Madagascar has also prepared National Action Plan to Combat Desertification Aligned with the Ten-Year Strategic Framework Plan (PAN-LCD, 2008-2018^{[3]⁶}) policy; the country's national strategy based on global Millennium Development Objectives; the National Environmental Action Plan (PNAE), a major instrument for the National Strategy for Sustainable Management of Biodiversity in relation to the Convention on Biodiversity (CBD); the National Strategy for the Management of Risks and Catastrophes to adapt in climatic change. The project will contribute to LDN indicators^{[4]⁷}, especially those about those for integrating the principle of Land Degradation Neutrality within land planning; integrating the principle of Land Degradation Neutrality in the design and implementation of sectoral policies and strategies; increasing the sustainable agriculture land parcels; reducing pasture fires; restoring landscapes and seascapes using green infrastructure; reinforcing intersectoral innovation capacities

through sustainable land management; mobilizing financial incentives to promote research on sustainable land management in relation to biodiversity and climate change.

Forest Policy 2016–2030: it aims to protect and sustainably manage Madagascar’s forest resources, emphasizing landscape restoration and climate resilience. Some key actions of the policy include reforestation of degraded watersheds, mangrove rehabilitation, and sustainable wood-energy production to reduce pressure on natural forests. The policy promotes decentralized governance, empowering local communities to manage forest resources through participatory approaches.

Charte de l’Environnement: It mandates ecological restoration and sustainable resource management across terrestrial and marine landscapes. It enforces bans on destructive practices such as slash-and-burn agriculture and unsustainable fishing, while promoting fire management and sustainable land-use systems. The charter obligates communities to rehabilitate degraded habitats, including forests, wetlands, and coastal zones, ensuring ecosystem services in support of climate resilience and socio-economic development

National Territorial planning policy (Politique Nationale d’Aménagement du Territoire): This spatial planning policy ensures balanced land-use allocation to protect critical landscapes and seascapes. It designates zones for conservation, agriculture, and development, preventing incompatible land uses that could fragment ecosystems. It states that environmental impact assessments are mandatory for infrastructure projects to minimize ecological disruption. The zoning rules help protect biodiversity corridors, coastal buffers, and marine reserves. The policy integrates ecological priorities into national development planning, ensuring sustainable use of natural resources.

[1] According to NDC2, the Madagascar aims to reduce around 37,809 Gg eq. CO2 from the Land Use, Land Use Change and Forestry. This project will contribute to part of this aim covering part of northern regions. <https://unfccc.int/documents/636850>

[2] The full report of National Biodiversity Strategy and Action Plans (NBSAP) of Madagascar 2015-2025 can be checked in this link. <https://www.cbd.int/doc/world/mg/mg-nbsap-v2-en.pdf>

[3] Link to The Ten-Year Strategic Framework Plan (PAN-LCD, 2008-2018).

<https://drmims.sadc.int/en/documents/database/national-action-plan-combat-desertification-aligned-ten-year-strategic-framework>

[4] <https://www.unccd.int/our-work/country-profiles/voluntary-ldn-targets>

B. 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

Platform of Environment Sector Coordination (Plateforme de Coordination du Secteur Environnement, PCS-E) : Trimesterial strategic coordination meeting on March 18, 2024 ; Monthly coordination meeting and discussions on November 9, 2023.

Ministry of Environment and Sustainable Development (MEDD): Regular meetings at the technical level, as well as higher level in November, December 2023, January, February, March 2024.

Regional Director of Environment and Sustainable Development (DREDD) in SAVA Region: During PADAP implementation support mission in January 2024.

DREDD in Anosy, Androy, and Atsimo-Andrefana Regions: During MIONJO implementation support missions during October 2023 and March 2024.

Le Bureau National des Changements Climatiques, du Carbone et de la Réduction des Emissions dues à la Déforestation et Dégradation: Regular more than weekly meetings.

Civil Societies and NGOs : WWF, WCS, Blue Ventures, MIHARI, IUCN, and others.

Other donors and partners: United Nations relevant agencies and others.

Additional information on Stakeholder Engagement

The development of this concept note is already the result of an initial series of consultations led by the Ministry of Environment and Sustainable Development with potential key stakeholders, including government officers, civil society organizations, non-governmental organizations, and other donors and partners including United Nations' agencies. This active engagement will continue and will be extended especially in terms of geographic specific consultations during project preparation to ensure that stakeholders' views will be fully reflected. Continued engagement is planned at national level as well as regional level.

A stakeholder engagement plan (SEP) will be developed during project preparation, which will focus on important stakeholder groups for the project and meaningful stakeholder consultation. The development of the SEP will be coordinated with the GEF national focal point within the Ministry of Environment and Sustainable Development. The SEP will comprehensively promote consultation on the cross-sectorial and landscape/seascape approaches entailed in the Project. In addition to the above key actors, the SEP will define the consultation of a wider groups of stakeholders with relevance to the Project including the National Committee on Forest and Landscape Restoration, the Ministry of Tourism, the

Ministry of Agriculture, the Ministry of Industrialization, Trade and Consumption, and the Climate Smart Agriculture Task Force. Furthermore, GEF Agencies are required to outline a Knowledge Management (KM) Approach and propose knowledge and learning outputs/deliverables, explaining how the KM Approach will contribute to the project's overall impact. The proposed KM Approach will include processes to capture, assess, document, and share information, lessons, best practices, and expertise generated during implementation in a user-friendly manner; plans for strategic communications; and an overview of existing lessons and best practices that inform the project concept.

Technical committee has been discussing this project concept. The fundamental members of the committee include those from the MEDD, including various departments and institutions within the ministry, the World Bank, the lemurs' scientists, including those from the IUCN Species Survival Commission (SSC) Primate Specialist Group. The MEDD's team along with its directorate has been leading this initiative and collaborated closely with key stakeholders such as scientific experts, PAs manager, and other stakeholders. The engagement strategy involves regular technical meetings and continuous communication to ensure that each input is integrated into the project planning and execution phase. To address critical gaps, a specialized working groups will work and suggest focusing on financial transparency, innovative funding mechanisms (such as sustainability-linked bonds), and stronger collaboration with local stakeholders. These groups would ensure efficient use of funds, develop long-term financing strategies, and improve coordination with partners so that the approach align with its technical and policy priorities.

There is an active Environment Coordination Platform (la Plateforme de Coordination Stratégique Environnement, PCS-E) in Madagascar. PCS-E is co-led by MEDD and one of the bilateral or international partners. The co-led was UNDP from international partner in 2023/2024, then was handed over to UK from bi-lateral in 2024/2025. From international communities, FAO, IOM, UNCDF, UNDP, UNEP, UNESCO, UNICEF, UNIDO, UNODC, the World Bank are the members. From bilateral communities, AFD, European Union, GIZ, KFW, UK, USAID, US Embassy are the members. There are bi-monthly meetings, and various topics have been discussed and coordinated in the environment and natural resources management sector in Madagascar. The World Bank team has been participating, and the MEDD is co-leading for effective coordination. In February 25-27, 2027, with the initiative of PCS-E together with various other partners, the Bank's technical team also joined the field visit along the National Road 4 from Antananarivo to Mahajanga to see the past interventions on landscape and seascape restoration, extracting lessons learned and the discussing how to scale-up success cases.

Various civil society organizations and non-governmental organizations have been communicating closely with the Bank's technical team, and such coordination will be strengthened further through the course of this project concept development. The Bank has been communicating with various entities including Blue Ventures, Conservation International, Catholic Relief Services, Centre Valbio, Fanamby, Indiri, International Union for Conservation of Nature, Locally Managed Marine Areas Associations, MIHARI, Re Wild, Tany Meva, The Peregrine Fund, Wildlife Conservation Society, World Wildlife Fund, Acep Madagascar, Conservation Alpha, Zoological Society of London, etc.

The Bank's past and on-going projects have been already working as strong communication points. Within the seascape, through SWIOFish2 (P153370), the Bank team has been communicating and engaging with MPEB, LMMA, MIHARI, WWF, WCS, Coastal associations and communities. Within the landscape, the relevant projects of ERPA (P167725), PADAP (P154698), FSRP (P178566), RizPlus (P175269) have been communicating and engaging with MEDD, CI and various entities.

Several meetings on Lemur Bond have been organized to discuss its idea, goal, strategy, selection criteria, and possible sites. The concept of this project was explained financing for improving management of natural resources and biodiversity for climate resilient economic development has been explained during the GEF National Dialogue in August 2024, Climate roundtable organized by the International Monetary Fund and the World Bank in October 2024. It has been one of the important themes that leveraging the longstanding collaboration between development partners and Madagascar and building on the Enhanced Collaboration Framework for Scaled-up Climate Action between the World Bank and the International

Monetary Fund. In October 2024, a climate finance roundtable was organized with the aims to convene development partners and the private sector to crowd in additional public and private financing, then a follow-up meeting to learn from outcomes-based finance models for species conservation and climate resilience in Madagascar was organized at the World Bank Office in Madagascar with multiple connections with international and national experts. The objectives of the meeting were to build shared understanding based on specific examples of the key elements for success of a possible lemur bond in Madagascar, as well as the context of lemur populations and conservation opportunities. Criteria's choice for species and sites has been discussed with different stakeholders and more focus is needed for strategies and local community resilience. The Additional details on the linkage between the Lemur bond and the overall climate financing discussed in the roundtable is outlined in the IMF press

release: <https://www.imf.org/en/News/Articles/2024/11/14/pr-24420-madagascar-launches-country-platform-for-clim-fin-through-international-partnership>

Private sector engagement will be a priority area for the Project given the focus of the Project on generating community-based and gender sensitive new and improved job opportunities from agricultural, agroforestry, forest, fishing and tourism-related activities. Existing private operators (mainly small and medium enterprises involved in nature-based tourism and supporting sustainable forest management) will be supported with capacity enhancements and investments. Efforts will be made to identify new opportunities for agriculture, agroforestry forest, fishing and tourism-based private sector investments and conditions for a successful implementation, including access to innovative finance. In addition, the proposed project will also seek how to better engage the private sector through going beyond corporate social responsibility.

Involvement of local actors and local communities. The principle cross cutting approach of the Project is to empower local communities and community-based organizations by strengthening their institutions, enhancing their ability to respond to threats, engage in restoration activities. The Project will open up new and improved job opportunities from forestry, non-timber forest products, fishing, mariculture, and tourism-based activities through an effective public-private partnership. The Project will engage directly with communities via existing participatory and consultative mechanisms such as local councils and with those who represent communities and special interest groups such as federations, civil society organizations and NGOs, especially those present in PA. There will be special measures and outreach undertaken to make sure that potentially excluded groups (women, migrants etc) are incorporated into these processes.

Youth. Involvement of youth is important for this intervention of transformative, sustainable, inclusive, climate-resilient, biodiversity-centered landscape and seascape management, as they will be the ones who will see the longer-term results. The project will have a clear activity that youth to be involved in all the process from decision-making to implementation on ground.

Gender. The proposed activities will be in line with the World Bank Gender Strategy 2024 – 2030^[1]⁸, especially in relation to expand and enable economic opportunities and in some extent to engage women as leaders. As the Gender Strategy target outcome shows, the project will also aim to have more and better jobs, including jobs of the future, considering gender. The project will have special criteria to have more women participation in such economic activities and creation of jobs, then it will help to the other outcome of the strategy to have grater ownership and use of economic assets. A gender assessment will be carried out during Project preparation, as part of a social assessment. The assessment will build on existing data for Madagascar to inform the identification of gender gaps related to natural resources management and access to land/ land rights registration. Based on preliminary gender gap analysis in Madagascar, it is evident that legal texts relating to the environment and sustainable development do not yet systematically integrate a gender dimension, whether at the level of laws, implementing decrees or political/strategic documents. The assessment will identify gender-differentiated needs and concerns related to project activities. Based on the

assessment, the project document will incorporate specific actions and indicators to overcome gender gaps, and a Gender Action Plan (GAP) will be developed to further guide the implementation of these actions. All activities under the project will be gender responsive, including the development of agricultural, agroforestry, forest, fishing and tourism value chains, which provide opportunities for women; restoration activities and management of protected areas with local communities. The proposed project will work in close collaboration of an existing platform of women in Madagascar (for example: PNFDDSA: Plateforme Nationale Femme, Développement Durable et Sécurité Alimentaire; other relevant associations at national and regional levels). A separate budget line will be set and allocated for the development of GAP, then the follow up, monitoring and reporting of GAP through the project implementation. In the landscape side, there is already existing legal structure to recognize the local community rights in the form of COBA (Communauté de Base) in Madagascar (Loi, Decree, Arretes) on community based natural resources management. However, women and women groups' roles, responsibilities within COBA are not articulated clearly. The immediate policy dialogue and reform area would be here if the government would be willing to add or amend such structure so that women's rights can be strengthened more in the legal system. In the seascape side, Madagascar already has an exemplary case of the FisherWomen Leadership Programme in certain coastal communities that promoted more participation of women in the management of coastal resources, empowered female community leaders who act as ambassadors, developed a peer-model for fisherwomen to inspire their skills and strengthened their confidence to participate in community-led fisheries management. It also allowed to establish wider regional and national networks. Such model can be scaled-up in other communities as well as other natural resources, especially in precious tropical forest areas.

[1] The World Bank Gender Strategy 2024 - 2030.

<https://www.worldbank.org/en/topic/gender/brief/gender-strategy-update-2024-30-accelerating-equality-and-empowerment-for-all>

(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
High or Substantial			

C. 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 (\$)
World Bank	GET	Madagascar	Biodiversity	BD STAR Allocation: BD-1	Grant	11,000,000.00	990,000.00	11,990,000.00
World Bank	GET	Madagascar	Biodiversity	BD STAR Allocation: BD-3	Grant	2,000,000.00	180,000.00	2,180,000.00
World Bank	GET	Madagascar	Land Degradation	LD STAR Allocation: LD-1	Grant	1,175,126.00	105,760.00	1,280,886.00
World Bank	LDCF	Madagascar	Climate Change	LDCF Country allocation	Grant	1,834,863.00	165,137.00	2,000,000.00
World Bank	GET	Madagascar	Multi Focal Area	NGI	Non-Grant	2,752,294.00	247,706.00	3,000,000.00
World Bank	GET	Madagascar	Land Degradation	LD STAR Allocation: LD-2	Grant	1,237,770.00	111,399.00	1,349,169.00
Total GEF Resources (\$)						20,000,053.00	1,800,002.00	21,800,055.00

Project Preparation Grant (PPG)

Is Project Preparation Grant requested?

true

PPG Amount (\$)

275179

PPG Agency Fee (\$)

24766

GEF Agency	Trust Fund	Country/ Regional / Global	Focal Area	Programming of Funds	PPG(\$)	Agency Fee(\$)	Total PPG Funding(\$)
World Bank	GET	Madagascar	Biodiversity	BD STAR Allocation: BD-1	275,179.00	24,766.00	299,945.00
Total PPG Amount (\$)					275,179.00	24,766.00	299,945.00

Please provide justification

Sources of Funds for Country Star Allocation

GEF Agency	Trust Fund	Country/ Regional/ Global	Focal Area	Sources of Funds	Total(\$)
World Bank	GET	Madagascar	Biodiversity	BD STAR Allocation	16,900,000.00
World Bank	GET	Madagascar	Land Degradation	LD STAR Allocation	200,000.00
Total GEF Resources					17,100,000.00

Indicative Focal Area Elements

Programming Directions	Trust Fund	GEF Project Financing(\$)	Co-financing(\$)
BD-1-1	GET	4,500,000.00	18,613,742.00
BD-1-3	GET	1,500,000.00	5,000,000.00
BD-3-2	GET	2,000,000.00	55,153,690.00
CCA-1-1	LDCF	1,834,863.00	56,532,568.00
LD-2	GET	1,237,770.00	5,000,000.00
BD-1-4	GET	7,752,294.00	17,000,000.00
LD-1	GET	1,175,126.00	5,000,000.00
Total Project Cost		20,000,053.00	162,300,000.00

Indicative Co-financing

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Investment Mobilized	Amount(\$)
GEF Agency	World Bank IDA, Food Systems Resilience Program, FSRP1	Grant	Investment mobilized	10,000,000.00
GEF Agency	World Bank IDA, Food Systems Resilience Program, FSRP1	Loans	Investment mobilized	10,000,000.00
GEF Agency	World Bank IDA, Rural Livelihoods Productivity and Resilience Project (RizPlus)	Loans	Investment mobilized	30,000,000.00
Others	Trust Fund from Enhancing Access to Benefits while Lowering Emissions (EnABLE)	Grant	Investment mobilized	4,000,000.00
Others	Accerelating the implementation of REDD+ (AccelREDD+)	Grant	Investment mobilized	3,000,000.00
Recipient Country Government	Government of Madagascar	In-kind	Recurrent expenditures	300,000.00
Others	TBD	Public Investment	Investment mobilized	5,000,000.00
Others	TBD	Other	Investment mobilized	100,000,000.00
Total Co-financing				162,300,000.00

Describe how any "Investment Mobilized" was identified

Diverse sources of funding are potentially available to finance the Project. The Government is willing to use Global Environment Facility (GEF) financing to cover part of the proposed activities. Indeed, through the GEF-8 current cycle, an endorsement of US\$22.1million has been provided to support the Science-based management of Biodiversity and Natural Resources for Economic Development. In addition, US\$4million grant resources from the Trust Fund from Enhancing Access to Benefits while Lowering Emissions (EnABLE) is already secured, and a trust fund of the Accelerating the Implementation of REDD+ in Africa (AccelREDD+) of US\$3million can be used for Emission Reduction related activities. Other donors and partners are already financing multiple activities of biodiversity conservation and natural resource management at landscape and forest level in Madagascar. The proposed activities here are expected to catalyze innovative actions for sustainable and inclusive growth using the unique biodiversity and natural resources in Madagascar, which could be supported by others. A phased approach is proposed so that activities can be expanded, and lessons consolidated as other sources of funds become available.

The last two lines of cofinancing correspond to additional outcome payers and private bond investors:

- The project is expecting NGO & Private sector financing but the amount to be confirmed later through the project preparation, including Landscape operators (such as WWF: World Wide Fund for Nature; WCS: Wildlife Conservation Society, etc), Other partners (such as CIF: Climate Investment Fund, WRI: World Resources Institute, etc), Philanthropical investors, and Private sector): [US\$5-10 million]

- The Lemur bond (component 3) leverages the World Bank's AAA rated balance sheet to provide a principal protected product to investors, while raising funds for conservation. The World Bank will issue a [US\$100 – US\$175 million] bond and use proceeds for its sustainable development (SDG) investments.

ANNEX B: ENDORSEMENTS

GEF Agency(ies) Certification

GEF Agency Type	Name	Date	Project Contact Person	Phone	Email
GEF Agency Coordinator	Elif Kiratli	9/17/2024			ekiratli@worldbank.org
Project Coordinator	Sachiko Kondo	9/17/2024			skondo@worldbank.org

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

Name	Position	Ministry	Date (MM/DD/YYYY)
Hery A. Rakotondravony	GEF Operational Focal Point	Minister of Environment and Sustainable Development	3/20/2024

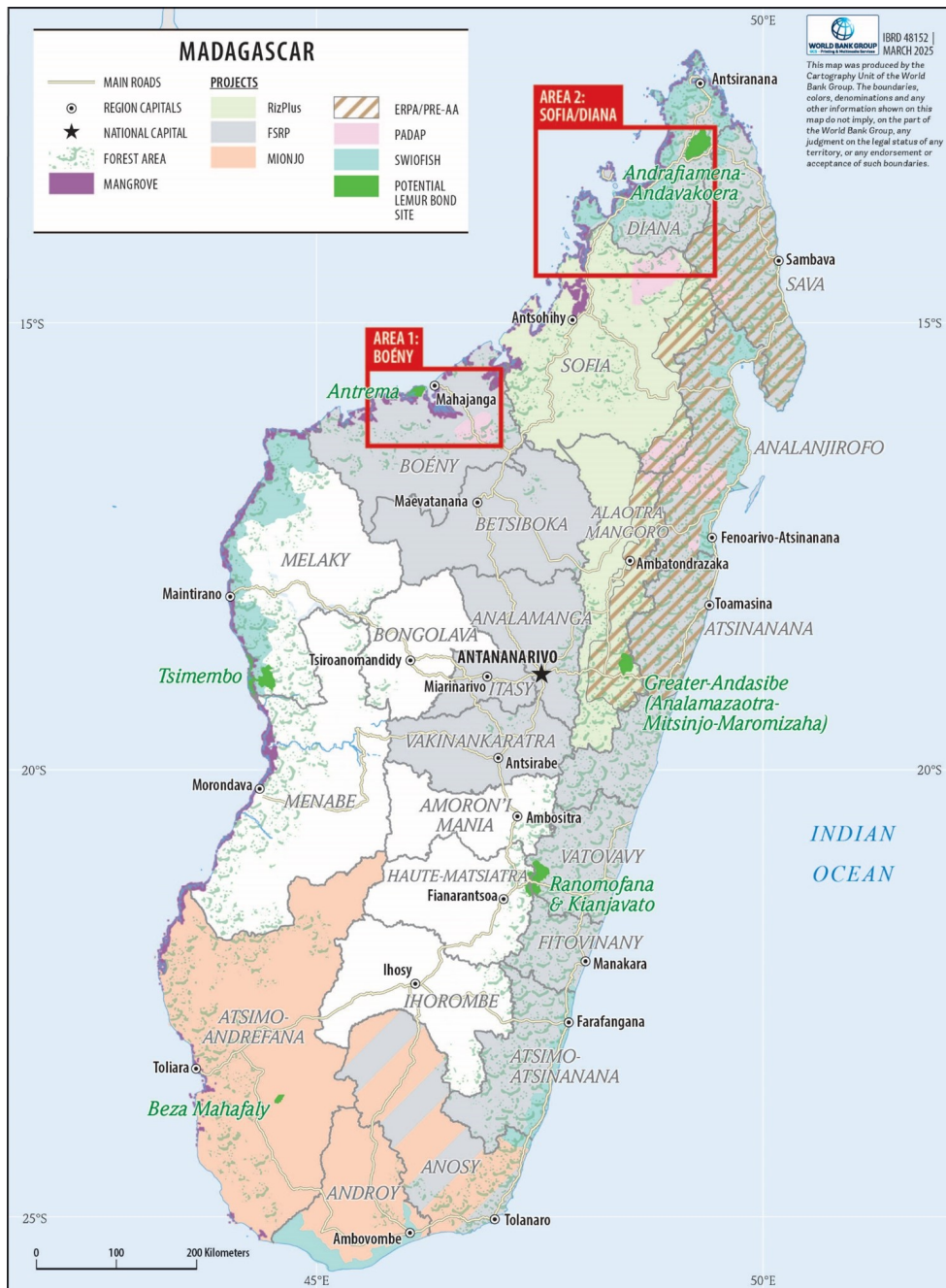
NGIs do not require a Letter of Endorsement if beneficiaries are: i) exclusively private sector actors, or ii) public sector entities in more than one country. However, for NGI projects please confirm that the agency has informed the OFP of the project to be submitted for Council Approval

Yes

ANNEX C: PROJECT LOCATION

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

Additional Maps included in the roadmap.



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

Madagascar_ESRS_UmbrellaCN1

ANNEX E: RIO MARKERS

Climate Change Mitigation	Climate Change Adaptation	Biodiversity	Land Degradation
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Significant Objective 1	Principal Objective 2	Principal Objective 2	Significant Objective 1
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ANNEX F: TAXONOMY WORKSHEET

Please see selected taxonomy in the GEF portal.

ANNEX G: NGI RELEVANT ANNEXES

Please use the most up to date templates per the most recent call for proposals.

Annex G.1: Template for Indicative Financial Termsheet

Instructions. This termsheet to be submitted with the PIF/PFD should include sufficient details to allow a financial expert to understand and judge the financial viability of the proposed investments. Indicative terms and conditions should be used when specific details are not yet available. An equivalent termsheet used for internal Agency purposes is acceptable but must include sections on Currency Risk, Co-financing Ratio and Financial Additionality.

Project/Program Title	Madagascar: Science-based management of Biodiversity and Natural Resources for Economic Development Project, As part of the broad Landscape-Seascape management and Lemur Bond operation Project
Project/Program Number	11694
Project/Program Objective	Protection of lemur populations, restoration of ecosystems, enhanced resilience of habitat and communities
Country	Madagascar
GEF Agency presenting the Project	World Bank
Outcome Bond	<p><i>Subject to securing additional outcome payments and to investor appetite and market conditions at the time of issuance, the World Bank may issue an outcome bond as part financial structure for this project.</i></p> <p>The outcome bond is expected to consist of: a World Bank principal protected bond issuance supported by outcome payments provided by GEF and one or more additional donors. If the Project meets certain pre-defined key performance indicators (KPIs), the outcome payments would be paid to the investors (as a Conservation Success Payment) at maturity (in whole or in part).</p> <p>Investors would forego a portion of the coupons they would otherwise earn on a regular World Bank bond, and that foregone amount would be invested in the Project as Conservation Investment Payments-defined below-.</p>

	<p>The outcome bond transaction is expected to consist of the following:</p> <p>A. World Bank principal protected bond issuance [Size TBD]</p> <p>B. Outcome Payments (potentially paid to investors as a Conservation Success Payment at bond maturity): USD [14.59 – 19.59] million</p> <ul style="list-style-type: none"> From the GEF family of funds: USD 9.59 million as follows: <ul style="list-style-type: none"> GEF Trust Fund: a total of USD 7,752,294 (BD STAR Allocation: USD 5,000,000 and Non-Grant Instrument (NGI) window: USD 2,752,294) LDCF Country Allocation: USD 1,834,863 <p><i>The total amount of the GEF contribution will depend on the additional outcome payments secured, and will be set to meet GEF guidance for GEF outcome payments.</i></p> From Additional outcome payments to be secured from other entities: USD [5 – 10] million. <p>C. Net Present Value (NPV) of investors' foregone bond coupon payments for the Conservation Investment Payments to the Lemur Project as defined below.</p>
Currency of the Financing (Lemur Bond)	TBD
Currency risk to GEF	N/A
Co-financing Ratio	<p>Indicatively every 1 USD of GEF outcome payment could mobilize approx. [8 – 12] depending on market conditions and subject to the project securing additional outcome payments.</p> <p>The Mobilization for Conservation Investment Payments is equivalent to the foregone coupon of investors at the time of the issuance as explained in the conservation investment payments section below.</p>
Financial additionality and minimum concessionality of GEF resources	<p>The proposed Lemur outcome bond transaction uses an innovative model for conservation financing that was first tested in the GEF supported Wildlife Conservation Bond. This outcome bond model allows capital market investors to take risks in a sector not historically considered investable by private sector bond investors.</p> <p>The exact outcome metrics and target outcome results are still to be determined ahead of CEO endorsement. The KPIs will aim for ecosystem-wide impacts beyond individual species, following the GEF Secretariat's Working Paper 'Guidance on GEF support to Outcome Payment conservation bonds' issued in July 2024.</p>
Use of bond proceeds	Use of Bond proceeds: IBRD will issue an outcome bond and retain the proceeds to support IBRDs general sustainable development (SDG) purposes,

	as with all other IBRD bonds. The bond proceeds will be used by IBRD to finance 'Eligible Sustainable Development Projects' through loans to, or guaranteed by, its members.
Conservation Investment Payments	<p>The Net Present Value of investors' foregone bond coupons that will be paid for Conservation Investments in activities in the selected sites with the aim of achieving the KPI(s). These activities will be further developed during PPG to respond to a solid TOC for biodiversity conservation and climate adaptation but could include the following:</p> <ul style="list-style-type: none"> (I) Ecotourism Development and Promotion: Training programs will be implemented for guides, focusing on best practices in wildlife tourism, including guidelines for primate viewing and interpreting climate impacts on lemur habitats. Stronger partnerships will be developed between guides, tour operators, hotels, and local park authorities to ensure a seamless visitor experience. Entry fees will be increased to better reflect the privilege of viewing lemurs in their natural habitats, and night walks will be allowed in protected areas to accommodate the nocturnal nature of many lemur species. These measures aim to boost tourism revenue while minimizing ecological impact, creating a sustainable funding stream for conservation efforts. (II) Improving Protection of Targeted Sites: Enhancing the protection of targeted sites is critical to safeguarding lemur habitats from threats such as wildfires and invasive species, which are increasing due to climate change hazards including temperature changes and changes and changing rainfall patterns. This will involve supporting effective park patrols that include members of the local community, local VOIs (local management associations), Eaux et Forêt agents with the authority to apprehend individuals engaged in illegal activities. Support will also be provided to local law enforcement by building stations near park borders and improving their capacity to deter illegal activities, such as poaching. Signage will be installed around park boundaries to clearly mark protected areas. Additionally, wildfire prevention measures will be implemented, including community engagement workshops on fire safety, creating and maintaining firebreaks around protected areas, and installing water tanks along these firebreaks for rapid response during drought seasons. These efforts will help reduce threats to lemur habitats and ensure long-term protection of these critical areas, as well as provide critical ecosystem services for climate adaptation and resilience of local populations to current and anticipated climate impacts. (III) Reforestation and Habitat Restoration: Reforestation and habitat restoration are essential for reconnecting fragmented

	<p>habitats and ensuring the survival of lemur populations. The Lemur Bond will focus on increasing the capacity of native tree nurseries to prioritize climate resilient species and expanding buffer zones and corridors around targeted sites. Community planting events will be organized, with planting holes pre-dug and filled with compost several months in advance to ensure successful growth. The growth of planted trees will be closely monitored, with invasive plants removed regularly and protective netting provided when necessary. These efforts will not only restore degraded habitats but also engage local communities in conservation and climate adaptation processes, fostering a sense of ownership and responsibility.</p> <p>(IV) Improving Communications and Engagement with Local Communities: Effective communication and community engagement are vital for the success of conservation initiatives. The Lemur Bond will host community forums to discuss the importance of conservation for ecotourism and sustainable development and the role of climate resilience in safeguarding livelihoods, helping to align local interests with conservation goals. Environmental education programs will be created for local schools, teaching students about the value of biodiversity and how climate change impacts ecosystems, and the role they can play in protecting it. By fostering a deeper understanding of the benefits of conservation and climate resilience, these efforts will build long-term support for protecting lemur habitats.</p> <p>(V) Reducing Community Reliance on Illegal Extraction of Natural Resources: To reduce the pressure on natural resources, the Lemur Bond will provide sustainable alternatives to illegal extraction activities. This will include developing plantations for fast-growing pioneer tree species suited to changing climate conditions and establishing associated timber mills to provide legal sources of wood for construction and furniture making. Training will be provided to local communities to produce high-quality wood materials, creating new livelihood opportunities. Additionally, access to natural gas for cooking will be increased, reducing the need for charcoal production, which is a major driver of deforestation. These measures will help shift communities away from illegal activities and toward sustainable practices.</p> <p>(VI) Enhanced Agriculture for Food Availability and Quality: Improving agricultural practices is key to ensuring food security and reducing pressure on natural habitats. The Lemur Bond will assist communities in selecting and farming crop varieties that are best adapted to local environmental and climate conditions. Training will be provided in sustainable farming techniques, including the cultivation of alternative protein sources such as <i>sakondry</i> (an edible insect). By enhancing food availability and quality, these efforts will reduce the need for communities to rely</p>
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	on wild resources, contributing to the overall sustainability of conservation and climate adaptation initiatives.
Financing instruments requested from the GEF TF (other than grants)	Contingent success payment made only upon the verified improvements in selected KPI for lemur conservation outcomes and broader ecosystem at maturity of the bond.
Financing requested from the GEF TF in the form of Grant for Technical Assistance	NA
Terms and conditions for the financing instruments from GEF	<p>For the proposed Lemur Bond:</p> <ul style="list-style-type: none"> (a) Issuer: IBRD (b) Principal Amount: TBD (c) Issuance Date: [TBD in 2026] (d) Maturity Date: TBD (e) Fixed Coupon paid to bondholders: [%], paid [semi-annually], fully guaranteed by IBRD (f) Conservation Success Payment payable to bondholders: the outcome payment paid to investors at maturity subject to project performance as verified by the KPI Calculation Agent (the actual amount paid to bondholders will be an amount between 0 and the sum of outcome payments provided by all outcome payers) (g) KPI Calculation Agent: [TBD], who will verify the [TBD KPI] reported by [the Monitoring/Reporting Entity] and calculate the Key Performance Indicator ('KPI') result by the Calculation Date. (h) Calculation Date: [X Business Days] before Maturity Date (i) Redemption Amount: Principal Amount plus Conservation Success Payment (k) Conservation Investment Payment paid from the NPV of foregone coupons to the Lemur Project as described in the Use of proceeds section. <p>Note: In addition to the [semi-annual] fixed coupon paid to bondholders, bondholders are entitled to receive at maturity the sum of the IBRD Bond Principal and the Conservation Success Payment. The Bond Principal amount will be paid by the IBRD, while the Conservation Success Payment will be paid by IBRD using the outcome funds provided by the outcome payers (with the</p>

	Conservation Success Payment to bondholders equaling an amount between 0 and the sum of the outcome payments provided by all outcome payers).
KPI	The KPI(s) aim to reflect ecosystem-wide impacts beyond individual species in selected sites, following the GEF Secretariat's guidance. The KPI and its calculation method, and observations will be defined during project preparation phase.
Reflow considerations	In the case of a partial Conservation Success Payment or if no Conservation Success Payment occurs, unused GEF amounts will be paid back as follows: <ul style="list-style-type: none"> (i) For the NGI portion, unused performance-based grant will be sent back to the GEF Trustee (ii) For the STAR allocation portion and for the LDCF portion, unused amounts will be disbursed to Madagascar to be repurposed for uses aligned with the GEF mandate. Specifics will be defined during project preparation

Annex G.2: Reflows table

Instructions. Any financial returns, gains, interest or other earnings and remaining principal will be transferred to the GEF Trust Fund as noted in the Guidelines on the Project and Program Cycle Policy. and the GEF Non-Grant Instrument Policy.

Item	Data
GEF Project Number	11694
Estimated Agency Board approval date	July 2025
Investment type description (financial product: debt, equity, guarantee, other)	Performance Based financing
Expected date for start of investment	Around October 2026
Amount of investment (USD GEF funds) (include technical assistance and non-grant portions)	Up to USD 9.59 million of which USD 2,752,294 from NGI window
Maturity (indicate the grace period if needed)	N/A
First repayment year	Maturity date of the bond which is expected to be 5 years after the bond issuance date (exact date TBD)
Final repayment year	On Maturity date of the Bond
Repayment method description	Potential repayment on bond maturity subject to achievement of the KPI (and payment of the Conservation Success Payment on the bond)
Frequency of reflow payments (if amortized)	Maturity of the Bond

A. Total principal amount to be paid-reflowed to the GEF Trust Fund (Please provide actual amount with assumption of exchange rate if applicable) in whole USD.	Between 0 and USD 2,752,294 million based on [KPI to be agreed upon]. Depending on Conservation Success Payments. Maximum reimbursable amount = 2,752,294 million. [1]⁹
B. Total interest/earnings/premiums amount to be paid-reflowed to the GEF Trust Fund (Please provide actual amount with assumption of exchange rate if applicable) in whole USD.	N/A
Total reflows to the GEF Trust Fund (Sum A + B) in whole USD	Between 0 and USD 2,752,294 million based on [KPI to be agreed upon]. Depending on Conservation Success Payments. Maximum reimbursable amount = 2,752,294 million. Note: For the STAR allocation portion and for the LDCF portion, unused amounts will be disbursed to Madagascar to be repurposed for uses aligned with the GEF mandate. Specifics will be defined during project preparation

[1] According to the NGI Policy Update GEF/C.63/ 12 only the NGI funding requires repayment of reflows to the GEFTF.

Annex G.3: GEF Agency Eligibility to Administer Concessional Finance

The GEF Agency submitting the PIF or PFD will demonstrate its capacity and eligibility to administer NGI resources as noted in the NGI Policy, summarized below:

1. A GEF Agency is eligible to administer projects using non-grant instruments if it can demonstrate the following:

a) Ability to monitor compliance with non-grant instrument repayment terms:

The World Bank Group Financing and Accounting Trust Funds and Loan Operations department supports an appropriate fiduciary control framework for Bank lending and donor funds. It performs several key financial operation activities related to loan origination, compliance, disbursements, accounting, and analytics for IBRD/IDA and Trust Funds. The department consists of WFA Client Services (WFACS) and WFA Corporate Services and Accounting Support (WFAAS). WFACS provides client services and related loan operation support to internal and external clients. WFACS provides services related to loan origination and disbursement, advisory and clearance support for project preparation and implementation, project-level fiduciary and loan portfolio management, and regional and country level loan operations activities. WFAAS supports both WBG Trust Funds and Loans portfolios with a range of services that cover: (i) providing advice on the design and implementation of new trust funds and related policies and procedures, and (ii) conducting activities

associated with establishment and closure of loans or trust funds, including account creation and maintenance, accounting and reporting, and help desk functions.

- b) Capacity to track financial returns (semester billing and receiving) not only within its normal lending operations, but also for transactions across trust funds;

As noted above, the World Bank Group supports an appropriate fiduciary control framework for Bank lending and donor funds. The World Bank Group maintains separate records and ledger accounts in respect of the GEF Funds.

- c) Experience and positive track record with the use of non-grant instruments.

The World Bank Group has been operating for more than 75 years and is one of the world's largest sources of funding and knowledge for developing countries. It consists of five institutions with a common commitment to reducing poverty, increasing shared prosperity, and promoting sustainable growth and development. The International Bank for Reconstruction and Development (IBRD) lends to governments of middle-income and creditworthy low-income countries. The International Development Association (IDA) provides financing on highly concessional terms to governments of the poorest countries. The International Finance Corporation (IFC) provides loans, equity, and advisory services to stimulate private sector investment in developing countries. The Multilateral Investment Guarantee Agency (MIGA) provides political risk insurance and credit enhancement for cross-border private sector investors and lenders.

The Bank Policy, 'Financial Terms and Conditions of Bank Financing' sets out the key financial terms and conditions of (i) IBRD loans and IBRD Guarantees, (ii) IDA Financing, (iii) IBRD Enclave IPF, and (iv) other financial products, including hedging products. This Policy is to be read concurrently with the applicable General Conditions for IBRD or IDA Financing, which set forth certain terms and conditions that are generally applicable to IBRD loans and IDA credits and grants. Provisions covered include withdrawals, financing terms, program and project execution, effectiveness, and cancellations.

2. For concessional finance (i.e., projects under the Blended Finance Global Program), a GEF Agency must further demonstrate:

- a) Ability to accept receive and account for financial returns and transfer from the GEF Agency to the GEF Trust Fund;

See above with respect to the World Bank Group's fiduciary control framework for Bank lending and donor funds.

Section 7.1 of the financial procedures memorandum agreed between the IBRD and the GEF, dated August 15, 2016, describes the commitment of the Bank to return reflows to the GEF trust fund:

If any GEF Trust Fund funds transferred to the Bank/IA for GEF Projects are used to provide financing, which generates any reflow of funds, and such reflow of funds are required to be returned to the GEF Trust Fund pursuant to the applicable policies and procedures of the GEF, the Bank/IA will credit and hold the funds in Bank/IA/GEF Trust Fund (following their receipt by the Bank/IA) until the Trustee requests the Bank/IA to return them to such account as the Trustee may designate.

The Bank/IA will maintain a record of any such reflow of funds and report them to the Trustee pursuant to Section 12.2.(e) below.

B) Capacity to perform investments in the type of non-grant instrument to be used with GEF funding;

The World Bank (IBRD And IDA) offers loans and guarantees and hedging products the terms and conditions of which are set forth in the Bank Policy, 'Financial Terms and Conditions of Bank Financing'. In FY 2024, the World Bank Group committed \$117.5 billion in financing, which includes loans, grants, equity investments, and guarantees to partner countries and private businesses. The World Bank (IBRD and IDA) has been extending loans and other non-grant financing to countries since 1946. IBRD's net commitments in FY 2024 totaled \$37.59 billion, all of which were non-grant.

C) An analysis of the investment/due diligence for GEF investments ahead of CEO endorsement

Prior to or concurrent with CEO Endorsement, the World Bank carries out project appraisal, during which the Borrower and the Bank review the work done during the identification and preparation phases and confirm the expected project outcomes, intended beneficiaries, application of Environmental and Social Framework (ESF) requirements and evaluation tools for monitoring progress. Agreement is reached on the viability of all aspects of the project at this time. The Bank team confirms that all aspects of the project are consistent with all World Bank operations requirements, assesses the project's readiness for implementation, and that the Borrower has institutional arrangements in place to implement the project efficiently. All parties agree on a project timetable and on public disclosure of key documents and identify any unfinished business required for final Bank approval. The Project Information Document and Environmental and Social Review Summary (for IPF) are updated and disclosed during this phase.

D) Additional requirements on the suitability of the Agency such as co-financing, co-investment requirements, additional safeguards, strengthened due diligence, and strengthened reflow reporting by executing entities. These may be included in the call for proposals, or be specific to the design of individual projects.

N/A

E) Commitment to transfer reflows to the GEF Trust Fund as agreed under the FPA;

As per section 12.2 para (e) of the financial procedures memorandum, the World Bank currently reports to the Trustee within thirty (30) days after the end of each quarter of the GEF Fiscal Year (or such other frequency agreed with the Trustee), the dates and amounts of reflows of funds received by the Bank/IA from GEF Projects, for the period reported, broken down by each GEF Project.

3. In case of concessional finance for public sector recipients, additionally, the Agency will be required to demonstrate

a) Track-record of lending or financing arrangements with public sector recipients;

Since its establishment over 75 years ago, the World Bank has been lending to member countries to support their development aspirations. IDA commitments include both loans, grants and guarantees, while IBRD commitments are in the form of loans and guarantees.

b) Established relationship with the beneficiary countries' Ministry of Finance or equivalent.

N/A

Annex G.4: Management Capacity of Executing Agency and Governance Structure

For projects requesting equity instrument, structured finance, or SPVs please provide following information

For projects requesting equity instrument, structured finance, or SPVs please provide following information

- Diagram of the overall governance structure of the investment (reporting lines, contractual arrangements, and decision-making bodies)
- Investment layers (tranches) if applicable: One tranche

