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Report No: PAD4273

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

PROJECT APPRAISAL DOCUMENT

ON A

PROPOSED EMISSION REDUCTION PAYMENT AGREEMENT
FROM THE FOREST CARBON PARTNERSHIP FACILITY CARBON FUND

IN THE AMOUNT OF US$50 MILLION

TO THE

REPUBLIC OF MADAGASCAR

FOR A

ATIALA-ATSINANANA EMISSION REDUCTIONS PROGRAM

February 4, 2021

Environment, Natural Resources and The Blue Economy Global Practice
Eastern and Southern Africa Region

CURRENCY EQUIVALENTS

(Exchange Rate Effective December 31, 2020)

Currency Unit = US Dollar

FISCAL YEAR
January 1 - December 31

Regional Vice President:	Hafez M. H. Ghanem
Country Director:	Idah Z. Pswarayi-Riddihough
Regional Director:	Mark R. Lundell
Practice Manager:	Africa Eshogba Olojoba
Task Team Leader:	Erik Reed

ABBREVIATIONS AND ACRONYMS

AA-ERP	Atiala-Atsinanana Emission Reduction Program
BNCCCR	National Climate Change, Carbon and REDD+ Coordination Office
BP	Bank Procedures
BSP	Benefit Sharing Plan
CASEF	Agriculture Rural Growth and Land Management Project
CAS	Special dedicated account (*Compte d'affectation Spéciale*)
CAPAM	Protected Area Complex Ambohimirahavavy Marivorahona
CAZ	Ankeniheny-Zahamena Corridor
CF	Carbon Fund [of the FCPF]
CFP	Carbon Fund Participants
CI	Conservation International
CIME	Interministerial Committee for the Environment
COBA	Basic Community
COMATSA	Corridor Marojejy-Anjanaharibe Tsaratanana
COVID-19	Coronavirus Disease 2019
CPF	Country Partnership Framewok
CTD	Decentralized local authority *(Collectivités Territoriales Décentralisées)*
DREDD	Regional Environment and Sustainable Development Directorate
E&S	Environmental and Social
ER	Emission Reductions
EPA	Public Entity with Administrative Status (*Entité Publique à Titre Administratif*)
EP	Environment Program Support Project
ERPA	Emission Reductions Payment Agreement
ER-PD	Emission Reductions Program Document
ESMF	Environmental and Social Management Framework
FAPBM	Madagascar Biodiversity Foundation
FCPF	Forest Carbon Partnership Facility
FGRM	Feedback and Grievance Redress Mechanism
FM	Financial Management
FY	Fiscal Year
GCF	Green Climate Fund
GEF	Global Environment Facility
GHG	Greenhouse Gas
GoM	Government of Madagascar
Ha	Hectare
IEM	Initiative for the Emergence of Madagascar (*Initiative d'Emergence de*

	Madagascar)
IFC	International Finance Corporation
IUCN	International Union for Conservation of Nature
LCU	Landscape Coordination Unit
MEDD	Ministry of Environment and Sustainable Development
MECIE	Consistency of Investments with the Environment
MF	Methodological Framework [of the FCPF]
MNP	Madagascar National Parks
MRV	Measurement, Reporting and Verification
$MtCO_2eq$	Million Tons Carbon Dioxide equivalent
NAMA	National Appropiate Mitigation Actions
NBSAP	National Biodiversity Strategy and Action Plan
NDC	Nationally Determined Contributions
NGO	Non-Governmental Organization
NSP	NAMA Support Project
OESRC	Operations Environmental and Social Review Committee
OP	Operational Policy
PA	Protected Area
PADAP	Sustainable Agriculture through a Landscape Approach
PCI	Principles, Criteria and Indicators
PF	Process Framework
REDD+	Reducing Emissions from Deforestation and forest Degradation, conservation of forest carbon stocks, sustainable management of forest, and enhancement of forest carbon stocks in developing countries
RPF	Resettlement Policy Framework
PC	Participants’ Committee [of the FCPF]
PCI	Principles, Criteria and Indicators
SAVA	Sambava- Antalaha - Vohemar-Andapa
SESA	Strategic Environmental and Social Assessment
SIS	Safeguards Information System
STD	Deconcentrated technical service (*Services Techniques Déconcentrés*)
SLC	Local Consultation Structure
tCO_2eq	Metric tons of carbon dioxide equivalent
UNFCCC	United Nations Framework Convention on Climate Change
WB	World Bank
WBG	World Bank Group
WCS	Wildlife Conservation Society
WWF	World Wildlife Fund for Nature

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DATASHEET

BASIC INFORMATION

Country(ies)	Project Name
Madagascar	Atiala-Atsinanana Emission Reductions Program

Project ID	Financing Instrument	Environmental Assessment Category
P167725	Investment Project Financing	B-Partial Assessment

Financing & Implementation Modalities

[ ] Multiphase Programmatic Approach (MPA)	[ ] Contingent Emergency Response Component (CERC)
[ ] Series of Projects (SOP)	[ ] Fragile State(s)
[ ] Performance-Based Conditions (PBCs)	[ ] Small State(s)
[ ] Financial Intermediaries (FI)	[ ] Fragile within a non-fragile Country
[ ] Project-Based Guarantee	[ ] Conflict
[ ] Deferred Drawdown	[ ] Responding to Natural or Man-made Disaster
[ ] Alternate Procurement Arrangements (APA)	[ ] Hands-on Enhanced Implementation Support (HEIS)

Expected Approval Date	Expected Closing Date
04-Feb-2021	31-Dec-2025

Bank/IFC Collaboration
No

Proposed Development Objective(s)

The objective of the Program is to make payments to the Program Entity for measured, reported and verified Emission Reductions (ER payments) related to reduced deforestation, forest degradation and the enhancement of forest carbon stocks (REDD+) at the national level in Madagascar, and distribution of ER payments in accordance with agreed Benefit Sharing Plan.

Components

Component Name	Cost (US$, millions)

Organizations

Borrower:	Ministry of Economy and Finance Ministry of Environment and Sustainable Development
Implementing Agency:	National Office of Climate Change, Carbon and REDD+

PROJECT FINANCING DATA (US$, Millions)

SUMMARY

Total Project Cost	50.00
Total Financing	50.00
of which IBRD/IDA	0.00
Financing Gap	0.00

DETAILS

Non-World Bank Group Financing

Trust Funds	50.00
The Forest Carbon Partnership Facility – Carbon Fund	50.00

Expected Disbursements (in US$, Millions)

WB Fiscal Year	2021	2022	2023	2024	2025	2026
Annual	2.00	2.34	4.17	15.83	8.29	17.37
Cumulative	2.00	4.34	8.51	24.34	32.63	50.00

INSTITUTIONAL DATA

Practice Area (Lead)	Contributing Practice Areas
Environment, Natural Resources & the Blue Economy	Climate Change

SYSTEMATIC OPERATIONS RISK-RATING TOOL (SORT)

Risk Category	Rating
1. Political and Governance	Substantial
2. Macroeconomic	Moderate
3. Sector Strategies and Policies	Moderate
4. Technical Design of Project or Program	Substantial
5. Institutional Capacity for Implementation and Sustainability	Substantial
6. Fiduciary	Substantial
7. Environment and Social	Moderate
8. Stakeholders	Substantial
9. Other	
10. Overall	Substantial

COMPLIANCE

Policy

Does the project depart from the CPF in content or in other significant respects?

[ ] Yes [✓] No

Does the project require any waivers of Bank policies?

[ ] Yes [✓] No

Safeguard Policies Triggered by the Project	Yes	No
Environmental Assessment OP/BP 4.01	✓	
Performance Standards for Private Sector Activities OP/BP 4.03		✓
Natural Habitats OP/BP 4.04	✓	
Forests OP/BP 4.36	✓	
Pest Management OP 4.09	✓	

Physical Cultural Resources OP/BP 4.11	✓	
Indigenous Peoples OP/BP 4.10		✓
Involuntary Resettlement OP/BP 4.12	✓	
Safety of Dams OP/BP 4.37	✓	
Projects on International Waterways OP/BP 7.50		✓
Projects in Disputed Areas OP/BP 7.60		✓

Legal Covenants

Sections and Description
In addition to Section 5.01(b)(i) of the General Conditions, the Program Entity shall monitor and report to the Trustee on the implementation of the Safeguards Plans and Benefit Sharing Plan during Reporting Periods. The Program Entity shall monitor and report to the Trustee on the implementation of the Safeguards Plans annually after the date of this Agreement. The Program Entity shall first monitor and report to the Trustee on the implementation of the Benefit Sharing Plan six (6) months after receipt of the first Periodic Payment and annually thereafter. The Program Entity may coordinate the annual monitoring and reporting of the Safeguards Plans and the Benefit Sharing Plan, provided that the Program Entity notifies the Trustee and the Trustee accepts such coordinated timelines. The Trustee reserves the right to initiate a separate monitoring of the implementation of the Safeguards Plans and/or the Benefit Sharing Plan annually after the date of this Agreement by an independent Third Party monitor. Sections 9.01(g) and (k) as well as Section 9.05(d) of the General Conditions shall apply to such Third Party monitor mutatis mutandis.

Sections and Description
In addition to Section 5.01(b) of the General Conditions, the Program Entity shall also, as a separate annex to the ER Monitoring Report, provide information on emissions from deforestation in the 5 regions partially overlapping with the ER Program Accounting Area (“Outside Area”) based on the national forest monitoring system. In the event that such emissions from the Outside Area are significantly higher than baseline emissions for the Outside Area at the time of the first verification, the Program Entity will subsequently conduct the necessary driver studies to understand the causes of deforestation and evaluate if such increased emissions have occurred as a consequence of land use activities moving from inside the ER Program Accounting Area to the Outside Area (“Displacement”). If such a study confirms that this increase in emissions is due to Displacement, the Program Entity shall prepare a mitigation plan to improve the measures described in the ER Program Document that are taken to address the risk of Displacement (“Displacement Mitigation Plan”). The driver study and the Displacement Mitigation Plan will be presented as a separate annex to the ER Monitoring Report for the second Reporting Period. If the Displacement Mitigation Plan is not prepared by that deadline, or not implemented in accordance with its terms, this shall constitute a material breach by the Program Entity (Event of Default) under Section 16.01(a)(vi) of the General Conditions.

Sections and Description
The Program Entity shall apply technical corrections to the estimation of activity data and emission factors of the Reference Level as notified by the Program Entity, and shall do this taking into consideration the areas of improvement identified in the Technical Advisory Panel report dated 24 May 2018 (“TAP Report”) and following the

provisions included in the "Guideline on the application of the methodological framework Number 2: Technical corrections to GHG emissions and removals reported in the reference period" dated November 2018 (“Guideline”). Such technical corrections shall be included in the Reference Level and shall be used for any ER Monitoring Report. If the Program Entity does not provide the Trustee with a detailed description of the technical corrections taking into account the TAP Report and in accordance with the Guideline at the latest three (3) months prior to the end of the first Reporting Period, this shall constitute a material breach by the Program Entity (Event of Default) under Section 16.01(a)(vi) of the General Conditions.

Conditions

Type	Description
Effectiveness	Submission of a final Benefit Sharing Plan which, based on the advance draft version of the Benefit Sharing Plan provided by the date of the ERPA, takes into account specific guidance to be provided by the Trustee, following consultations with CF donors, on the outstanding issues that need further clarification in the final version of the Benefit Sharing Plan

Type	Description
Effectiveness	Submission of an Operations Manual, which shall be subject to the Trustee’s prior review of and consent to the draft of such Operations Manual, for the operation of the Special Designated Account

Type	Description
Effectiveness	Submission of evidence demonstrating the Program Entity’s ability to transfer Title to ERs, free of any interest, Encumbrance or claim of a Third Party

I. STRATEGIC CONTEXT

A. Country Context

1. **The economic performance of Madagascar prior to the Coronavirus Disease 2019 (COVID-19) pandemic had been robust, and structural reforms were ongoing.** Following a prolonged period of political instability and economic stagnation over the period 2009-13, growth accelerated to reach an estimated 4.4 percent in 2019, its fastest pace in over a decade. The return to constitutional order in 2013 was instrumental to this economic revival, as it contributed to restore investor confidence, reopen access to key export markets, reinstate flows of concessional financing, and encourage structural reforms. The government's reform agenda was supported by World Bank development policy financing (DPF) and investment operations in support of human development, governance, and a conducive climate for private-sector-led growth, which contributed to the successful turnaround. All closed projects and DPFs during the World Bank Group Country Partnership Framework for Republic of Madagascar for 2017-21 (CPF, report number 114744-MG), were rated moderately satisfactory or better (see Annex 8 for CPF Adjustment Note in light of COVID-19). Despite a steady decline in previous years, the percentage of the population living below the international poverty line of US$1.90 (2011 purchasing power parity) per day was still estimated at 74.5 percent in 2019, significantly higher than the regional average of 41 percent.

2. **The adverse economic and fiscal impact of the COVID-19 crisis has been and will be very substantial.** Global trade and travel disruptions as well as domestic containment measures are expected to result in the first recession in Madagascar since the 2009 crisis, with gross domestic product (GDP) predicted to contract by 4.2 percent in 2020, compared to an estimated growth rate of 5.2 percent just prior to the coronavirus outbreak. Assuming successful containment measures, economic conditions should stabilize in 2021, with export sectors recovering against the backdrop of a modest pickup in global demand and domestic activity benefiting from the end of strict confinement measures and from an ambitious government infrastructure program. Under baseline assumptions, growth would recover to a subdued rate of 2 percent in 2021, about half the pre-COVID estimate. Overall, the effect of the coronavirus outbreak is expected to shave off about 13 percentage points to predicted GDP per capita levels over a two-year period. Tax revenues will be severely curtailed by the impact of the crisis, contributing to fiscal deficits widening to more than 5 percent of GDP in 2020-21. Public debt will increase from 37.4 percent of GDP in 2019 to an estimated 45.1 percent of GDP in 2021 but is expected to remain in coming years well below the risk threshold for a medium debt-carrying-capacity country like Madagascar.

3. **Madagascar is facing a health emergency with the global COVID-19 pandemic** An Emergency Contingency Plan for COVID-19 was prepared in February 2020 by the Government of Madagascar with support from partners. The first few COVID-19 cases in the country were confirmed on March 20, 2020, and the Government declared a state of health emergency on March 21, 2020 with decree 2020-359. Since then, the Government has adopted and alternated a series of measures to reduce the spread of the pandemic: closure of schools, partial and total lockdown, suspension of domestic and international travels, prohibition of gatherings, mandatory quarantine for individuals who have had possible exposure to COVID-19, curfews, etc. The World Bank responded swiftly to provide financial support in order to ensure preparedness for COVID-19 and its support and involvement was a catalyst to accelerate the country's preparedness and response. In response to the increasing needs and the financial gaps due to the acceleration of the pandemic,

the Government developed and validated a Multisectoral Social Emergency Plan, validated by the Council of Ministers on July 1, 2020. As of January 29, 2021, Madagascar had 19,065 confirmed cases of Covid-19.

4. **The impacts of the crisis could reverse past progress in poverty reduction and deepen fragility.** Formal employment has been significantly impacted by contracting activity in tourism and manufacturing sectors, notably textiles and apparel, while revenues from informal jobs in large urban areas affected by lockdowns will be significantly reduced. In this context, extreme poverty (US$1.90/day) is predicted to increase in 2020 to 77.4 percent, up from 74.3 percent in 2019, undoing three years of consecutive declines. Vulnerable populations in urban areas, notably women and youth, are particularly exposed to economic hardship and poverty traps, reflecting strict confinement measures. The economic and social impacts of the crisis remain highly uncertain in a rapidly evolving situation, with risks remaining largely tilted to the downside, including the possibility of renewed escalation of the pandemic. Declining income per capita and rising inequality could sharpen the risk of social unrest, while the fiscal shock would also be heightened. Madagascar has historically experienced cycles of political instability and has only recently completed a peaceful democratic transition. Although it has made progress over the past years, the country is still vulnerable to weak state institutions, as well as challenges related to elite capture. Impacts of the current crisis on both poverty and stability could be compounded by further shocks, particularly from natural disasters. Rural communities are highly vulnerable to the risks of cyclones, floods, and droughts due to their dependence on rain-fed agriculture, poor infrastructure, and the absence of affordable insurance mechanisms.

5. **Despite significant adverse effects of the COVID-19 crisis, the macroeconomic policy framework is still deemed adequate.** Fiscal deficits continue to be financed predominantly by concessional financing, and the fiscal shock associated with COVID-19 should be covered by emergency budget support from donors. Important reforms have also been implemented in recent years to improve fiscal sustainability and public financial management (PFM), including a renewed focus on maintaining fiscal space for priority expenditures, as well as boosting revenues and transparency. These reforms have been supported by development partners including through six World Bank DPF operations since the start of the CPF in FY17 and the IMF Extended Credit Facility (ECF) over the period 2016–20. This said, significant shortfalls remain in budget oversight and public investment management. Efforts to increase domestic revenue mobilization will need to be scaled up through improvements in tax administration, the removal of ineffective and poorly targeted tax expenditures, and the optimizing of fiscal revenues, including in the extractive sector. The Central Bank of Madagascar is also strongly committed to maintaining price, exchange rate, and financial stability, with those tasks being facilitated by a robust institutional framework and strengthened macroprudential rules. Authorities have reaffirmed their interest in having the World Bank, IMF, and other donors support their reform agenda, including with a successor of the IMF ECF arrangement concluded in January 2020.

B. Sectoral and Institutional Context

6. **Poverty is significantly higher in rural areas where agriculture is the main source of income.** Close to 80 percent of Madagascar's population lives in rural areas, and rural poverty rates are nearly twice as high as in urban areas. Agriculture is the main sector of employment for heads of households in the 80 percent of the population at the bottom of the economic pyramid, while only those in the fourth and fifth consumption quintiles engage significantly in services, manufacturing, and public administration sectors. The incidence of extreme poverty is higher among female-headed households, which make up one-fifth of all households[1]. In

[1] 2017, World Bank Group CPF for Madagascar FY17-FY21.

the five regions partially covered by the Atiala-Atsinanana Emission Reduction Program (AA-ERP)—Alaotra Mangoro, Analanjirofo, Atsinanana, Sava, and Sofia—poverty rates range between 67 and 82 percent of the respective populations[2]. Environmental and social challenges, exacerbated by forest and biodiversity loss resulting in less effectiveness of environmental services for agriculture activities, add further challenges to alleviating poverty.

7. **Madagascar is one of the eight "hottest" biodiversity hotspots**[3] **in the world, yet deforestation and biodiversity loss are rapidly increasing, driven largely by activities to meet basic needs.** According to the International Union for Conservation of Nature (IUCN) Global Red List data for 2020, Madagascar is considered as a priority conservation area, with a number of species threatened with extinction (e.g. 98 percent of lemur species are under threat of extinction). Despite major biodiversity conservation efforts, some ecosystems of the eastern forest are so fragmented and degraded that many native large animal species have been lost or face extinction.

8. **The main direct drivers of deforestation and forest degradation are land use change for small-scale agriculture, energy production, artisanal and illegal mining, and timber harvesting**[4]. The underlying drivers of deforestation are population growth and demographic pressure, poverty, weak governance and institutions, insecure land tenure, and a reliance on economic activities that foster deforestation and forest degradation. These activities include traditional agriculture systems and low-input agriculture with weak natural resource management. Small-scale agriculture is driven by slash-and-burn practices for production of low-yield annual crops mainly used for subsistence purposes. The negative effect of slash-and-burn, especially for rice, is well-known in Madagascar but means for stemming the incursion into forests remain a significant challenge. The inadequate duration of fallow cycles, and the accompanying slash and burn practices, are produced by an increase in household needs and a lack of basic technology and capacity to enable higher yields through intensification.

9. **Cash crops such as vanilla, cloves, and coffee incur less disturbance than slash-and-burn deforestation but cause significant forest degradation.** As an example, over the period 2015-2020, vanilla prices have soared and cash crops have created an increase of demand in forested land in northeastern Madagascar. Unlike slash-and-burn agriculture systems, these cash crops are grown in forested areas without causing a land use conversion, so they cause less disturbance. However, they are a cause of forest degradation when they are grown in dense or intact forests. Even though some private sector actors have promoted sustainable production of vanilla, most exported vanilla has been grown without considering the environmental impact. Additionally, processing of essential oils, which relies heavily on biomass for distilleries, is another cause of forest degradation (rather than deforestation) and where more sustainable approaches include engagement of the private sector and communities.

10. **Forests sustain environmental services, function as carbon sinks, strengthen resilience, and support livelihoods**. Forests also ensure environmental services critical for agricultural productivity and livelihoods including hydrological services, regulation of the flow of water and reduction of floods and water shortages, essential services for downstream urban water users and hydroelectricity generation, and reduction of soil erosion and sedimentation that can adversely affect agricultural activities and irrigated perimeters downstream. Forests provide important sources of livelihood through supply of timber, fuelwood, non-timber forest products and other raw materials, and provide other ecological services (e.g. drinking water,

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[2] 2012, Republic of Madagascar Employment and Poverty Analysis, World Bank.

[3] Myers, N., Mittermeier, R. A., Mittermeier, C. G., Da Fonseca, G. A., & Kent, J. (2000). Biodiversity hotspots for conservation priorities. *Nature*, *403*(6772), 853.

[4] Madagascar National REDD+ Strategy, published in 2018 by the Government of Madagascar.

protection against extreme events). Additionally, forests act a natural safety net when there are ecological disasters. The degradation and loss of forests put these many benefits at risk for the global community, but also directly for many households, especially the rural (and often isolated) poor.

11. **In order to both address the drivers of deforestation and forest degradation and enhance carbon stocks, the Government of Madagascar has designed an Emission Reduction Program (the Atiala-Atsinanana ER Program or AA-ERP) to implement the National Strategy on Reducing Emissions from Deforestation and forest Degradation (REDD+) in a defined area or jurisdiction.** The National REDD+ Strategy and the AA-ERP were both approved in June 2019. This program aligns mitigation measures and the framework for the reception of carbon finance from emission reductions generated under the REDD+ framework to local-level implementation.

12. **The scope of the project covered in this document is the emission reductions payments for the AA-ERP, the carbon finance transaction (payment for verified emission reductions).** The underlying investments are not covered here, as the AA-ERP is a broad program with underlying investments and activities which are not part of the operation. This carbon finance operation relates to the payment for Emission Reductions (ER) generated from the implementation of the AA-ERP through an Emission Reductions Payment Agreement (ERPA) to be signed between the World Bank (Trustee of the Forest Carbon Partnership Facility (FCPF) Carbon Fund) and the Government of Madagascar (the Ministries of Economy and Finance and Environment and Sustainable Development).

13. **The AA-ERP embodies a commitment to conservation as well as development and involves local and regional authorities as well as local community and protected area managers.** The scope of the AA-ERP is to consolidate the successes of conservation through single protected areas and to incentivize local authorities/institutions and governance organizations to become more involved in decision-making around the forests. Past approaches to managing forests have been focused largely on communities around forests and protected area management (with either Madagascar National Parks or Non-Governmental Organizations (NGOs) as delegated managers). The AA-ERP provides benefits for these participants but also sets in place institutional structures for local authorities to be more involved in, and receive benefit from, activities that reduce pressures on forests. Additionally, the focus on supporting activities in a forest landscape (which also includes productive agricultural zones) embodies the more holistic view that conservation will be limited in its success if development needs are not addressed.

14. **One of the building blocks of the AA-ERP is the landscape, making a clear link between reducing poverty and forest conservation.** The central objective of the AA-ERP is to reduce deforestation and forest degradation through a landscape approach contributing to improved governance, economic development of rural and forest-dependent communities, and a sustainable model for potential up-scale in Madagascar**.** The landscape management approach recognizes the link between agricultural development, natural resource management, and governance, both in terms of institutional management and practical implementation. This approach combines investments in a given geographic area to promote sustainable natural resource management (including reduced deforestation) and to reduce rural poverty in alignment with the National REDD+ Strategy. Agriculture presents the main opportunity for economic development while simultaneously representing the main driver of deforestation. Additionally, the exploitation of forests for firewood and charcoal production are currently helping to meet 80-90 percent of energy needs in rural households. The AA-ERP seeks to combine the protection and sustainable management of forests through forest smart interventions targeting agriculture, energy, and the forestry sector, and engaging stakeholders including local communities, local authorities such as Deconcentrated Technical Services (STD) and Decentralized Local Authorities (CTD), NGOs, private businesses, and research organizations. Activities to be promoted in the AA-

ERP will be aligned with United Nations Framework Convention on Climate Change (UNFCCC) decisions related to REDD+, listed in Decision 1/CP.16, para 70[5].

15. **The AA-ERP covers an ensemble of landscapes within the Eastern Humid Forest Ecoregion of Madagascar, totaling 6.9 million ha that are key for biodiversity conservation.** The AA-ERP covers a total of 2 million ha of forest, representing over 50 percent of the remaining rainforest in Madagascar (see map in Annex 3). The AA-ERP area is crucial for Madagascar's biological diversity, as it includes a bastion of endemic plant[6] and animal species of global importance[7] which are threatened with extinction. The AA-ERP area covers a total of 6,904,417 ha (more than 10 percent of the Malagasy territory) including 0.9 million ha of primary forest (14 percent of the total AA-ERP area), 1.1 million ha of disturbed forests (16 percent of the total AA-ERP area), and approximately 40,000 ha of young secondary forest. The total deforestation rate from 2006 to 2015 was -0.76 percent per year for all forests, -0.38 percent for primary forests, and -1.1 percent for disturbed forests. The selection of the area was based on: (i) high potential for achieving emission reductions and enhanced removals of carbon dioxide (high forest cover and capacity for carbon stock enhancement as well as a deforestation hotspot); (ii) coherent geographical area for reducing poverty and forest conservation (consideration of watersheds and other landscape units, potential for cost effective interventions linking forest conservation and development activities and respecting administrative boundaries of communes); and (iii) presence of important criteria for the efficiency of the ERPA (presence of land-tenure management offices within communes and existing protected areas and/or interventions to address deforestation).

16. **The AA-ERP is a large program building on ongoing World Bank financed investments as well as investments of partners in the area.** The Sustainable Landscape Management Project (PADAP, P154698[8]/P157909[9]) includes four out of five landscapes in the AA-ERP area and has been carried out in close collaboration with the AA-ERP. Paramount to the approach of the AA-ERP is the collaboration between sectoral ministries at the central/federal level, as well as at the decentralized/local level to develop a robust approach that emphasizes local development and conservation. In addition, the Agriculture Rural Growth and Land Management Project (CASEF, P151469) will also invest in over 886 hectares of the AA-ERP in agricultural activities to reduce deforestation and afforestation activities in the region of Atsinanana and Analanjirofo. Over the course of nearly 20 years the World Bank provided support for developing the management system for Madagascar's Protected Areas, as part of four successive projects (First Environment Program Support Project (EPSP) (P074235), second EPSP (P074236), third EPSP (P107484), fourth EPSP (P113976)). The support included Madagascar National Parks, which are currently active in the AA-ERP.

17. **The AA-ERP also builds on important engagements from the Government of Madagascar and partners in the program area**. It is designed to be collaborative with the delegated entities in charge of protected area management (Madagascar National Parks, Wildlife Conservation Society, Conservation International, World Wide Fund, and to a lesser extent, Missouri Botanical Garden) on behalf of the government and people of Madagascar that have the responsibilities to ensure financial perpetuation of protected areas (PAs) and their community management system in the program area. Notably, the PA of Makira, Ankeniheny-Zahamena

[5] REDD+ Activities: activities listed in Decision 1/CP.16, para 70 as follows: a. Reducing emissions from deforestation; b. Reducing emissions from forest degradation; c. Enhancement of forest carbon stocks; d. Conservation of carbon stocks and e. Sustainable management of forest.
[6] Dumetz, N. (1999). High plant diversity of lowland rainforest vestiges in eastern Madagascar. Biodiversity and Conservation, 8(2), 273-315.
[7] Goodman, S. M., & Benstead, J. P. (2005). Updated estimates of biotic diversity and endemism for Madagascar. Oryx, 39(01), 73-77.
[8] World Bank financing
[9] Global Environment Facility financing

Corridor (CAZ), Masoala, and *Complexe d'Aires Protégées Ambohimirahavavy Marivorahona* (CAPAM, Ambohimirahavavy Marivorahona Protected Areas Complex) are expected to deliver most of the emission reductions for the program, especially for the first few years (further details of the areas can be found in Annex 2).

18. **ER payments will further support the implementation of AA-ERP.** The performance-based payments for ER will only be available upon the verification of ER; and will be used according to an agreed-upon Benefit Sharing Plan. The AA-ERP will support the continuity of existing activities and reinvest many of the funds to foster new activities that will improve livelihoods and reduce pressure on forest resources. First, carbon finance will serve to ensure the consolidation of existing initiatives, giving continuity to the finance source beyond up-front financing. Second, carbon finance will be used to expand activities in high priority areas as defined by the Regional REDD+ Strategies where the potential for ER is higher and where no initial activities and up-front financing are available.

19. **The Government of Madagascar prepared an Emission Reductions Program Document (ERPD)[10] that entered into the Carbon Fund (CF) portfolio after the 18th Carbon Fund Meeting in June 2018 as part of their national effort to strengthen forest conservation and management**. The World Bank serves as the trustee to the FCPF Carbon Fund. The ERPA General Conditions are non-negotiable and available on the FCPF website[11]. The ERPA Commercial Terms[12] of the carbon finance transaction are negotiable and remain subject to negotiations of the ERPA. For this Project Appraisal Document, assumptions have been made about the commercial terms based on the current status of exchanges about expectations of the Carbon Fund Participants (CFP) and Madagascar. Also, the proposed project period for the ERPA is five years (March 22, 2020 – December 31, 2024).

C. Relevance to Higher Level Objectives

20. **The AA-ERP will contribute to the World Bank Group's (WBG) corporate goals of ending extreme poverty and boosting shared prosperity and sustainability.** The ER payments would contribute to improving the well-being of some of the most vulnerable rural households in the ER program area by providing a source of financing to often remote areas near forests. The ER payments will allow rural communities to invest in their human, financial and social capital, diversify livelihood options, and pursue opportunities for further income generation. Other relevant stakeholders in the program area will also be eligible to receive payments for emission reductions according to the benefit sharing plan.

21. **The AA-ERP is aligned with the objectives of the World Bank Group CPF 2017-2021 (See Annex 8), and with the Government's development plan, the Initiative for the Emergence of Madagascar (IEM).** Overall, the CPF seeks to increase the resilience of the most vulnerable people and to promote inclusive growth, while strengthening national and local institutions to reduce fragility. Payments for ER will incentivize sustainable and productive use of forest and non-timber natural resources and the adoption of agriculture techniques aimed at maintaining soil fertility, allowing regeneration of forests and contributing to agricultural growth, productivity, and market participation. These land use practices also increase resilience to deal with short-term weather variability and longer-term climate change. Altogether, these efforts will boost benefits to local communities through the management of natural resources while contributing to their sustainable use.

[10] http://www.forestcarbonpartnership.org/system/files/documents/Advanced%20draft%20ERPD%20-%20MDG-Final.pdf
[11] http://www.forestcarbonpartnership.org/erpa-general-conditions
[12] http://www.forestcarbonpartnership.org/erpa-commercial-terms-0

22. **The AA-ERP contributes to Madagascar's high-level priorities and targets expressed in their national policies and development priorities.** The program figures prominently in the national strategy to reduce emissions from deforestation and forest degradation and is the first large scale application of the program. The AA-ERP contributes to the Nationally Determined Contribution (NDC) submitted to the UNFCCC which includes a major contribution coming from the land use, land use change, and forestry sectors. It also aligns with the National Development Plan (2015-2019), National Policy to Combat Climate Change (published in 2010), the Environmental Plan for Sustainable Development (2016-2020), and the National Biodiversity Strategy and Action Plan (NBSAP 2015-2025), among others. This initiative also aligns with the newly elected government's ambitious goal to reforest 40,000 ha of forest per year and the restoration of degraded areas through commitments in the AFR100 initiative. The new government that was inaugurated on January 19, 2019 has singled out carbon finance, specifically linked to forest carbon, as a strategic opportunity to reinforce their environmental priorities. The IEM articulates the Governments vision for the next five years and specifically mentions putting in place carbon finance mechanisms for sustainable natural resource management and implementing a REDD+ program as part of "Priority 30—preserving natural resources and the environment."

23. **The AA-ERP is in line with the WBG response approach to COVID-19 and the adjusted CPF (See Annex 8).** The significant impacts of the pandemic on Madagascar have had a major impact on the country's development financing needs over the next two years, requiring adjustments to the WBG country program. In line with the WBG COVID-19 Crisis Response Approach Paper published on June 1, 2020, resources have been realigned to support priority actions aimed at saving lives threatened by the virus; protecting the poor and vulnerable; securing the foundations for the private sector; and strengthening policies and institutions for increased resilience based on transparent, sustainable debt, and investments. Program adjustments include: i) reallocation of portfolio resources through activation of Contingent Emergency Response Components and restructuring and reallocations of existing programs; ii) developing new operations responding to the pandemic that were not envisioned in the original CPF program (e.g. pandemic preparedness programs); and, iii) reprioritization of the CPF pipeline to advance operations that were planned for later years (from FY22/23 to FY21), while delaying selected new infrastructure operations.

II. PROJECT DESCRIPTION

A. Project Development Objective

PDO Statement

24. The objective of the Program is to make payments to the Program Entity for measured, reported and verified Emission Reductions (ER payments) related to reduced deforestation, forest degradation and the enhancement of forest carbon stocks (REDD+) at the national level in Madagascar, and distribution of ER payments in accordance with agreed Benefit Sharing Plan.

PDO Level Indicators

25. The achievement of the PDO will be measured through the following indicators:

    (a) Volume of ER (in tons) that have been measured and reported by the Program Entity, verified by a Third Party, and transferred to the FCPF Carbon Fund (tCO_2e);
    (b) Amount of payments by the FCPF Carbon Fund for CO_2 Emissions Reductions generated by the Program (USD);

(c) Emission Reductions payments distributed in accordance with agreed Benefit Sharing Plan (Yes/No).

26. The Reference Period for the AA-ERP is 2006–2015, against which the baseline or Reference Level of emissions was established. The Reference Level (RL) for the AA-ERP is 11,415,238 tons of CO_2e ER on average for the five-year duration of the ERPA. This includes emissions from deforestation, degradation, and removals from the enhancement of carbon stocks from afforestation/reforestation activities. Table 1 provides the reference level per year for the life of the ERPA.

Table 1. Reference Level

ERPA term year	emissions from deforestation (tCO2/yr)	emissions from degradation (tCO2/yr)	removals from enhancement of carbon stocks (tCO2/yr)	Total Reference Level (tCO2/yr)
March 2020 - Dec 2020	7,111,232	1,508,267	-29,035	8,590,464
Jan 2021 - Dec 2021	9,481,642	2,011,023	-58,071	11,434,595
Jan 2022 - Dec 2022	9,481,642	2,011,023	-77,428	11,415,238
Jan 2023 - Dec 2023	9,481,642	2,011,023	-96,785	11,395,881
Jan 2024 - Dec 2024	9,481,642	2,011,023	-116,142	11,376,524

B. Project Beneficiaries

27. **The ER program area is largely based on investments made in and around protected areas that are bastions of standing forest.** The delegated management arrangements for these protected areas include agreements with surrounding communities, and this arrangement of PA management that includes the surrounding communities is referred to as a REDD+ initiative. These initiatives have existing governance structures and institutional arrangements in place, in some cases even involving sharing carbon revenues.

28. **The primary beneficiaries are Promoters of REDD+ Initiatives[13] and local communities within these REDD+ Initiatives that adhere to the norms of the AA-ERP and can receive carbon benefits.** More specifically, these are:

(a) Promoters of REDD+ Initiatives: These are one or more public or private legal entities that have the capacity to contract and manage a REDD+ Initiative. Each Promoter will be accredited by the National Climate Change, Carbon and REDD+ Coordination Office (BNCCCR) based on criteria relevant to REDD+. They may be forest managers (i.e. community forest managers or protected area managers), rural households, farmers' associations or groups of small producers and processors (i.e. charcoal producers, hunters, animal and agriculture farmers), private sector actors[14], NGOs, civil society

[13] A coherent set of REDD+ activities, at different scales, managed by a promoter and with an internal governance body, contributing to REDD+ performance. It is approved and accredited by the National Bureau in charge of coordinating REDD+. It can be part of a REDD+ Program or an Out-of-Program Initiative

[14] Lucrative activities of a private economic operator, i.e. Statuts of SA or SARL or Groupement Economique, cannot be financed directly according to Malagasy legislation, thus the private sector is not eligible as a final beneficiary in the AA-ERP. However, carbon benefits can be used to finance REDD+ activities that are promoted by private operators and managed / co-managed as part of a private-community partnership. Local communities or non-profit organizations (NGOs, associations, etc.) collaborating with private operators are eligible for example. Conditions for the implication of a private operator are provided in the Benefit Sharing Plan.

organizations, etc. Part of the management, operation, and governance costs of the REDD+ Initiative are eligible to be covered by carbon benefits, and Promoters will be in charge of planning and distributing carbon benefits within the REDD+ Initiative.

(b) Local communities: Local communities are the final beneficiaries of carbon benefits and the main beneficiary of the AA-ERP. Local communities may participate as managers[15] of REDD+ activities, having the capability to receive monetary benefits and manage them, or they can receive carbon benefits from a Promoter of a REDD+ Initiative or a manager of a REDD+ activity.

29. **As integral actors within the REDD+ initiatives, forest-dependent and rural communities are some of the central beneficiaries of the AA-ERP.** Social and economic benefits targeting these populations are a central component of the AA-ERP. These include: (i) improvement of livelihoods and release of children, particularly girls, for education that is not currently possible due to agricultural work and other productive activities; (ii) increased resilience for local populations through greater availability of forest food and increased production of agroforestry and agricultural products supported by the programme; (iii) improved skills and knowledge of rural and forest dependent communities through capacity building, with an emphasis on facilitating access for women and vulnerable groups within the community; and (iv) enhanced opportunities for women's employment as many forest related opportunities are carried out by women.

30. In addition to the two categories of beneficiaries (Promoters of REDD+ Initiatives and local communities) part of the monetary benefits will be allocated to cover the operational costs of the AA-ERP, including REDD+ governance and monitoring and management of the AA-ERP by national institutions.

31. The distribution of ER payments will take place according to a Benefit Sharing Plan (BSP), which has been prepared by the Government through a consultative process and approved by the FCPF Carbon Fund. A draft of the BSP, addressing the latest comments from the FCPF, is provided in Annex 4. The BSP clarifies who the beneficiaries are and how funds will flow to those beneficiaries, and it defines the institution responsible for distributing and overseeing the BSP, among other details about implementation. At this stage the BSP is considered as an “advanced draft” and a final version will be prepared and shared with stakeholders before the first payment is made.

32. **The corner stone for the distribution of benefits to final beneficiaries is a Utilization Plan** that will need to be presented by each REDD+ Promoter for every benefit sharing period. The Utilization Plan will specify the REDD+ activities to be implemented, the timeline for implementation, and their cost. The Utilization Plans are prepared by each Promoter in consultation with local communities and the national/regional platforms and are approved by the relevant governance structure for each Initiative, before being validated by BNCCCR.

C. Results Chain

33. **The added value of the AA-ERP is the consolidation of different protected areas into one single program to be led by the Government of Madagascar.** As mentioned above, the project covers the ER payments and sharing of benefits within the area of the AA-ERP, a large-scale program whose activities are implemented with the support of ongoing Bank-financed projects (each of which has been appraised and approved separately) and other REDD+ activities lead by the GOM and partners in the Program Area, named REDD+ Initiatives. The main World Bank investment project (IPF) PADAP and GOM/partner REDD+ Initiatives (GCF

[15] One or more public or private legal person (s) who manage and use monetary carbon benefits

project in CAZ PA landscape[16], Makira PA landscape, Madagascar National Parks PA landscapes, and Corridor Marojejy-Anjanaharibe Tsaratanana (COMATSA) landscape) complement each other and cover much of the upfront investment needed to generate ER results for the project, as described in the approved ERPD, see Annex 2 for more information.

34. **The AA-ERP aims to reduce deforestation and forest degradation in its area by 16 percent (on average against the reference level) in the first 2.5 years of implementation and by 39 percent in the subsequent 2.5 years.** Additionally, support for around 53,000 ha of afforestation/reforestation activities are expected over the 5 years of implementation. This represents a total of 13.99 million ER to be achieved during the ERPA term, 85 percent of which is expected to be paid by the FCPF Carbon Fund as contract ER – that is, 10 million ER.

35. **The Project implementation period, or ERPA term, starts 22 March 2020 and will continue for five years until 31 December 2024, before the end of the lifetime of the Carbon Fund (December 2025).** The implementation of the AA-ERP started in 2018 with the launch of the World Bank/Agence Française de Developpement/Global Environment Facility funded PADAP project and the GCF funded project in the CAZ landscape and aims to continue through 2024 and beyond. These ongoing REDD+ Initiatives and the continuation of existing REDD+ Initiatives are expected to generate ER in the first reporting period which runs from March 22, 2020 through December 31, 2020. These activities also build on over 20 years of engagement by partners and GOM with various target communities in forests in the AA-ERP area.

36. **During the 4.8 years of the Project implementation period or ERPA term, the program will mainly focus on activities that would lead to the generation of emission reductions**. This will ensure carbon performance, reducing GHG emissions, and reinforce the REDD+ auto-financing process that will fund activities to further contribute to carbon performance in the AA-ERP area. The table below lists the types of activities focusing on improving different sectors which have an impact on reducing deforestation. These include scaling up activities that have proven successful, as well as the categories of activities prioritized by regional REDD+ platforms. Other activities to be financed may include socially beneficial investments that do not directly lead to reduced deforestation but serve as incentives for actions that reduce pressure on forests.

Table 2. Description of existing and potential REDD+ activities within the AA-ERP area

Category of activity by sector	With direct impacts	With indirect impacts
Agriculture sector	• Optimize production systems and agricultural and livestock-dedicated infrastructure • Improve the management of cash crop production under agroforestry systems and improve food security of local communities' riparian to forests	Support the development and setting up of small and medium-sized enterprises and/or rural cooperatives and promote the creation of REDD+ mechanism-related subsectors at the local level
Forest sector	• Improve the management of forest areas through a landscape approach	• Reinforce forest surveillance, monitoring systems, and regulatory

[16] An approved Green Climate Fund project includes grant funding for the management of the CAZ Protected Area as well as investment finance for the development of private-sector focused activities in sustainable agriculture and energy production.

	• Promote private and community reforestation, rehabilitate degraded forest areas, and reforest in consideration of local needs, without converting natural forests • Promote sound forestland management and conservation as a condition that can facilitate access to land tenure	enforcement, including fire management • Improve the forest sector's contribution to economic development by promoting the production and use of non-timber forest products and other subsectors that do not affect the carbon stock
Energy sector	• Promote improved fuel wood use and transformation techniques, as well as the dissemination of improved stoves in urban centers • Develop the use of renewable energy (solar, biogas, etc.) for domestic use	• Support the harmonization and development of the legal framework relating to the development of alternatives to fuel wood and sustainable fuel wood supply
Crosscutting and other sectors	• Enhance non-carbon benefits delivered by the improvement of rural livelihoods and the conservation of biodiversity and ecosystem services	• Improve livelihoods for rural and forest dependent communities, including women, youth, and children • Reduce material efforts and household expenses by improving access to wood fuels, charcoal and firewood and efficient cookstoves • Put in place strategies to increase women's employment at the project and community levels • Reinforce land security while addressing gender imbalance in access to land and resource rights • Provide appropriate management of ecosystems, forestry, agroforestry and agriculture, and technical support to customary and formal landowners • Improve the coordination and monitoring of mining and agricultural developments and set up compensatory reforestation • Reinforce decentralized management and coordination of REDD+

		mechanism-related interventions at local level • Align the legal framework with the institutional one conducive to the good governance of the REDD+ mechanism.

37. **Out of a total of 13.99 million ER potentially available to the CF, the GOM proposes to sell 10 million ER at a unit price of US$5 per ER, resulting in a total transaction value of US$50 million.** The remaining volume might be sold to the CF as additional ERs or might be sold to third-party buyers. The GOM prepared an ERPD)[17] which was presented at the 18th Carbon Fund Meeting in June 2018 and was approved by Carbon Funds Participants with no conditions.

38. **It is estimated that the implementation of activities will lead to a generation of 13.99 million ER during the ERPA term**. This estimate is based on the target in reduction of deforestation/degradation and increase in reforestation defined in the landscapes of the REDD+ Initiatives. A specific reference level, consistent with the AA-ERP, was defined for each landscape and emission reductions were estimated for each individual REDD+ Initiative using the defined targets. Since monetary benefits will be invested in new activities in existing REDD+ activities or new REDD+ Initiatives, emission reductions resulting from this re-investment were estimated based on the mitigation cost of the initial activities. Areas that are not covered by REDD+ Initiatives are assumed to maintain the same level of GHG emissions as historical GHG emissions. The resulting efficiency in the reduction of GHG emissions ranges between 15 percent the first year and 30 percent the last year. This results in an estimated 19.4 million ER over the ERPA period (March 2020 - December 2024). Uncertainties associated with the estimation of ER were at the threshold of 30 percent at the 90 percent of confidence level. In order to consider the risk of uncertainties as required by the FCPF, 8 percent of the total ER are to be set aside in an uncertainty buffer reserve. In order to address the risks of reversals as required by the FCPF, a fraction (28 percent of contract ER)[18] of ER are to be set aside to a buffer reserve. A total of 5.4 million ER are set aside in the uncertainty and non-permanence buffers and a total of 13.99 million ER could be potentially be available to the CF. See details in Table 3.

39. **Measurement and reporting of ER will be done on an annual basis while external verification of these ER will occur every other year**. Payments will be annual based on either third-party verification reports or interim progress reports (in case verification does not take place). ER payments will be distributed by GOM in accordance with the final BSP. The ER sold to the Carbon Fund and those set aside in the buffer will be registered in Madagascar's transaction registry[19] and transferred to a centralized transaction registry

[17] Final ERPD: *https://www.forestcarbonpartnership.org/sites/fcp/files/2018/June/Final%20ER%20PD%20MDG6_20180606_Posted.pdf*

[18] A fraction of the ER generated and verified under the ER Program will be deposited in the ER Program CF Buffer to account for the risk of reversals and to account for the risk of uncertainty. The former will be used to manage the risk of future reversals (i.e. A situation where the cumulative monitored and verified ER are less than the currently transferred ER), while the latter is a mechanism to manage the risks of over-issuance due to the uncertainty of the ER and to provide incentives to improve uncertainty of ER with time. The requirements for the operation of these two buffers are established by the CF Methodological Framework and the CF Buffer Guidelines.

[19] The ER transaction registry is a system that creates (i.e., issues) emission reduction titles with unique serial numbers; supports the transfer of these units between account holders within the registry and to other linked trading registries; allows account holders to manage positions and transaction; generates reports on ownership of emission reduction units and transactions; and supports accounting for non-permanence risk management (buffer reserves). At the time of this PAD, Madagascar´s transaction registry is in early stages of feasibility analysis and it is not expected it will be in operation before the first issuance of ER.

managed by the FCPF. GOM is currently exploring the possibility of entering into separate transactions, potentially selling part of the remaining volume of 3.99 million ERs to the International Finance Corporation (IFC) or other partners.

40. Implementation of the AA-ERP is expected to generate environmental benefits in addition to the reduction of GHG emissions and enhanced GHG removals, such as increased resilience to the impacts of climate change, soil conservation, water retention, and biodiversity protection. The cost-benefit analysis of the AA-ERP presented later in this document shows that the AA-ERP will also generate significant positive net social impacts.

Table 3: Ex-ante estimations of the ER expected from AA-ERP[20]

Year	Reference level	Emissions and removals ER program	Emission reductions or enhanced removals	Uncert.	NPR	ER potentially available to CF
				8%	**28%**	
March 2020 - Dec 2020	8,590,464	7,169,544	1,420,920	113,674	285,960	1,021,286
Jan 2021 - Dec 2021	11,434,595	8,706,969	2,727,626	218,210	548,935	1,960,481
Jan 2022 - Dec 2022	11,415,238	7,276,548	4,138,689	331,095	832,911	2,974,683
Jan 2023 - Dec 2023	11,395,881	5,967,611	5,428,270	434,262	1,092,439	3,901,569
Jan 2024 - Dec 2024	11,376,524	5,630,436	5,746,088	459,687	1,156,400	4,130,000
TOTAL	**54,212,701**	**34,751,109**	**19,461,593**	**1,556,927**	**3,916,645**	**13,988,020**

D. Rationale for Bank Involvement and Role of Partners

41. **The Government of Madagascar, together with its development partners, has sought to align different financial instruments and conservation and development activities within the ER program area to be able to secure results-based financing**. This approach is also seen as a means for consolidating multiple ongoing initiatives into a common approach. As a result, different activities financed and implemented by development partners include: Makira PA supported by Wildlife Conservation Society (WCS); Masoala National Park and other National Parks like *Ambatovaky and Anjanaribe Sud* (South Anjanaribe) supported by Madagascar National Parks; CAZ PA supported by Conservation International (CI); *Complexe d'Aires Protégées Ambohimirahavavy Marivorahona* (Complex of Protected Areas in Ambohimirahavavy Marivorahona) supported by World Wildlife Fund (WWF). These partners work closely with the Government and communities to conserve natural resources in the ER program area and will be key partners in ensuring that the AA-ERP meets its objectives.

42. **The program aims to create incentives for private investment in the program area.** In 2017, BNCCCR commissioned the development of a Private Sector Investment Blueprint for the AA-ERP. This first study identified commodity sectors for potential sustainable supply chain development in the AA-ERP area. REDD+

[20] The values in the table correspond to total estimated ERs and does not correspond to Schedule 2 of the ERPAs which represents minimum committed amounts per reporting period.

compatible business plans and potential partners have also been identified. They have continued to narrow in on potential investments that align with objectives of the REDD+ strategy and the current aim is to produce one or more partnership agreements with supply chain actors or investors. In the vanilla sector, IFC supports the gradual predominance of sustainably produced vanilla in the market by private firms. The initiative incentivizes farmers to grow vanilla without engaging in techniques which result in forest loss. The ER Program is seeking appropriate arrangements to enable and support sustainable activities that reduce pressure on forests and also provide benefits for local communities.

43. **Stakeholder consultation, participation, and disclosure was conducted during the design of the AA-ERP and will continue during its implementation**. The design and implementation of the AA-ERP, including the advanced draft Benefit Sharing Plan[21] which was disclosed 12 June 2020, is based on the on-going participation of a broad set of stakeholders, in line with the Malagasy legal framework, the FCPF Methodological Framework (FCPF MF) and the World Bank safeguards policies. The Program was designed in tandem with the preparation of the National REDD+ Strategy and is thus aligned with the information sharing, consultation, participation, and validation mechanisms as well as their safeguards instruments. All consultations that have taken place are described on BNCCCR's website: *http://bnc-redd.mg*.

F. Lessons Learned and Reflected in the Project Design

44. **REDD+ has a relatively long history in Madagascar, with this program's financing used to support three protected areas over the past ten years: Ambositra-Vondrozo Forest Corridor Natural Reserve (COFAV), Ankaniheny-Zahamena Corridor (CAZ), and Makira Protected Area**. The former COFAV PA is not located within the AA-ERP while the latter two protected areas will now be integrated within the AA-ERP and merged with the national approach to REDD+. With the launch of the AA-ERP, the effort to consolidate financing is anticipated to bring a multi-sector approach to conservation and development through at least 2025. The AA-ERP is built on an approach that carbon finance can be used as a source of funding for protected areas and for conservation and development of surrounding communities, covering over 10 percent of the national territory and 20 percent of the AA-ERP. The AA-ERP also brings a coherent approach and methodology to forest carbon transactions in the country rather than individually promoted projects with different methodologies.

45. **Lessons learned from the implementation of the three protected areas receiving REDD+ finance have been integrated into the design of the AA-ERP**. The two main issues identified[22] to ensure a successful transaction were the coordination and communication among government agencies, and the elaboration of a BSP in a consultative manner early in the process. Regarding the former, the government of Madagascar has established in its REDD+ Strategy (adopted 30 May 2018 through decree N° 2018-500) the necessary institutional arrangements and coordination structures to enable efficient coordination amongst government ministries. A more comprehensive REDD+ decree has also been submitted for inter-ministerial approval and codifies more detailed technical aspects of REDD+ implementation. The REDD+ decree is expected to be adopted by June 2021 and in any case before the deadline for effectiveness set for February 2022. Madagascar has already established an inter-ministerial coordination committee that will oversee and provide political orientation to the AA-ERP. Regarding the latter, the government of Madagascar has

[21] Advanced draft benefit sharing plans is a draft version of the plan that has been considered complete by the Trustee and that has addressed the fundamental comments from CF donors.

[22] Implementation completion and results report (p108943 / tf091055) on the purchase of verified carbon units by the biocarbon fund from the republic of Madagascar for the Ankeniheny-Mantadia-Zahamena biodiversity conservation and restoration corridor carbon project, conservation component.

advanced in defining a benefit sharing plan, which is considered an "advanced" version as required by the FCPF Methodological Framework.

46. **The World Bank has considerable experience working with the Government of Madagascar on issues of forest management and conservation.** The First and Second Environmental Program Support Projects were implemented between 1990-2004 (P001556, P001537) and supported the creation of institutions to manage natural resources. The projects supported an agency to manage the national protected area system, create the first protected areas,[23] and integrate environment into development and economic policies.[24]

47. **The risk of resorting to old practices are high if investments in behavior change are not associated with income generation opportunities. The AA-ERP is built on the lessons learned from the successive Environment Program Support Projects implemented over the course of nearly 20 years.** In line with sector-specific goals, the project sought to reduce poverty by contributing to broad-based economic growth, sustainable natural resources management, and improved governance. The project identified the importance of ownership among line ministries and implementing agencies to balance short term interests of the project with long term interest of sector development. It also captured potential synergies by coordinating with other development projects for improved natural resource management where different sector operations target the same area, such as buffer zones surrounding the PAs. For complex projects with a large number of implementing agencies (local governments, NGOs, independent service providers), the project used results-based or performance-based contracts as a main vehicle of project implementation instead of the traditional disbursement arrangements. Results-based contracts simplified the management of multiple implementers and enhanced their independent functioning as service providers. In addition, fiscal sustainability of environmental agencies established under the project was crucial in ensuring overall sustainability of project achievements.

III. IMPLEMENTATION ARRANGEMENTS

A. Institutional and Implementation Arrangements

48. **The AA-ERP will be implemented by multiple stakeholders aligning with the national REDD+ strategy.** At the national level, the BNCCCR will be responsible for technical coordination, monitoring, measurement, and reporting ER in collaboration with the National REDD+ Platform. At the regional level, coordination units will work with regional REDD+ platforms, communes, technical government services and other partners in support of initiatives to be funded with carbon finance. National delegated entities partnering with the government on the management of protected areas and the surrounding communities, private sector, communes, local NGOs, and other operators are key actors for implementing activities on the ground.

49. **REDD+ governance and planning** is carried out mainly by three multi-stakeholder entities at the national and regional levels (National REDD+ Platform, Regional REDD+ Platform, and the Local Consultation Structures (SLC) at the commune level). The national and the regional platforms will ensure that the REDD+ activities

[23] Project objectives were the: (a) conservation and management of Madagascar's biodiversity, (b) promotion of the sustainable development and management of the country's natural resources, (c) improvement of the population's living conditions, and (d) development of the country's human resources and institutional capacity.
[24] The original development objectives of the Second Environmental Support Program were to (a) reverse current environmental degradation trends and to promote sustainable use of natural resources, including soil, water, forest cover, and biodiversity; and (b) to create conditions for environmental considerations to become an integral part of macroeconomic and sectoral management.

proposed in the Utilization Plans of the REDD+ Initiatives are in line with the REDD+ Strategy and will take a decision on the approval of extension of REDD+ activities through existing or new Initiatives. The Local Consultation Structures are a fundamental part of the current governance structure at a local level and provide a key role for authorities which have been excluded from formal management in many previous conservation projects.

50. **The operation and management of the program** is ensured by four national and regional entities (inter-ministerial Committee for the Environment (CIME), BNCCCR, REDD+ regional coordination offices that are embedded in Regional Environment and Sustainable Development offices (DREDD), and REDD+ activity promoters). It is important to note that REDD+ Initiative promoters work closely with communities and local authorities. CIME is in charge of providing political and strategic guidance. BNCCCR is in charge of ER program management, while the REDD+ regional coordination offices are in charge of the supervision of REDD+ Initiatives at regional level and supporting SLC to prepare the Utilization Plans of REDD+ Initiatives. The REDD+ activity promoters are in charge of implementing and managing REDD+ Initiatives, these may be, among others: forest managers (i.e. community forest manager or protected area manager), rural households, farmers' associations or groups of small producers and processors (i.e. charcoal producers, hunters, animal and agriculture farmers, private sector actors, NGOs, civil society organizations, etc.). The private sector actors include those within sustainable agriculture value chains such as vanilla, cocoa, cloves, coffee, and others for further development as potential sustainable supply chain priorities, as well as energy and forestry sectors.

51. **ER payments will be received by the Ministry of Economy and Finance (MEF) in a specific special dedicated account (CAS) in the Central Bank of Madagascar.** Fiduciary management will be based on the rules of public accounting with the MEF as a payee and the MEDD as the authorizer and they will follow the requirements specified in an operations manual to be approved by the MEF and MEDD. Once the funds arrive in the CAS, they will be distributed in accordance to the BSP and the operations manual. The operations manual is being prepared and its approval is expected by June 2021 and in any case before the deadline for effectiveness set for February 2022. More information on the financial mechanism is provided in Annex 7. This mechanism will be an interim mechanism until the MEF and MEDD defines an alternative financial management (FM) mechanism.

B. Results Monitoring and Evaluation Arrangements

52. **The proposed project estimates to pay up to US$50 million for the delivery of Measured, Reported, and Verified (MRV) ERs** from the AA-ERP under an Emission Reductions Payment Agreement (ERPA) to be signed between the World Bank, as Trustee of the FCPF, and the Ministries of Economy and Finance and Environment and Sustainable Development as the Program Entity.

53. **The measurement of the deforestation and associated emission reductions in the AA-ERP area will be prepared by the MRV unit** at National Coordination Office for Climate Change, Carbon and REDD+ (BNCCCR) annually. Reporting from the GOM to the FCPF will take place on three occasions in years 2021, 2023, and 2025, and interim reporting for advance payments will take place in 2022 and 2024. The reporting period may vary upon approval by both parties (GOM and FCPF) whenever needed and based on the availability of carbon credits. Verification will be conducted by a third party hired by the CF following the submission of the Monitoring Report. Reporting occurs upon completion of each monitoring period. Upon verification of the emission reductions, payments will be made by the FCPF Carbon Fund to the government of Madagascar.

54. **A REDD+ Initiative and Program Information System (SIIP) has been designed, and is operational, to ensure the recording of relevant data from each REDD+ Initiative and Programs** including the boundaries, details of the promoters, reference level, credits issued, reports, etc. This is in conformity with the FCPF MF and will have an ER transaction functionality in the near future.

55. **A Safeguards Information System (SIS)** integrated in the SIIP has been designed to ensure that implementation of REDD+ activities do not result in negative unintended social, economic, or environmental impacts. The SIS will also be used to report on meeting the Cancun Safeguards—a set of seven safeguards that must be considered in all REDD+ initiatives that were agreed upon at the 16th Conference of the Parties in Cancun in 2010, in conformity with UNFCCC guidance.

C. Sustainability

56. **The AA-ERP is built on GOM vision for consolidating experiences in conservation and development and moving towards a coherent national approach to REDD+.** The AA-ERP will use carbon revenues to reinvest in activities in the ER Program area to continue extending gains from the program. Carbon revenues are an opportunity to contribute to the sustainable financing of the PA network, but also to incentivize investments that have multiple benefits, for communities, for the environment, and for private actors. The institutions supported by the REDD+ process are also building and strengthening national and local development planning processes to promote the sustainability of the institutions for continuation beyond the AA-ERP. For example, the same institutions could be used to develop an ER program for mangroves, which is under discussion with other partners, or for other ecoregions of Madagascar. Carbon revenues, and particularly REDD+, have long been identified by the environment sector as a source of sustainable financing. However, materializing them has been longer, less lucrative (in terms of value), and more complex than expected. By supporting structures and an approach that encompass a broader geographic area and a more diverse set of actors, there is more flexibility to share the benefits where there is particular need and to stretch investments beyond a single project lifecycle, which has hampered activities in the past.

IV. PROJECT APPRAISAL SUMMARY

A. Technical, Economic and Financial Analysis

(i) Technical

57. **The ER project has been developed in accordance with the methodological framework of the FCPF Carbon Fund**. The methodological framework is the result of a two-year consultation process involving international experts, donors, and REDD+ countries. It contains 78 indicators regarding the general approach, level of ambition, carbon accounting, safeguards, sustainable program design and implementation, and ER project transactions. An independent Technical Assessment Panel assessed compliance of Madagascar's ERPD with the 78 indicators. The final assessment report dated May 2018 indicates that 61 criteria or indicators are met, 5 are not met, and 12 are not applicable at this stage. The indicators that were not met related to elements that were developed in parallel to the ERPA negotiation process and were adequately addressed.

58. **The AA-ERP MRV system is robust and in line with good practices, as confirmed by an independent technical assessment**. It uses the same methods for quantifying emissions as the RL to produce fully

consistent results as a basis for measuring ER. Areas of deforestation and forest degradation will be estimated through a stratified sampling estimation approach consisting of the visual interpretation by expert operators from a representative number of sampling units located within different strata. The visual interpretation will be done using the same protocols used for the RL. The forest cover change reference condition for each sampling unit is manually interpreted using a combination of medium resolution (e.g. Landsat 7 and 8), high resolution (e.g. Sentinel 2) and very high-resolution imagery (e.g. world view, SPOT 6 and 7, PLANET). The stratification will be based on forest cover change maps produced by the MRV unit with a semi-automatized tool that is being currently designed. The estimates of areas of deforestation will be used in combination with the same Emission Factors used for the RL to quantify the annual GHG emissions in the monitoring period. The estimated GHG emissions will be subtracted from the RL to determine the ER. Uncertainty of ER will be quantified at 90 percent confidence level. Based on the estimation of uncertainty and the risk defined in line with the FCPF Carbon Fund Buffer Guidelines, the MRV Unit within BNCCCR will estimate the volume of ER to be set aside in the uncertainty and risk buffers and will estimate the ER available to be sold and transferred to the FCPF Carbon Fund.

59. The ministerial approval of the REDD+ Decree will provide the legal basis and procedures for any REDD+ Initiative and Jurisdictional Program to comply with the country's legal REDD+ framework. This Decree is expected to be approved by June 2021 and in any case before the deadline for effectiveness set for February 2022. It is expected that COVID-19 will not cause any delay as this Decree is already in advanced draft form and pending government approval.

(ii) Economic and Financial analysis

60. **The economic analysis compares the economic benefits generated by the proposed project to the costs**. This ex-ante economic analysis focuses on the emission reduction benefits. A spreadsheet model compares costs and benefits under various scenarios using net present value analysis, which discounts all monetary streams to a common base year. To examine alterative price and performance combinations, a sensitivity and break-even analysis is implemented (see Annex 5).

61. **Costs**. The proposed US$50 million are the project costs, which are spread over 2020-2025 (although estimated ERs are until December 2024, the payments will be actually received in 2025). These are performance-based payments.

62. **Emission Reduction Performance** (Carbon Benefits). The total ER estimated to be generated and paid for are ten million tCO2eq. If a lower share of ER is produced, the benefits are also reduced. The World Bank has produced guidance on the shadow price/ social value of carbon, recommending low and high ranges from US$40 to 80 per ton of $CO2_e$ in 2020.

63. **Analytical Results and Sensitivity Analysis**. This ex-ante economic analysis demonstrates positive benefit-cost results across a range of sensitivity analyses and assumptions. The positive result is robust to variations in ER performance, discount rates, carbon prices and levels of performance as shown in the figure below. The benefits are much larger than the costs in all scenarios examined. Given the nature of the project, carbon benefits will generate positive results.

64. **The sensitivity analysis showed that for all combinations of discount rates from 5 to 20 percent, the project benefits exceed costs by a substantial margin, even under a low-price path and low performance scenario.** Even for a low ER performance scenario, assuming only 40 percent, benefits remain positive.

65. **Qualitative Benefits**. Beyond these global ER and livelihood benefits, as noted above, a wider range of additional non-carbon benefits are expected, including the provision of ecosystem services contributing directly or indirectly to sustainable development and the human well-being, improvement of soil health, water regulation, watershed management, and biodiversity conservation. Other benefits include those related to governance, such as recognition and strengthening of legal and customary institutions, and users' rights of local communities. This underscores the robustness of the quantitative analysis, considering that any additional unvalued benefits would only add to the positive evaluation of the project.

Table 6: Benefits and costs with varying discount rates. Values in million US$

Scenarios		Discount rates				
		5%	**7.50%**	**10%**	**15%**	**20%**
100% of expected performance	Costs	40	36	33	27	23
	Benefits High C value	734	681	634	553	486
	Benefits Low C value	369	342	318	278	244
	Benefit-Cost ratio low C value	9.15	9.40	9.64	10.13	10.62
	Livelihood benefits	10.06	9.31	8.63	7.50	6.59
40% of expected performance	Costs at 40% performance	16	15	13	11	9
	Benefits High C value	294	273	254	221	195
	Benefits Low C value	148	137	127	111	98
	Benefit-Cost ratio low C value	9	9	10	10	11
	Livelihood benefits	4.02	3.72	3.45	3.00	2.64

B. Fiduciary

(i) Financial Management

66. **The FM assessment conducted in accordance with the Bank Guidance for ERC Projects under IPFs, issued on June 2, 2020, concluded that the proposed interim FM arrangements for this project are adequate for the implementation of this project.** The assessment was conducted on the project implementing agencies, including for the CAS as well as the likely fiduciary teams of BNCCCR within the MEDD and the FAPBM.

67. The advanced draft BSP available at the appraisal stage describes the dedicated payment mechanism for this project and is further described in Annex 7. The use of CAS is deemed appropriate to enable secure disbursement of the carbon benefits. The interim FM arrangement in the implementing agencies was assessed as adequate subject to implementing the mitigating measures noted below.

68. **The overall FM risk is rated Substantial primarily because of the country risks, project design and weaknesses in the implementing agencies.** Specific attributing factors include: (i) PFM weaknesses affecting the financial controls, transparency and accountability, (ii) multiplicity of actors, resulting in a large number of small transactions to communities and entities not very familiar with World Bank FM procedures; and (iii) lack of fiduciary capacity within the MEDD, although there is some existing capacity within the BNCCCR.

69. The following mitigation measures are recommended to reinforce the interim FM arrangements in place and to address the risks : (i) operation manual will be developed and approved by June 2021 which describes the policies and procedures governing the BSP implementation, (ii) one qualified FM specialist will be

recruited to support the existing team in the BNCCCR (as potential fiduciary agent), (iii) one dedicated additional accountant will be recruited to support the team at FAPBM with the additional workload, (iv) robust budgeting, reporting and auditing arrangements will be developed for this project within the operations manual, (v) the General State Inspection (*Inspection Générale d'Etat* or IGE), the Internal Audit Department of the MEF and the internal auditor of the FAPBM (as potential intermediary agency for certain funds) will conduct the internal audit of the project. Additional FM capacity will be built within the MEDD to increase options for future implementation.

70. The advanced payments will be fully shared and disbursed using the interim mechanism and no transfer of funds from the interim to the replacing financial management mechanism will occur. The FM assessment of the replacing financial management mechanism shall be conducted once established.

(ii) Procurement

71. **The World Bank's Procurement Regulations do not apply under the project.** For Carbon Finance operation, the inputs financed by the World Bank are the purchase of emission reduction and there is no scope in the procurement policy for further application to second-tier utilization of these funds. The World Bank will nevertheless continue to support the implementation of the AA-ERP according to the agreed-upon benefit sharing plan and will encourage the Government to conduct regular audits of the utilization of funds.

C. Safeguards

(i) Environmental and Social Safeguards

72. Implementing a REDD+ ER Program has inherent social risks, particularly with regard to land tenure and forest resource rights. The safeguard policy Operational Policy (OP) / Bank Procedures (BP) 4.12 Involuntary Resettlement is triggered. The REDD+ process has been highly inclusive and participatory. A Strategic Environmental and Social Assessment (SESA) and an Environmental and Social Management Framework (ESMF) were prepared for the national REDD+ Strategy and disclosed on 22 March 2020, endorsing a participatory and inclusive approach to identify certain social risks associated with implementing REDD+ Initiatives. An ESMF was prepared for the Emission Reduction Program. Additionally, issues related to land acquisition and/or restrictions of access to natural resources in legally designated parks and protected areas were identified during the development of the safeguard instruments for REDD+ at the national level. A Resettlement Policy Framework (RPF) and a Process Framework (PF) specific to the AA-ERP were submitted to the World Bank for approval and have been approved and disclosed in country and on the World Bank website. To ensure the RPF and PF are designed with adequate input and feedback from communities, an additional round of consultations has been conducted and the instruments have been submitted to the World Bank, approved and disclosed in country and on the external website of the World Bank on March 22, 2020.

73. The REDD+ mechanism requires generating so-called non-carbon benefits targeting environmental and social objectives. In the case of social co-benefits, the AA-ERP should contribute to reducing poverty and unemployment, facilitating increased access to markets, and improving access to health and education services. Strengthened capacity on REDD+ issues, including at the community level, is another of the benefits stemming of the ER-Program. For instance, the AA-ERP will support the creation of Local

Consultative Structures while sustaining capacity building activities regarding diverse REDD+ issues, such as local-scale land-use planning. Moreover, the Local Consultative Structures should ensure gender parity.

74. Madagascar has adopted REDD+ related Principles, Criteria and Indicators (PCI) in synergy with UNFCCC Cancun Safeguards. The PCI sustain the country's Safeguards' Information System (SIS) and involve—among others—the increase and sharing of social and economic benefits, gender mainstreaming, and respect for and promotion of rights and remedies. Madagascar will continue working to (i) strengthen the capacities of AA-ERP stakeholders, including civil society to monitor safeguards, and (ii) test safeguards indicators in the field.

75. Social benefits: Payments from the project will be shared with stakeholders as per an agreed BSP. Principles of the BSP include the prioritization of the flows of funds to improve the livelihoods of local communities and the most vulnerable groups, including youth and women. In addition to the economic benefits expected from the project in poor rural areas, social and economic benefits will accrue to a wide range of beneficiaries.

76. The implementation of the AA-ERP, due to the emphasis on prohibiting forest conversion to agricultural land, is expected to have positive environmental impacts, including habitat and biodiversity conservation, as well as enhanced provision of ecosystem services that in turn fosters a more productive environment (reducing erosion risk, maintaining soil fertility, etc.). The AA-ERP has been developed in line with the National REDD+ Strategy and the Safeguards approach that is being promoted as part of the national legislation in Madagascar through a REDD+ Decree which will be approved by June 2021. Environmental Safeguards policies, triggered for the AA-ERP include: Environmental Assessment (OP/BP OP4.01); Natural Habitats (OP/BP 4.04); Forests (OP/BP 4.36); Pest Management (OP 4.09); Physical Cultural Resources (OP/BP 4.11); OP/BP 4.12 Involuntary Resettlement, and Safety of dams (OP 4.37).

77. To enhance the positive impacts and reduce any risk of negative impacts of the activities that will contribute to generating ER, various safeguards instruments were prepared by the government and will apply to investment projects that will contribute to the generation of ER. They include: a) SESA, an ESMF, a PF and a RPF for the national REDD+ strategy; and b) An ESMF, a PF and a RPF for the AA-ERP. All instruments have been publicly disclosed on the Government's website[25], and on the WB external website on March 22, 2020. The ESMF addresses the risks associated with OP/BP 4.01, OP/BP 4.04, OP/BP 4.36 and OP/BP 4.11. With regard to Pest Management, since activities are not known specifically, the World Bank operation PADAP has produced an integrated pest management plan for activities within the ER program area that has been identified as a reference, as part of the ESMF, as well as the Small Dams Safety Manual.

78. **The scope of the World Bank's supervision will be consistent with the Operations Environmental and Social Review Committee (OESRC) memo[26] and its subsequent supplemental briefing note[27].** The World Bank, as Trustee of the FCPF program, will focus on the performance of agreed safeguards systems for screening, due-diligence, supervision, and technical support for safeguards implementation as defined in the ESMF and ensure that the Program Entity has sufficient capacity and resources to implement the ESMF. Given that the activities under the AA-ERP will be mostly financed and implemented by or under the

[25] ESMF available on *https://bnc-redd.mg/images/documents/rapports/20190517/CGES_REDD_MEDD_Madagascar.pdf* and SESA available on *https://bnc-redd.mg/images/documents/rapports/20190517/EESS_REDD_MEDD-Madagascar.pdf*

[26] OESRC Memo on Forest Carbon Partnership Facility (FCPF): Managing Safeguards in the FCPF Emission Reduction Phase issued on November 14, 2017

[27] Supplemental Briefing Note to the OESRC: Managing Environmental and Social Risks for the FCPF Emission Reductions Programs issued on April 22, 2019

supervision of entities other than the World Bank, including government agencies, bilateral donors and private sector actors, the World Bank as Trustee will be responsible for:

a. Prior to appraisal, ensuring that the ESMF addresses potential environmental and social impacts of activities under the boundaries of the government's AA-ERP and that the Program Entity has the capacity and resources sufficient to implement the ESMF. This institutional capacity assessment has been done and a safeguards capacity action plan has been proposed as part of the ESMF to address capacity gaps;

b. During implementation, the World Bank's role is to take steps to demonstrate that the implementation of Safeguards measures continues to function effectively at the system level. This includes confirming that: budgets and staffing are adequate to support the implementation of the Safeguards measures, the Program Entity can demonstrate credibly that environmental and social assessments and management plans are prepared in accordance with the safeguards frameworks, mechanisms for self-reporting and Third Party monitoring are in place and functional, grievance redress and dispute resolution mechanisms are established and functional, and the implementing entities have demonstrated the ability to solve issues of non-compliance. It is important to note that the World Bank is responsible for ensuring that the instruments were developed but their implementation remains the responsibility of the client. It is expected that this process will not be affected by COVID-19.

79. Consistent with the supplemental briefing note to the OESRC (dated 22 April 2019), the AA-ERP will be required to undertake independent third-party monitoring to be financed by the FCPF. This will be appointed at the time a Monitoring Report is presented to the FCPF for verification. The third-party monitoring would be separate from verification of ER generated from the ER Program, and the World Bank, acting as Trustee, will review the information from third-party monitoring, along with the self-reporting and verification report (verifying the volume of ER generated) to determine whether or not to make payments under the ERPA in whole or in part to the Program Entity. The arrangements and timeline for third-party monitoring are currently under development by the Trustee of the CF.

(ii) Implementing Agency's Institutional Capacity for Implementing Safeguard Policies

80. The Ministry of Environment and Sustainable Development (MEDD) is the anchor ministry for the implementation of the AA-ERP. Oversight and coordination at the national level is ensured by BNCCCR. More specifically its REDD+ Strategy development department has a safeguards unit, in charge of ensuring safeguards measures implementation compliance. BNCCCR has experience in implementing the World Bank (FCPF)-funded REDD+ readiness grant, as well as good knowledge about the WB safeguards policies. However, its experience consists mainly in developing safeguards instruments rather than ensuring the implementation of measures actually complies with the policies. This capacity is being strengthened through the hiring of dedicated Environmental and Social Safeguards staff and capacity building and training will continue. Specific training will also continue for monitoring at the regional level now that the Environmental and Social Safeguards expert is hired. There is a robust national framework in place for Environmental Assessments nationally and a history of applying World Bank safeguards across multiple sectors.

81. Although the funding for implementing the safeguards measures should not be a major issue for the AA-ERP[28], currently, the MEDD and BNCCCR have limited human resources to ensure proper safeguards measures implementation to be compliant with the policies. Currently, the BNCCCR team has two people dedicated to safeguards. On the ground, the regional REDD+ coordination units will use the existing teams (who are increasingly familiar with World Bank safeguards policies) to cover the REDD+ safeguards-related day to day tasks. It is expected that this will not be affected by COVID-19.

82. Capacity building can be undertaken within the same sector or across sectors: (i) the BNCCCR team has submitted the AA-ERP-related safeguards instruments (ESMF, RPF, PF); and a REDD+ safeguards implementation guidebook will be developed by the national team and will be used to build safeguards basic skills for the regional teams, along with regular trainings planned to be provided by the national team; (ii) Some of the projects contributing to the emissions reduction in the AA-ERP are also financed by the World Bank (e.g. the PADAP), anchored in the Ministry of Agriculture, with an extensive experience in implementing World Bank-financed projects, including safeguards. Experience-sharing and exchanges between BNCCCR and the E&S specialists of such project would also mutually build both team's capacity. Each REDD+ Initiative will be evaluated for compliance with WB safeguards policies before any benefits can be received. As there are many PAs within the AA-ERP area, each one will be audited to assess whether their establishment was consistent with World Bank policies and evaluate any gaps.

83. **External support will be provided.** The World Bank will provide trainings to build institutional capacity both at the national and the local level to improve both the awareness of safeguards policies and how to implement and monitor mitigation and inclusion measures for the projects that contribute to generating emission reductions in the AA-ERP area.

84. **Feedback and Grievance Redress Mechanism**. A feedback and grievance redress mechanism (FGRM) was designed for REDD+ based on analyses and stakeholder consultations in several steps including: (i) a review of potential conflicts and complaints under the implementation of REDD+ in Madagascar (PA, MECIE, forest resource governance, etc.) and interviews with stakeholders at the national level; (ii) national workshops; (iii) surveys at the regional, commune and village levels to identify potential conflicts and complaints and evaluate current capacity of resolution; and (iv) a review and synthesis of all the information to categorize and prioritize the types of complaints and conflicts, to develop an adequate and operational FGRM with a pragmatic guide for local use. The REDD+ FGRM has been defined and integrates traditional systems and modern systems as well as the local rules, *dinas*, related to natural resource management transfers. A manual is being prepared by BNCCCR for the Borrower which describe the operationalization of the FGRM and training and capacity building measures are being launched to support the operationalization with REDD+ readiness funding (FCPF Readiness Fund Grant project, 124655). A draft has been shared with the World Bank and a final version is expected by March 2021.

(iii) Grievance Redress Mechanisms

85. Communities and individuals who believe that they are adversely affected by a World Bank supported project may submit complaints to existing project-level grievance redress mechanisms or the World Bank's Grievance Redress Service (GRS). The GRS ensures that complaints received are promptly reviewed in order to address project-related concerns. Project-affected communities and individuals may submit their complaint to the World Bank's independent Inspection Panel which determines whether harm occurred, or

[28] Costs for implementing the safeguards measures will be borne by the proponents (see paragraph 24 under the Project description section) of the REDD+ activities as part of their investment.

could occur, as a result of World Bank non-compliance with its policies and procedures. Complaints may be submitted at any time after concerns have been brought directly to the World Bank's attention, and World Bank Management has been given an opportunity to respond. For information on how to submit complaints to the World Bank's corporate GRS, please visit *http://www.worldbank.org/*GRS. For information on how to submit complaints to the World Bank Inspection Panel, please visit *www.inspectionpanel.org*.

V. KEY RISKS

86. **The overall risk rating for the project is substantial.** Generating ER is subject to external factors such as migration, extreme climate events such as floods, droughts, and increase of population in the AA-ERP area. Additionally, pressures on forests are exerted by local communities that resort to slash and burn agriculture due to limited recourse and to meet local livelihood needs. Covid-19 has demonstrated that in light of restrictions on the economy that sustainable management of natural resources is even more important as they become a measure of security to ensure basic livelihoods. The ER program depends on investment projects financed by the World Bank and other partners to generate ER and will provide a positive feedback loop through sustainable financing. The key risks and proposed mitigation measures are outlined below.

87. **Political and Governance risks are rated substantial.** Powerful local interests benefit from the status quo in natural resources management. This includes harmful practices such as over-harvesting in forest landscapes, harvesting of illegal timber, limited information flow and dissemination of knowledge, and potentially excessive decentralization of decisions over natural resources. These circumstances may generate conflict which would hinder the governance of forests and the effective implementation of mitigation measures conducive to generating ER. Under the operation, the World Bank has proposed a broad suite of improvements in policy and practice as part of the mitigation strategy, including significant resources allocated for the provision of technical assistance, policy advice and strategic communication. Nevertheless, the instability of the governance structure of natural resources remains a residual risk. High turn-over with frequent changes in ministries reduces the ability to effectively exert governance over natural resources and may affect AA-ERP investments required for the effective and timely achievement of the Project Development Objective. The adhesion to an agreed upon BSP that is conditional to each consecutive payment partially mitigates this risk. The stability of the governance structure and the political economy dynamics will be monitored closely but are beyond the control of the project. Therefore, this risk is currently rated as Substantial.

88. **Technical design of project risk is rated substantial.** The technical design of the AA-ERP is based on a detailed analysis of drivers of deforestation and forest degradation and an assessment of the best interventions to address these drivers. A significant number of these interventions have secured finance which would ensure the generation of ER and enhanced removals, yet there are external factors that could negate this, such as migration from areas out of the ER program area, extreme climatic events, or leakage (displacing negative impacts from one area to another) amongst projects. Apart from these external risks, it is important to note that this is the first time that this scale of interventions and inter-sectorial coordination is being done, making it a complex operation. To mitigate the risks the project team is monitoring forests surrounding the AA-ERP program area to ensure that there is no leakage. Additionally, the program will work with initiatives that have a track record and are well established within the surrounding communities and further each initiative will be expected to conform with standards established in the national REDD+ strategy, including environmental and social standards.

89. **Institutional Capacity for Implementation and Sustainability Risk are rated substantial**. BNCCCR, the entity in charge of the AA-ERP implementation, is highly competent, but ongoing support will be needed to fully operationalize the regional and local coordination of the program. Resources from the additional funding of the FCPF readiness fund (P124655) are being used to build capacity among BNCCCR, the regional coordination offices, and the other institutions responsible for REDD+ delivery. A large part of the forests in the AA-ERP are within a PA or an investment project which have their own local management institutions and entities which will provide support to the AA-ERP at the beginning, taking care of important management, implementation, and monitoring functions.

90. **The overall FM risk is rated Substantial primarily because of the country risks, project design and weaknesses in the implementing agencies.** Specific attributing factors include: (i) PFM weaknesses affecting the financial controls,

transparency and accountability, (ii) multiplicity of actors, resulting in a large number of small transactions to communities and entities not very familiar with World Bank FM procedures; and (iii) lack of fiduciary capacity within the BNCCCR. The World Bank will continue to build capacity of the BNCCCR and other authorities with respect to World Bank procedures and have secured resources through the REDD+ readiness project and PADAP.

91. **Stakeholders risk is rated substantial**. Consultations with many stakeholders have taken place at various levels during the preparation and implementation of investment projects financed by the World Bank and others, and during the preparation of the National REDD+ Strategy. Substantial risks are related to the management of expectations regarding benefits from the ER payments and of partners delivering on the investments. To mitigate this risk, the government has communicated the potential benefits, procedures and obligation in order to benefit from the program. For each evolution of the BSP the changes and considerations taken into account were communicated to all stakeholders that participated and will also be the case with the final version of the BSP (expected to occur prior to June 2021). Further it will continue to be communicated that any ER payments will be based on documented performance taking into account associated delivery risks to avoid raising high and unrealistic expectations, as well as providing appropriate arrangements for partners to participate in and benefit from the ER program.

VI. RESULTS FRAMEWORK AND MONITORING

Results Framework
COUNTRY: Madagascar
Atiala-Atsinanana Emission Reductions Program

Project Development Objectives(s)

The objective of the Program is to make payments to the Program Entity for measured, reported and verified Emission Reductions (ER payments) related to reduced deforestation, forest degradation and the enhancement of forest carbon stocks (REDD+) at the national level in Madagascar, and distribution of ER payments in accordance with agreed Benefit Sharing Plan.

Project Development Objective Indicators

Indicator Name	PBC	Baseline	End Target
Make payments for verified ER and distribute in accordance with the agreed Benefit Sharing Plan			
Volume of ER (in tons) that have been measured and reported by the Program Entity, verified by a Third Party, and transferred to the FCPF Carbon Fund (tCO_2e) (Number)		0.00	10,000,000.00
Amount of payments by the FCPF Carbon Fund for CO_2 Emission Reductions generated by the Program (Amount(USD))		0.00	50,000,000.00
Emission Reductions payments distributed in accordance with agreed-upon Benefit Sharing Plan (Yes/No)		No	Yes

Intermediate Results Indicators by Components

Indicator Name	PBC	Baseline	End Target

Monitoring & Evaluation Plan: PDO Indicators					
Indicator Name	**Definition/Description**	**Frequency**	**Datasource**	**Methodology for Data Collection**	**Responsibility for Data Collection**
Volume of ER (in tons) that have been measured and reported by the Program Entity, verified by a Third Party, and transferred to the FCPF Carbon Fund (tCO_2e)	This will be measured by the MRV team in BNCCCR following the monitoring plan described in the ER-PD.	Reporting periods end 31 December 2020 (868,093 expected ERs); 31 December 2022: (4,194,889 expected ERs); and 31 December 2024 (4,937,017 expected ERs)	MRV as described in the ERPD	As described in the ERPD	BNCCCREDD+/MEDD

Amount of payments by the FCPF Carbon Fund for CO2 Emission Reductions generated by the Program	This will be estimated by BNCCCR based on the payments received by the REDD+ fund.	Annually, in accordance with ERPA terms			
Emission Reductions payments distributed in accordance with agreed-upon Benefit Sharing Plan	This will be estimated by BNCCCR through the monitoring of implementation of the BSP.	Annually, based on ERPA terms.	BNCCCREDD+ /MEDD responsible for reporting on the implementation of the BSP.	Annual Report.	

Monitoring & Evaluation Plan: Intermediate Results Indicators

Indicator Name	Definition/Description	Frequency	Datasource	Methodology for Data Collection	Responsibility for Data Collection

ANNEX 1: Implementation Arrangements and Support Plan

COUNTRY: Madagascar
Atiala-Atsinanana Emission Reductions Program

National level supervision

1. The Government of Madagascar will be the signatory of the ERPA. It is the counterpart to the Trustee of the FCPF and is legally responsible for the program's success. The Ministry of Economy and Finance and the Ministry of Environment and Sustainable Development (MEDD) will sign the ERPA with the Carbon Fund.

2. The MEDD is responsible for the REDD+ process, the focal point in relation to the UNFCCC, and has oversight over BNCCCR. It is responsible for ecology and the protection and conservation of nature, wildlife, and sustainable development.

3. An Inter-ministerial Committee for the Environment (CIME) is in charge of providing political and strategic guidance and will have oversight over the implementation of the AA-ERP and the AA-ERP management.

4. BNCCCR is responsible for coordination of all of the sectors involved in REDD+ and of the implementation of the REDD+ mechanism.

5. In this regard, BNCCCR will have responsibility for the day-to-day management of the AA-ERP.

6. The BNCCCR will constitute the principal agency responsible for the coordination of activities generating ERs under the program framework, and it will be responsible for the national verification of the carbon monitoring and safeguards reporting. It will be responsible for:

    a. Ensuring consistency of the current and planned initiatives/projects in the AA-ERP area and their alignment with the objectives of the AA-ERP.

    b. Checking the ER monitoring reports and the monitoring of the Benefit Sharing Plan.

    c. Ensuring implementation of the Environmental and Social Management Framework and GRM.

    d. Managing information about projects and programs through the SIIP, in particular information related to the generation and certification of ERs.

    e. Informing the MEED, the MEF, the National REDD+ Platform, the UNFCCC, the FCPF, and the international and local partners, in particular the private sector and local communities, on the progress of the AA-ERP.

7. The National REDD+ Platform will ensure that the REDD+ activities proposed in the Utilization Plans of the REDD+ Initiatives are in line with the REDD+ Strategy and will take a decision on the approval of extension of REDD+ activities through existing or new Initiatives.

Regional level supervision

8. At the regional level, operation and management of the AA-ERP is ensured by three entities: a) REDD+ regional coordination offices that are embedded in Regional Environment and Sustainable Development offices (DREDD); b) the regional REDD+ Coordination platform and SLCs; and b) REDD+ activity promoters.

9. The REDD+ regional coordination offices are in charge of the supervision of REDD+ Initiatives at regional level

and supporting SLC to prepare the Utilization Plans of REDD+ Initiatives.

10. The regional platforms will ensure that the REDD+ activities proposed in the Utilization Plans of the REDD+ Initiatives are in line with the REDD+ Strategy and will take a decision on the approval of extension of REDD+ activities through existing or new Initiatives. The SLC are a fundamental part of the current governance structure at a local level and provide a key role for authorities which have been excluded from formal management in many previous conservation projects
11. The REDD+ activity promoters are in charge of implementing and managing REDD+ Initiatives, these may be, among others: forest managers (i.e. community forest manager or protected area manager), rural households, farmers' associations or groups of small producers and processors (i.e. charcoal producers, hunters, animal and agriculture farmers, private sector actors, NGOs, civil society organizations, etc.). The private sector actors include those within sustainable agriculture value chains such as vanilla, cocoa, cloves, coffee, and others for further development as potential sustainable supply chain priorities, as well as energy and forestry sectors
12. Decentralized bodies. The prefectures and regional councils constitute the deconcentrated and decentralized structures. As government delegates, the regional prefecture represents each of the ministries as well as the national interests and oversees the application of laws and regulations. Within the context of delivery of the program, it monitors compliance with the policies relating to the implementation of REDD+ activities and it plays an essential role in supervising the complaints and appeals mechanism open to recipients. The regional councils are tasked with steering regional development within this context; they play an essential role in local territorial planning and the implementation of REDD+ activities. At the municipal level, they interact with city councils that are also key players in local development.
13. To oversee the ERP at the regional level, BNCCCR will organize biannual meetings in the AA-ERP area with the Regional REDD+ Platforms to which representatives from REDD+ activity promoters and SLC will be invited.

AA-ERP Monitoring and Evaluation

14. The ERP monitoring and evaluation activities will be carried out by the BNCCCR's MRV unit and the BNCCCR's monitoring and evaluation unit. This will be done in collaboration with the Regional coordination units and the REDD+ Activity Promoters.
15. At the beginning of the year—based on ongoing projects, programs, and initiatives—a global planning meeting will be organized to consolidate action plans and ensure better monitoring of their implementation. Data collection and quality control missions will be carried out by the SEP-REDD+ for each of the projects, programs, and initiatives. Quarterly review meetings will be organized to present the different status of ongoing projects, programs and initiatives.
16. BNCCCR will be responsible for the following in the AA-ERP area:
    a. Coordination of the National Forest Monitoring System and the MRV system;
    b. Establishment and support of the functioning of the FGRM;
    c. Support for the implementation and supervision of safeguards;
    d. Management of the SIIP;
    e. Organization of the meetings of the governance system;
    f. Support in the preparation and evaluation of the Utilization Plans;

g. Monitoring and evaluation of the program.

17. A detailed implementation Plan is under preparation and will be validated at the National level and approved by the World Bank prior to ERPA effectiveness.

World Bank implementation support

18. The FCPF has been supporting Madagascar in REDD+ efforts since 2014 through the FCPF Readiness Fund Grant project (124655), as well as a US$650,000 World Bank-Executed grant specifically for the preparation of this Project.

19. The implementation support strategy for the ER Program builds on the support provided during the Readiness process, focusing on the functions and activities typically monitored by World Bank during implementation support visits, including monitoring of technical activities, management arrangements, FM, and compliance with safeguards operational policies, including stakeholder commitment. Supervision will also focus on the methodological aspects of carbon accounting to ensure that the Project complies with the Carbon Fund Methodological Framework. The World Bank task team will include technical specialists with expertise in a range of areas from within the institution and external consultants as needed. World Bank safeguards specialists, both staff and Short-Term Consultant (STC) backups, are currently supporting the Government of Madagascar on all matters related to the ER Program and will be available to provide close support and detailed, hands-on guidance to their counterparts during the initial months following approval. Technical specialists with highly technical expertise may be recruited externally as necessary as it has been done so in the past, for instance for carbon accounting and MRV tasks, and for private sector engagement. Aspects of FM will be focused primarily on the benefit sharing arrangements given the nature of the Project (i.e., a standalone Carbon Finance transaction).

20. Field visits will focus on compliance with safeguards operational policies and assessment of benefit sharing plan implementation and efficiency. The Implementation Support Plan will be revisited regularly, considering implementation progress and continuous risk assessment. The task team, in particular the carbon accounting experts, will support the verification events set for years 1, 3 and 5, and for the interim reporting set for years 2 and 4. Regular meetings with the Project team will be held between missions in the first year, monthly or bimonthly as required by topic, to ensure timely progress on the implementation of the ER Program. These meetings will review agreed actions for the Project. Technical and safeguards monitoring will also be done during these meetings.

Implementation Support Plan

21. The FCPF will provide an allocation for World Bank's implementation support (amount to be determined by the FMT of the FCPF) during the duration of the ERPA period (five years) as a World Bank Executed grant. The main focal areas of expected implementation support activities are summarized in Table A.1.1. Implementation support is expected to be particularly intense during the first 12 months of implementation. Implementation support missions will be reduced to two support missions per year after the first year, although support provided remotely by the task team will remain for the five-year ERPA term.

Table A.1.1 Main focal areas of implementation support activities

Time	*Focus*	*Skills Needed*	*Resource Estimate*
First twelve months	• Benefit Sharing Plan consolidation • Program implementation Plan • Operations Manual • REDD+ Decree approval • Institutional arrangements • Revision of the RL • Private sector involvement (e.g. Vanilla)	• Project planning and management (TTL) • FM specialist • Safeguards (Safeguard Specialists) • Legal aspects (LEGEN lawyers) • Carbon finance (TTL + FMT) • MRV (carbon accounting FMT or STC specialists)	• 3-4 implementation support and/or technical missions • Remote support from HQ office
12-48 months	• Program Implementation Plan • Carbon accounting • Monitoring and Reporting	• Project planning and management • MRV • Safeguards • Carbon finance	• 2 implementation support and/or technical missions • Remote support from HQ office
Years 4-onwards	• Program Implementation Plan • Monitoring and Reporting	• Project planning and management • MRV • Safeguards • Carbon finance	• 2 implementation support and/or technical missions • Remote support from HQ office

ANNEX 2: Description of Existing REDD+ initiatives in the AA-ERP AREA

COUNTRY: Madagascar
Atiala Atsinanana Emission Reductions Program

Sustainable Landscape Management project (PADAP P154698/P157909) (2017-2022) **–** Funded by the Word Bank and Initiative contributing to Emission Reductions.

1. The US$107 million PADAP has been approved by development partners (the World Bank, the French Agency for Development and the Global Environment Facility) in March 2017, and entered effectiveness in October 2017. The project is managed and implemented by the Government of Madagascar through its ministries in charge of Agriculture, Environment and Water. It is based on a programmatic, integrated landscape management approach that aims to improve agricultural production while preserving the necessary ecosystem services to foster a productive environment to support these activities.

2. The activities include (i) investment (economic value chains development, more efficient agricultural practices, agroforestry, anti-erosive measures, green infrastructures, forest landscape restoration, sustainable timber and non-timber forest products management, protected areas management, rehabilitation of irrigation infrastructures, etc.) and (ii) planning, focusing on the development of sustainable landscape management plans for each of the landscapes; which, in turn, will inform the landscape management approach at the national level for consistent, sustainable development. Another important aspect of the project is the strong emphasis on the roles of the decentralized and deconcentrated authorities: the institutional arrangement for implementing the project involves both the CTDs and the STDs, which work hand in hand to ensure that landscape management plans developed by the project are consistent with the local development vision/strategy.

3. Four of the five landscapes of the project are included in the AA-ERP area, and the project development has been carried out in close collaboration with that of the ER-P. Paramount to the approach of the AA-ERP is the collaboration between sectoral ministries at the central level, as well as at the decentralized/local level to develop a robust approach that emphasizes local development and sustainable management of natural resources.

Ankeniheny-Zahamena Corridor (CAZ) Protected Area – Funded by many donors, in part by the GCF, and Initiative contributing to Emission Reductions during the ERPA term (2020-2024)

4. The Ankeniheny-Zahamena Corridor (CAZ), started in 2007, has long been regarded as one of Madagascar's top conservation priorities and numerous studies have catalogued its rich biodiversity. To reduce deforestation in CAZ, the Government of Madagascar and Conservation International developed a partnership for Protected Area management, to provide direct incentives and alternative livelihood activities for communities living around the forest corridor. The CAZ Protected Area covers 370,032 hectares of Madagascar's eastern humid rainforest and provides important ecosystem services to both the surrounding area and the greater region.

5. Through the creation and management of the CAZ protected area, the government and CI aim to reinforce the long-term management of the protected area and to expand economic opportunities for local communities. The PA at CAZ has been developed based on a pioneering model for Madagascar that involves

strong collaborative management (co-management) with local communities.

Makira Protected Area – Funded by many different donors and initiatives contributing to Emission Reductions during the ERPA term (2020-2024)

6. The Wildlife Conservation Society (WCS) is the delegated manager for the IUCN Category II Makira Natural Park, which covers over 372,000 ha and which is surrounded by a 'green belt' or buffer zone of an additional 350,000ha, and was formally established in 2012.

7. Working with local communities is the hallmark of WCS' approach to management of the area, and WCS carries out a range of control and surveillance and ecological restoration activities to reduce deforestation in the protected area. The project supports 120 villages in a range of community development actions including natural resources governance through community based natural resource management, improved subsistence livelihoods (rice and small-scale livestock), conservation enterprises (cloves, cacao and raffia), and health and education. 48,000 people live in the green belt around the PA. With the support of WCS they are organised into community associations that each have a management transfer contract with the designated administrator for a specific area of community forest in the green belt. These COBAs simultaneously represent the main threat and the solution to deforestation in Makira and as such are the entry point for all WCS's livelihoods work. By working with WCS, they receive 50 percent of net carbon revenues generated by the protected area. Funding is constantly being sought to maintain the Park.

Madagascar National Parks (MNP) Protected Area – Funded by many different donors and initiative contributing to Emission Reductions during the ERPA term (2020-2024)

8. Madagascar National Parks, an association under private law established in 1990, is mandated by the Malagasy government to manage a national network of 43 PAs with a cumulative area of 2.8 million hectares (comprising one-third of all PAs of the country, and almost 5 percent of the national territory). Moreover, the park network managed by MNP represents all the ecoregions of Madagascar. The objective of MNP is to conserve and sustainably manage the national parks and reserves of Madagascar. These Protected Areas will: (i) leverage climate change mitigation and adaptation through economic incentives for conservation among local populations; (ii) attract investment (donors, private, technical assistance-NGOs) for sustainable development in the region of implementation and; (iii) ensure sustainable management by strengthening professionalization at all levels of management. MNP is funded by a number of donors as well as through entry fees on an ongoing basis.

9. Specifically, within the ER-P area, MNP manages 11 protected areas belong to the ecoregions of the East, the Center and the High Mountains of Madagascar (513,712 ha) that are included in the ER-P area.

Complexe d'Aires Protégées Ambohimirahavavy Marivorahona **–** Funded by many different donors and initiative contributing to Emission Reductions during the ERPA term (2020-2024)

10. The CAPAM area is composed of several protected areas all with the same objective: protecting the environment and landscape while contributing to sustainable development. Within the ER-P, part of the CAPAM is managed by MNP, and another part is managed by WWF under *the Programme Holistique de Conservation des Forêts* (Holistic Program for the Conservation of Forests). Funded entirely by Air France, the

first phase of Holistic Conservation Program for Forests began in October 2008 and was completed in December 2012. A second phase lasted through 2017. The first pilot phase included 5 intervention sites (515,000 ha) of humid and spiny forests; currently HCPF sites will comprise 300,000 hectares within the ER-P area in the COMATSA site. The protected area currently benefits from limited funding raised by WWF.

NAMA Support Project (NSP) – It is under preparation and will contribute to Emission Reductions during part of the ERPA term (2022-2024).

11. As of August 30, 2019 the NAMA Facility Board granted the approval of the REDD+ NAMA Support Projects (NSP) of Madagascar to finance the Detailed Preparation Phase (DPP) as part of the 6th Call of submission with a timeframe of six months. The final proposal will be submitted in October 2021 and if accepted will be implemented for a duration of five years (from 2021 to 2026).

12. The REDD+ NAMA Support Projects (NSP) of Madagascar will take place in the Northern Highland Part of the island, covering the Region of SAVA and SOFIA. The delimited intervention area has one of the largest remaining blocks of intact humid forest in Madagascar. These two Regions are highly dynamic in production of food (Rice) and cash crops (Vanilla, Coffee, Cocoa) generating nearing Billion Euros of financial flow annually. However, the deforestation rate increase from 0.35% to 1.22% during the last 15 years, due to poor practices such as slash-and burn agriculture leading to deforestation. As a consequence, natural resources are being severely impacted, including putting into risk some forest blocks that constitute key reserves to mitigate GHG emissions to disappear completely within the next five-ten years.

13. Challenges in the NSP intervention area include deforestation triggered by vanilla, rice and other cash crop production. The recurrent rising prices for vanilla in the international market trigger farmers to clear and establish vanilla in new forestlands, leaving only 30 percent of forests as shade trees for vanilla growth. Farmers will also convert forests mainly through the "tavy" or slash and burn practices for rice and other food crop production. Due to the unsustainable practices and lack of farming inputs, food crop growth will rapidly decline due to land and soil degradation, forcing farmers to clear new forestland in search of more fertile soils.

14. This NSP will address these issues in alignment with the NDC of the Government of Madagascar, which proposes major mitigation actions within the agriculture and Land Use, Land Use Change and Forestry sectors. Madagascar's NDC highlights the critical role that REDD+, sustainable forest management, and sustainable agriculture will play in the effort to achieve the country's national objectives of reducing GHG emissions by 14 percent and increasing GHG absorption by 32 percent by 2030. The commitment to reforestation and curbing deforestation was reaffirmed by the President of Madagascar at the One Planet Summit in March 2019.

15. The central objective of this NSP is to reduce deforestation, enhancing carbon sequestration but also to contribute to improve community's livelihoods. It ambitions to catalyze several transformational changes mainly on the reverse of deforestation trends, building sustainable development model linking low carbon practices, market access, forest conservation and private sector at scale, leverage private sector funding to support forest management and reforestation and shift from unsustainable agricultural practice to sustainable one.

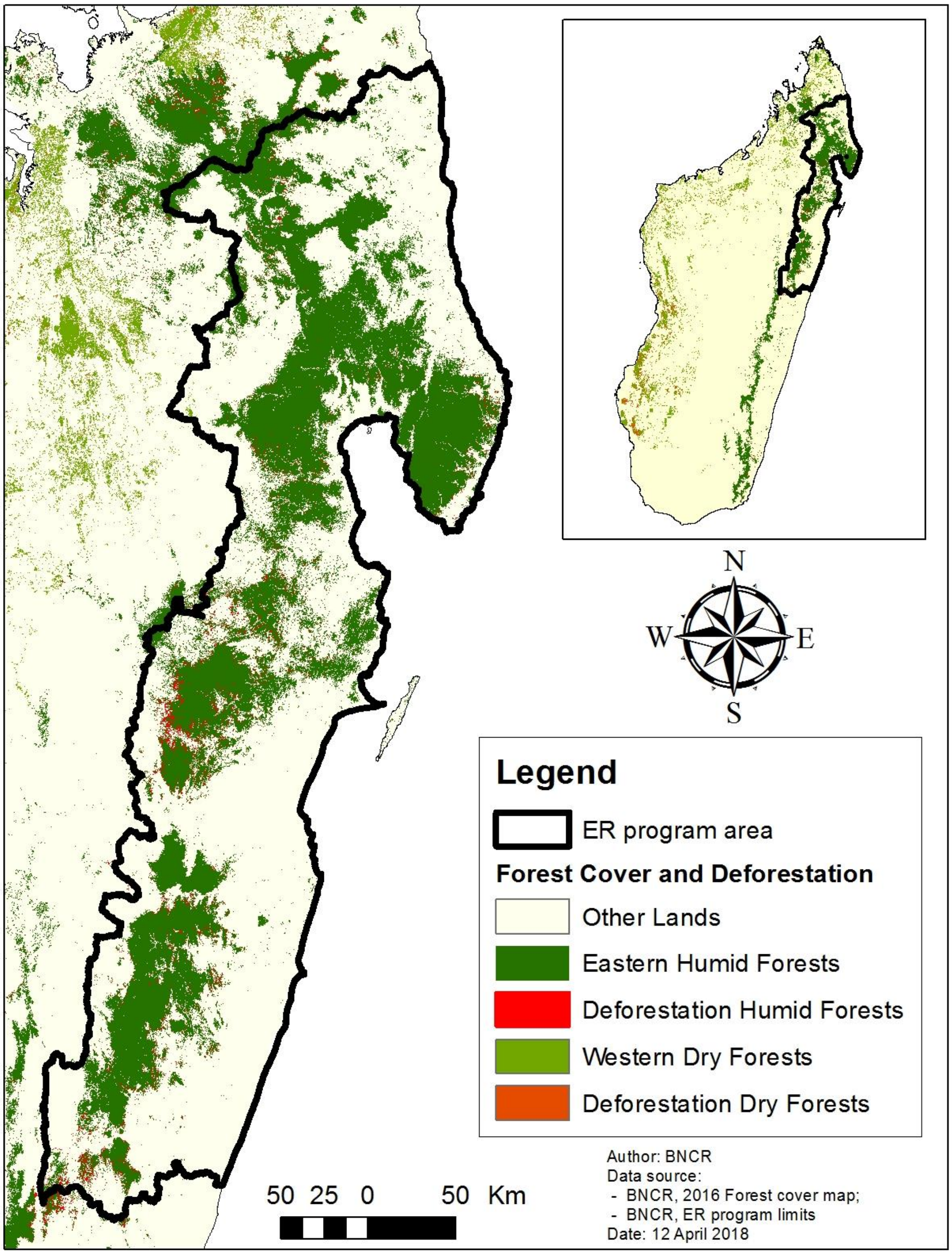
16. Six financial mechanisms will be used for the implementation of this NSP: Direct Grants, Performance Based

Grant, Subscribe part of the NSP Funding to the FAPBM, Capital Assets, Revolving Fund mechanism, Loan program through Micro-Finance Institution, purchasing Good and Service contract.

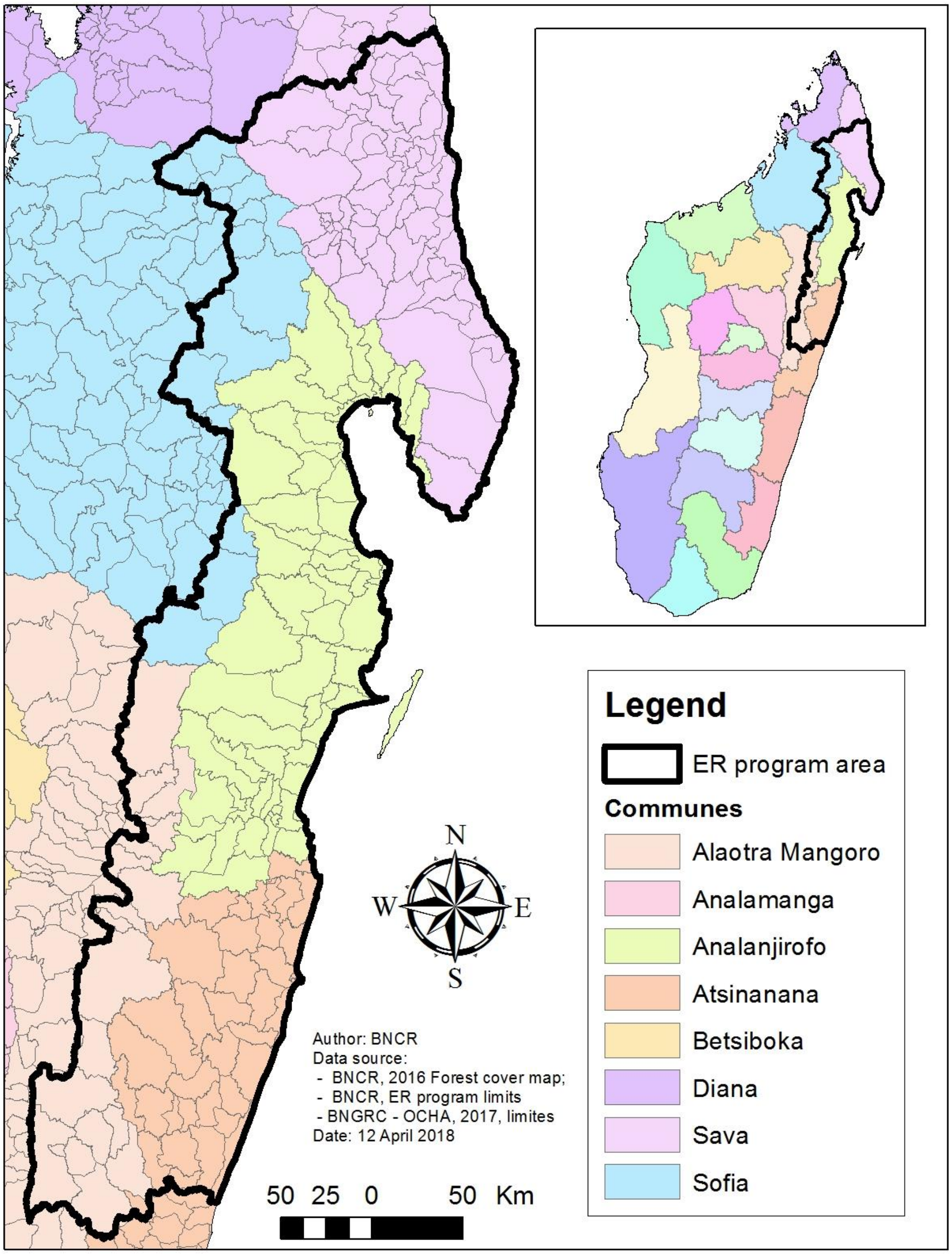
17. In terms of mitigation potential, this NSP ambitions to generate 2.5MtCO_2eq within five years. EUR 20 Million Euros contribution has been requested from NAMA Facility for its implementation of which 63 percent for Financial Component and 37 percent Technical Component. This NSP will leverage EUR 25 million of Public, Private and Other Donor funding to support its implementation and ensure sustainable funding to maintain the NPS assets beyond its completion. Several co-benefits will be generated at through farmers increased revenue, private companies' sustainable business, better provision of ecosystem service impacting larger range of people living within the intervention area of the NSP.

ANNEX 3: Maps of the Atiala-Atsinanana ER Program Area

COUNTRY: Madagascar
Atiala Atsinanana Emission Reductions Program



Location of Accounting area with regard to Communes and regions



ANNEX 4: Benefit Sharing Plan (Summary)

COUNTRY: Madagascar
Atiala Atsinanana Emission Reductions Program

Below is a summary of the Benefit Sharing Plan for the AA-ERP, the full document will be finalized and is expected to be approved by June 2021, and before the deadline for effectiveness set for February 2022, and has been prepared as a separate, standalone, document.

1. The Benefit Sharing Plan clarifies how generated carbon benefits will be distributed among the beneficiaries enabling the AA-ERP to achieve its objectives. This document describes the benefit sharing mechanism including: a) types of benefits and beneficiaries; b) criteria: conditions, percentages and calculations for sharing of benefits; c) process: planning of activities and the decision rules for sharing of benefits. The document does not provide further detail on specific amounts allocated to each REDD+ Initiative and how these will be distributed among REDD+ activities and final beneficiaries. These details will rather be stated in a Utilization Plan to be developed upon confirmation of the carbon performance by the AA-ERP and the respective REDD+ Initiatives.

2. **The REDD+ Decree[29] sets the legal basis of the benefit sharing mechanism**. The Decree defines the national REDD+ framework through the following section titles:
    a. Carbon rights including title to ER and the right of carbon benefits (Title 1);
    b. The governance mechanism (Title 2);
    c. Management and monitoring of Initiatives and Programs (Title 3);
    d. The benefit sharing mechanism (Title 4);
    e. Selling and transacting ER (Title 5);
    f. Financial management of carbon benefits and other finance related to REDD+ (Title 6);
    g. Remedies and resolution of disputes (Title 7);
    h. Transitional and final provisions (Title 8).

3. According to the draft REDD+ Decree, Carbon benefits are considered as “public resources” in Madagascar and as such they are subject to the specific provisions of applicable Malagasy law.

4. **Principles and basis of the benefit sharing mechanism**, the BSP outlines the following principles as the basis for sharing benefits:
    a. **Fairness**: coherence of the allocation of carbon benefits with the carbon and non-carbon performance identified in the REDD + Initiatives and Programs Information System (referred to by its acronym in French as SIIP)[30];
    b. **Inclusiveness and participation**: the inclusion of all potential beneficiaries in the BSP;
    c. **Evolution**: the updating of the BSP according to the relevance of the results of its implementation;
    d. **Transparency**: the publication of the BSP and the carbon benefits utilization plan once validated.

[29] Version submitted to the Minister of the MEDD. Anticipated approval by June 2021 and in any case prior to the deadline for effectiveness set for February 2022, although subject to national procedures.
[30] *http://siip.bnc-redd.mg/#/*

5. The carbon benefits shared must contribute to REDD+ activities that are additional, meaning: Benefits cannot replace existing sources of finance used by the REDD+ Initiative, which will be assessed by BNCCCR at the time of evaluating the Utilization Plans; Benefits must support the sustainability of existing REDD+ activities initiated with non-REDD+ finance so as to ensure that existing REDD+ activities do not cease due to lack of finance.

6. **The AA-ERP and Initiatives.** The carbon performance of the AA-ERP is measured for the totality of the REDD+ Initiatives and the areas without REDD+ Initiatives. In case there is no carbon performance at the level of the AA-ERP, the ensemble of REDD+ Initiatives will not receive carbon benefits, even if some REDD+ Initiatives demonstrate carbon performance.

7. The areas without REDD+ Initiatives are municipalities covered partially by forests that are not part of or do not overlap with a REDD+ Initiative. The risks of non-performance of these areas could affect the overall performance of the AA-ERP. It is expected that carbon benefits will be used to extend REDD+ activities, within REDD+ Initiatives, new or existing, with the aim to address drivers of deforestation and forest degradation.

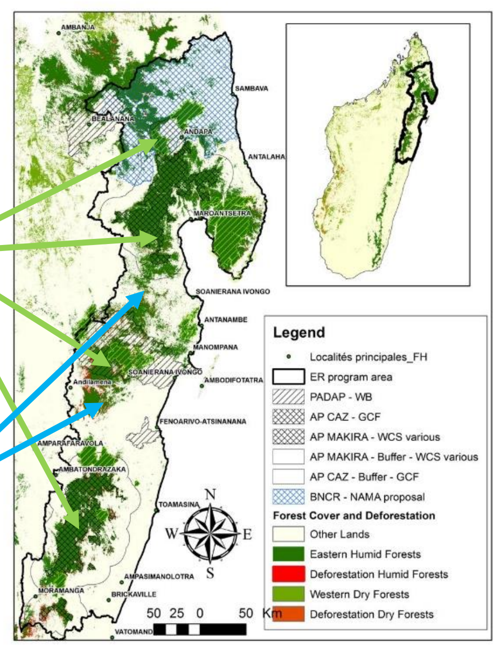
8. The Emission Reductions generated by all Programs and Initiatives in Madagascar are owned and managed by the Government of Madagascar. Only the Government of Madagascar can commercialize Emission Reductions directly or may commercialize them through a delegation of authority/responsibility. Revenues received from the commercialization of Emission Reductions are considered "public" and are under the management and responsibility of the MEF and the MEDD.

Figure 4.1. Overview of ER program and some of the potential REDD+ Initiatives)

REDD+ Program (AA-ERP)
- Include the ensemble of REDD+ Initiatives
- Managed by the BNCCCR

REDD+ Initiatives
Ensemble of eligible REDD+ activities, implemented by different actors in the field (e.g. communities) and managed by a promoter.

Areas without initial REDD+ Initiatives. During the five-year ERPA term, the REDD+ Program intends to extend REDD+ activities by promoting REDD+ Initiatives in these areas.



9. **Beneficiaries**. There are four broad categories of beneficiaries of carbon benefits (for eligibility criteria see section 2.2 of the advanced draft benefit sharing plan):
   a. REDD+ Governance structures required for the operation of the AA-ERP, i.e. BNCCCR, Regional REDD+

coordination (CRR, "*Coordination Régionale REDD+*"), National and Regional REDD+ Platforms;

b. The Promoters of validated REDD+ Initiatives who receive the carbon benefits (monetary), manage them and further distribute in accordance to the approved Utilization Plan as monetary or non-monetary benefits;
c. The managers of REDD+ activities included within validated REDD+ Initiatives who receive carbon benefits from the Promoter and manage them and further distribute in accordance to the approved Utilization Plan as monetary and non-monetary benefits;
d. The final beneficiaries (e.g. local communities) who benefit from the impact of the implementation of REDD+ Activities identified in the validated Utilization Plan.

10. **Carbon benefits**. A Carbon benefit is revenue from the sale of emission reductions, distributed to stakeholders in accordance with the carbon benefit sharing plan and the utilization plan, which can be monetary (in cash, to finance activities) or non-monetary (supporting services and other goods for the society e.g. building of infrastructure).

11. **The overall objective of carbon benefits** is to: a) ensure the financial sustainability of REDD+ Activities; and b) support the national development of the REDD+ mechanism. Carbon benefits must serve five broad purposes:
    a. The continuation of performing existing REDD+ activities within a REDD+ Initiative;
    b. The extension of REDD+ activities within an Initiative in terms of geography, objectives or theme;
    c. The promotion of new Initiatives;
    d. The operationalization of mechanisms of governance, monitoring, and REDD+ funds management;
    e. The provision of rewards to local communities.

12. **Distribution of carbon benefits.** The benefit sharing mechanism for REDD+ Programs in Madagascar is built on three levels which will be applied upon receipt of funds and will be applicable for each benefit sharing period. Level 1 sets the sharing mechanism to distribute carbon benefits across five broad categories. Level 2 sets the sharing mechanism to distributed carbon benefits across validated REDD+ Initiatives that are located within the AA-ERP. Level 3 sets the requirements for further sharing within the REDD+ Initiative following a Utilization Plan prepared in consultation with local governance structures and validated by BNCCCR.

13. **Governance and flow of funds.** REDD+ governance, planning and decision making is carried out mainly by four multi-stakeholder entities at the national and regional levels (National REDD+ Platform, Regional REDD+ Platform and the SLCs, CIME), while the operations and management of the program is ensured by four national, regional and communal entities (BNCCCR, the DREDD or regional Coordination Unit, the REDD+ fund, and Promoters of REDD+ Initiative).

14. **The flow of funds.** Funds from the FCPF Carbon Fund will be transferred to a special dedicated account managed by MEF who will act as trustee at the request of MEDD who will act as the donor.

15. **Monitoring of the benefit sharing plan.** BNCCCR will monitor on an annual basis the implementation of the benefit sharing plan following the procedures and requirements set in the FCPF ER Monitoring Report template. The monitoring will be based on the reports received by each Initiative, Reward activity and the CTDs and the information contained in the SIIP. BNCCCR will report to the FCPF Carbon Fund within 6 months of the first Periodic Payment and annually thereafter.

16. **Monitoring of Initiatives.** The Promoter of the REDD+ Initiative will be responsible for the monitoring of the REDD+ activities implemented within its REDD+ Initiative. The Promoter may rely on REDD+ activity managers or Actors for certain monitoring functions, but it will remain responsible for monitoring and reporting. These responsibilities will be defined in the contract between the BNCCCR and the Promoter. The CRRs and CTDs will supervise the implementation of REDD+ activities and will report to BNCCCR on the implementation of their activities in an annual basis. CRRs will include in their report an evaluation of the percentage of implementation of REDD+ activities of REDD+ Initiatives.

ANNEX 5: Detailed Economic Analysis

COUNTRY: Madagascar
Atiala Atsinanana Emission Reductions Program

1.1. Approach and Assumptions

1. This ex-ante economic analysis focuses on quantifiable benefit and cost streams to assess the feasibility of the project, including emission reduction and livelihood derived from results-based payments for verified beneficiaries. A spreadsheet model was developed to compare the stream of benefits and costs under various scenarios using net present value analysis, which discounts all monetary streams to a common base year. The assumption of the "without project" scenario in the targeted area was assumed as the baseline, meaning smallholders will likely continue to implement slash-and-burn agriculture with low productivity and value added leading to further soil and land degradation and further emitting greenhouse gas emissions. The ''with project'' scenario will support the reduction of deforestation and forest degradation which will result as a climate co-benefit reducing the greenhouse gas emissions in comparison with the ''without project'' scenario. Activities supporting household incomes to remain stable can be considered as benefits compared to declining agricultural productivity under the "without" scenario. The timeline of the analysis focuses on the generation of benefits and costs over the payout period of the project (2020-2025). If benefits exceed the costs during the short time horizon, it increases confidence that the analysis is robust in the long run.

1.2. Costs

2. **The investment costs are the Carbon Finance Transaction costs totaling 50 million USD.** According to the anticipated disbursement schedule, the total project costs are spread over 2021-2026. The total amount of payments (the costs of the project) will depend on the performance of the activities to reduce GHG emissions. As the costs are distributed over time, they are also subject to discount assumptions, identical to the benefit streams.

Table A.5.1. Investment costs

Pay Out Assumptions (in US$ m)	2020	2021	2022	2023	2024	2025	Total
Interim Payments	2	-	4.17	-	8.29		14.46
Expected Disbursements after Verification and deduction	-	2.34	-	15.83		15.92	35.54
Total Costs / Payments	**2**	**3.79**	**4.17**	**15.83**	**8.29**	**17.37**	**50**

1.3. Benefits

Carbon Benefits

3. The activities of the program aim to generate ten million tCO2eq of Emission Reductions which represent the net carbon benefits during the duration of the project. If non-performance would take place at some point

during the project intervention, lower ER-share would be generated and less payment of disbursements. The World Bank's guidance of Shadow Price of Carbon[31] in economic analysis of investment project financing in line with the High-Level Commission on Carbon Prices, recommends that projects' economic analysis use a low and high estimate of the carbon price starting at US$40 and 80, respectively, in 2020 and increasing to US$50 and 100 by 2030. Although this recommendation does not reflect the current value in the carbon market it represents a value consistent to the Paris Agreement, linking to maintaining global mean temperature below 2°C by 2050 in order to avoid devastating climatic catastrophes. As this valuation generates high benefits alternative price and performance combinations as well as sensitivity analysis was applied to the assessment.

4. The generated ER Payments will be distributed to rural communities through a benefit sharing mechanism according to the Benefit Sharing Plan (BSP). Payments are aimed to directly contribute for the development of projects and public goods (e.g. building of infrastructure) for the local population intervening in the program.

Non-Carbon Benefits

5. The proposed ER Program measures include sustainable land management practices which will enhance carbon sequestration in the long run, helping communities build resilience and to adapt to climate change. The activities will also result in the provision of ecosystem services contributing directly or indirectly to sustainable development and the human well-being, including improvement of soil health, water regulation, watershed management and biodiversity conservation. Livelihood benefits in the program relate to improvement of living conditions in the long run. Providing additional livelihood opportunities in rural areas can yield important secondary effects, for example with respect to improving agriculture production, and empowering communities to seek better access to education and health services. There is potential to catalyze development momentum in sustainable management of natural resources and potential for replicability and continuity beyond the official lifetime of the project. Livelihood benefits and investments in productivity generated beyond the lifetime of the program were not quantified, even though it is likely that the target areas and communities will continue to generate positive incremental changes compared to the "without project" scenario. While this approach systematically undervalues project benefits, it underscores the robustness of the quantitative analysis of benefits, considering that any additional unvalued benefits would only add to the positive evaluation of the project. Broader economic benefits generated by the project may also include learning, as well as replication of the positive outcomes and practices to wider areas in Madagascar. The project can serve as an important catalyst for generating such changes with impacts beyond the immediate project boundaries and lifetime of the project.

2. Results

6. The Net Present Value (NPV) and the benefit-cost ratio (BC) for various discount rates and benefits as well as performance variations was estimated. The net present value of both costs and benefits was calculated for a range of carbon prices including high and low values according to the Shadow Price of Carbon World Bank guidance. These quantitative assessments help to show that the project produces substantially positive net benefits under all reasonable price and performance scenarios. For all combinations of discount rates from 5 to 20 percent the project benefits exceed costs by a substantial margin, the low-price path and the low

[31] World Bank, 2017. Shadow Price of Carbon in economic analysis- Guidance note.

performance scenario. For the low ER performance path it was assumed that only 40 percent of the proposed ER were delivered. Within the range of discount rates from 5 to 20 percent the Benefit-Cost ratio is high even at low C price and low delivery scenarios. Expected livelihood benefits will provide full employment and income generation for the communities during the lifetime of the program. It is assumed that household income will increase by 10 percent for targeted communities under the ER program considering successful and timely implementation of the field activities. Results of the incremental benefits stream to the beneficiaries even at 40 percent performance level will be positive, see table 1.

Table A.5.2. Sensitivity Analysis, NPV and discount rates of different scenarios for Madagascar ER Program

	million US$				
	5%	7.50%	10%	15%	20%
Costs	40	36	33	27	23
Costs at 40% performance	16	15	13	11	9
Benefits High C value	734	681	634	553	486
Benefits Low C value	369	342	318	278	244
Benefit-Cost ratio low C value	9.15	9.40	9.64	10.13	10.62
Benefits High C value at 40% performance	294	273	254	221	195
Benefits Low C value at 40% performance	148	137	127	111	98
Benefit-Cost ratio low C value at 40% performance	9	9	10	10	11
Livelihood benefits	10.06	9.31	8.63	7.50	6.59
Livelihood benefits at 40% performance	4.02	3.72	3.45	3.00	2.64

ANNEX 6: Sharing modalities for the advanced payment

COUNTRY: Madagascar
Atiala Atsinanana Emission Reductions Program

1. **The US$2 million will be shared in accordance to the final Benefit Sharing Plan**, with few modifications resulting from the fact that there will be no carbon performance measured at the AA-ERP or at the REDD+ Initiative level. These modifications are explained below.
2. The benefit sharing arrangements have been designed by local stakeholders participating in the national and regional REDD+ platforms, so it has been designed in such a way to ensure that carbon benefits get to local communities while at the same time stimulating activities that will generate additional emission reductions.
3. Following the distribution arrangements ("*clé de repartition*") contained in the drafted Benefit Sharing Plan and the REDD+ Decree, the US$2 million will be distributed in a first stage as described in the table below. **A detailed description of each of the items found below may be found in the draft Benefit Sharing Plan**; a brief description is provided below.

Table A.6.1 Summary Distribution Arrangement

Montant Avance US$	Distribution as per the benefit sharing plan		Overall description
2,000,000	% Distribution	Amount US$	
1. Field activities	83%	1,660,000	
1.1. Continuation of REDD+ activities	58%	1,160,000	Investment towards the support of existing and new REDD+ activities. Sharing defined at the level of REDD+ Initiatives by Promoters and local communities and described in a Utilization Plan. Utilization Plans are compliant with the BSP and are consulted with the national and regional platforms and validated by the governance of the Initiative and the BNCCCR.
1.1.1. Fixed payment (30% of total)	17%	348,000	
1.1.2. Variable payment (70% of total)	41%	812,000	
1.2. Extension of REDD+ activities	25%	500,000	
2. Operational cost AA-ERP	0%	0	No operational cost will be funded with the advanced payment.
3. Monitoring by Decentralized Territorial Collectivities (CTD)	2%	40,000	Municipalities will support forest governance and monitor the implementation of REDD+ activities, including FGRM, benefit sharing, etc. This will be allocated to municipalities against a Utilization Plan that will be approved by BNCCCR.
4. Reserve	5%	100,000	As required by the BSP, a reserve will be maintained for two years to cover any risk of non-performance that may occur in the future. This will be kept by the fiduciary mechanism in

Montant Avance US$	Distribution as per the benefit sharing plan		Overall description
2,000,000	**% Distribution**	**Amount US$**	
			accordance to the BSP.
5. Reward	10%	200,000	Local communities will define social infrastructure and services, which will be supported by this amount.

4. **The operational costs of the AA-ERP**, which are an estimated fixed amount of almost US$1 million per year and that must be less than 20 percent of the total payments according to the BSP, **have been assumed to be zero in this case**. As described above, these costs will largely be borne by other sources of financing.

5. According to the draft BSP, in a second stage of sharing the 58 percent above allocated to the continuation of REDD+ activities would have to be shared between the REDD+ Initiatives that are validated ("*Homologée*") in accordance to the benefit sharing plan provisions. Currently the validated REDD+ Initiatives are:
   a. Masoala National Park managed by Madagascar National Parks (MNP);
   b. Other Protected Areas managed by MNP;
   c. COMATSA Protected Area managed by WWF;
   d. Makira National Park managed by WCS;
   e. CAZ managed by CI;
   f. Sustainable Landscape Restoration Project (PADAP)[32].

6. According to the draft BSP, the sharing amongst REDD+ Initiatives would occur through a fixed part and a variable part:

   a. Fixed part: Proportional to the number of the communes overlapped with the REDD+ Initiative's REDD+ activities as described in the approved utilization plan and weighted by the level of investment secured and disbursed by the initiative. This is a proxy to the level of ambition of the REDD+ Initiative.

   b. Variable part: This is based on the REDD+ Initiative's carbon performance, corrected by its "execution" performance measured as the implementation rate of the approved utilization plan.

7. However, the estimation of the fixed and variable part is impossible because at the start of the AA-ERP, the amount of investment that was disbursed by the REDD+ Initiative, the estimation of the carbon performance and the "execution" performance are not available.

8. As a result the GoM, proposes to do this (advance) allocation based on an alternative approach which reflects the amount of forest covered, the risk of deforestation and forest degradation and the financing needs. The following equation is used to estimate the weight of each initiative:

$$Weight_{Initiative_i} = \frac{\left(Areaforest * 0.3 + Deforestation_{Initiative} * 0.3 + Deforestation_{Buffer} * 0.4\right) xTypePromoter}{\sum^{All\ initiatives} Weight_{Initiative_i}}$$

Where

– $Weight_{Initiative_i}$: Weight of each initiative;

[32] This is not yet a validated REDD+ Initiative as the internal governance is still not defined at the time of this note.

- $Areaforest$: Area of forest in the REDD+ Initiative area (hectares). Estimated with the same methods used to establish the RL of the ER Program;
- $Deforestation_{Initiative}$: Historical annual deforestation during the reference period in the area of forest in the REDD+ Initiative (ha/year). Estimated with the same methods used to establish the RL of the ER Program;
- $Deforestation_{Buffer}$: Historical annual deforestation during the reference period in the 10km buffer around the area of forest in REDD+ Initiative (ha/year). Estimated with the same methods used to establish the RL of the ER Program;
- $TypePromoter$: Type of Promoter. 1 if State, 2 if national NGO and 3 if international NGO).

9. The factors that play in the equation are the following:
   a. The benefit distributed to the REDD+ Initiatives is proportional to the area of forest in the REDD+ Initiative area and the green belt or buffer around the Protected Area (PA);
   b. The benefit distributed to the REDD+ Initiatives is proportional to the historical deforestation in the REDD+ Initiative area and the 10 km buffer around the REDD+ Initiative;
   c. REDD+ Initiatives with low initial investment are favored, so the benefit distributed is also proportional to a score varying from 1 to 3 is given according to the type of Promoter (State, national NGO, international NGO): i) 1 = if the promoter is an international NGO, ie a larger investment via international funding; ii) 2 = if the promoter is a national NGO, ie an average investment through small funding; iii) 3 = if the promoter is state (MNP). As indicated previously the level of investment at the PA level is relatively low for state organizations.
10. The GoM through BNCCCR will estimate these amounts once the Utilization Plans of each REDD+ Initiative are made available and approved, but **an estimation** is provided in excel and in the following table:

REDD+ Initiatives	Percentage	Amount (US$)
Masoala AP	14%	164,382
MNP AP	47%	546,227
COMATSA AP	4%	44,790
Makira AP	35%	404,600
CAZ AP[33]	0%	-
PADAP[34]	0%	-
TOTAL	**100%**	**1,160,000**

11. This amount of US$1,160,000.00 will be used to finance the REDD+ activities within these four (4) REDD+ Initiatives (excluding CAZ AP and PADAP) and **will cover 60 Communes out of 192 Communes in the entire AA-ERP Area, i.e. around 31 percent of the total and 75 percent of all Communes containing forests**. This will enable a significant percentage of beneficiaries to commence to see benefit sharing arrangements being implemented and benefits flowing to the ground.

[33] A value of 0 is assumed for CAZ AP. Following the roadmap for the GCF agreed by the GoM, CAZ will not receive any carbon finance during the duration of the GCF project so as to ensure no double financing.
[34] The PADAP project will not participate in the benefit sharing as it still has to take some steps (e.g. create internal governance system and define a promoter, define the limits of the Initiative to avoid overlapping with others as required by the REDD+ Decree) to be a validated REDD+ Initiative.

12. Following the provisions of the benefit sharing plan, 70 percent of these amounts must be allocated to field activities, whereas the 30 percent remaining will be mostly used for field activities and may be used for covering management costs of REDD+ Initiatives and unavoidable costs (e.g. activities that are critical to maintaining the REDD+ Initiative such as patrols).
13. REDD+ Initiatives will have to provide a Utilization Plan listing all activities implemented by managers of REDD+ activities ("*gestionnaires d'activités* REDD+) and budgeting them, as a pre-requisite to receive the benefits. The submission will occur prior to June 2021 and its approval will occur in approximately three months following the process detailed in the benefit sharing plan. The approval of the Utilization Plan and its monitoring of the implementation will be done in accordance to the benefit sharing plan.
14. From the first monitoring period onwards the normal provisions of the BSP will apply.

ANNEX 7: Financial management

COUNTRY: Madagascar
Atiala Atsinanana Emission Reductions Program

FM contractual arrangements

1. The following are the contractual arrangements:
    a. Annual Work Plan and Budget (AWPB) provided to the Bank not later than November 30 of the year preceding the year the budget should be implemented.
    b. Monthly CAS account statement issued by the Central Bank shall be provided by the FM team in BNCCCR (MEDD) to the Bank.
    c. Interim un-audited financial statements (IFR) on a quarter basis 45 days after the end of each quarter; and (d) audited annual financial statements within 6 months following the end of the period audited.

FM assessment objectives and scope

2. The assessment was conducted in accordance with the Bank Guidance for ERC Projects under IPFs, issued on June 2, 2020, to determine whether the Recipient has the systems and capacity to implement and manage the dedicated payment mechanism (BSP) proposed for this project.
3. For a carbon finance transaction, the assessment of FM arrangements entails the review of financial flows from the FCPF Carbon Fund to the beneficiaries according to the BSP. The main principles for the FM of the ERPA funds are to (a) reduce complexity and organize financial flows through a limited number of 'entry points', (b) use existing reliable structures where possible, (c) minimize transaction costs, (d) ensure the proper recording of and reporting on all transactions related to the project, and (e) facilitate external audits as required by the World Bank.
4. The Government intends to establish parastatal fiduciary agency (EPA or *Etablissment Publique à titre Administratif*) to manage the BSP. During the appraisal, the proposed interim FM arrangements before the establishment of the EPA, described as follows, was assessed.
    - The interim FM arrangement will involve the use of special account in Treasury ("*compte d'affectation spécial du Trésor*" or CAS) where payments will be received from the FCPF.
    - The Ministry of Finance (MEF) will manage the CAS based on the public accounting rules. MEDD will be the authorizing officer for the CAS. The disbursement from the CAS will be based on the policies and procedures to be set out in the operation manual to be approved by the MEF and MEDD.
    - the carbon benefits going to public institutions will be managed by the FM team within the Bureau National Climate Change, Carbon and REDD+ Coordination Office within the MEDD (BNCCCR), on an interim basis.
    - the carbon benefits dedicated to non-government institutions will be potentially managed by the Madagascar Biodiversity Foundation (FAPBM). The FAPBM will act as fiduciary agent of the portion of carbon benefits dedicated to REDD+ Initiatives and local communities within REDD+ Initiative areas.
    - Carbon benefits distribution will be made in accordance with the BSP and the operations manual.

5. As such the assessment covered the BSP, the CAS mechanism, the BNCCCR and FAPBM financial management (FM) arrangements.

Details of the FM arrangements

Budgeting

6. The MEDD through BNCCCR (for the interim period) will have the overall responsibility in the planning and budgeting of the project and national procedures will apply. An initial work plan and budget (WPB) by project effectiveness and thereafter an annual (AWPB) not later than November 30 of the year preceding the year the budget should be implemented.

7. The FAPBM will contribute to the annual working plan based on the estimated benefits to be received by non-government institutions and will provide information to the BNCCCR/MEDD for consolidation purpose no later than September 2020. The FAPBM will support the non-government beneficiaries in developing the funds utilization plan. The budgeting process as defined in internal control manual of procedures of the FAPBM is deemed adequate and will apply to this portion of the financing.

Internal control

8. The MEDD through BNCCCR will develop and adopt comprehensive operation manual for the implementation of the BSP. The operation manual will apply in BSP transactions by both BNCCCR and FAPBM. The advanced draft of BSP available at the appraisal stage provided clarifies how generated carbon benefits will be distributed among the beneficiaries enabling the AA-ERP to achieve its objectives. The BSP describes the process of activities planning and the decision rules for sharing of benefits. The document will be complemented by the Utilization Plan developed by each REDD+ initiative as soon as the monitoring results are available, which will state further detail on specific amounts allocated to each REDD+ Initiative and how these will be distributed among REDD+ activities and final beneficiaries.

9. The implementation of the FCPF Readiness Project by the BNCCCR is affected by the lack of FM capacity. The BNCCCR will reinforce its FM capacity by hiring one qualified FM specialist for this project.

10. The FAPBM has qualified staff with robust experience in managing donors financed- projects. Given the workload derived from this project, the FAPBM will hire one additional accountant to support the existing team. The FAPBM has also well-designed procedures that are documented in its internal control manual of procedures.

Accounting

11. The transactions within the Special account at the Treasury (CAS) will be recorded in the national integrated system for public finance (SIGFP).

12. The MEDD-BNCCCR and FAPBM will record the use of the carbon benefits, monitor budget and prepare reporting with their ongoing accounting software.

Reporting

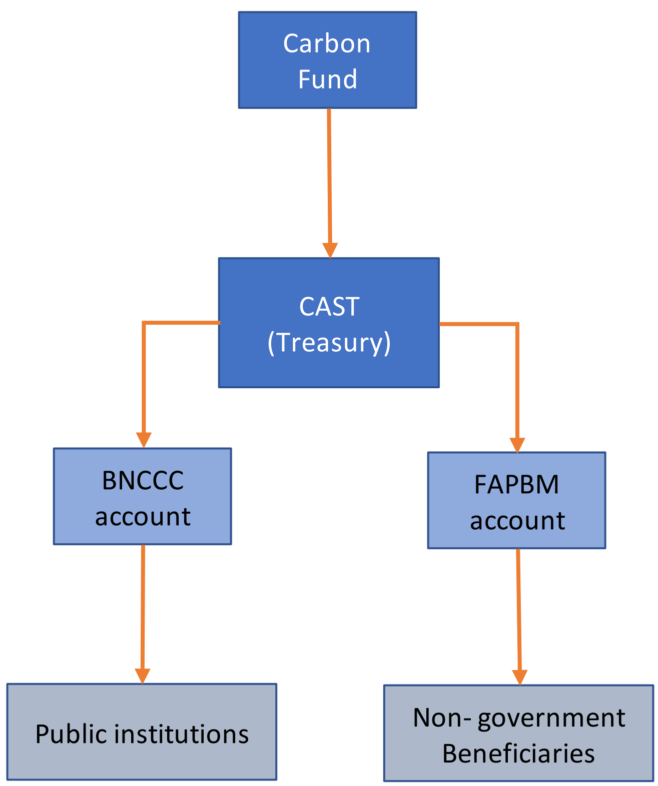
13. To properly address the risk identified mainly related to PFM weakness and the lack of experience with ERC operation, robust reporting arrangements will apply to this project.

14. The BNCCCR will communicate to the World Bank the CAS account statement issued by the Central Bank on a monthly basis to ensure transparency and efficient monitoring of the use of funds.
15. The BNCCCR will prepare quarterly Interim Financial Report (IFR) of the project. the IFR will encompass portion managed by the FAPBM.
16. The annual financial statements of the entire project will be consolidated at BNCCCR level and submitted to external audit.

Funds flow and disbursement arrangement

17. The utilization of CAS is in line with the provision of national law, as the carbon benefits are considered as public resources in Madagascar. The CAS will be opened at the Central Bank and denominated in USD. The CAS will be managed by the MEF and funds will be disbursed to the BNCCCR or the FAPBM against request. The CAS functioning is ruled in organic law No. 2004 – 007 dated July 26, 2004, governing finance acts (LOLF).
18. The disbursement and financial information letter will detail the disbursement methods and terms applicable to the project.
19. Funds mobilization will be made according to the BSP. The BNCCCR and the FAPBM will open segregated accounts at an acceptable commercial bank to receive the funds from the CAS.

Figure 7.1. Financial Funds flow



Internal audit

20. In accordance with the country policy, IGE as well as the Internal audit department of the MEF will review the adequacy of CAS functioning during the project implementation.

21. In addition, the FAPBM will include to its internal audit plan the implementation review of activities by the non-government institutions.

Auditing

22. Given the limited capacity of the Court of account, the consolidated financial statements of the project will be audited annually by private audit firm acceptable for the World Bank. The audit report will be transmitted to the World Bank no later than six months after the end of the fiscal year.

Implementation support mission

23. Based on the risk level, FM implementation support mission will be conducted at least twice a year in order to verify that the Recipient has implemented the BSP as agreed per the legal agreement.

Table. A.7.1 Risk table and mitigation measures

Risks	Risk Rating	Risk Mitigating Measures to be implemented by Effectiveness	Residual Risk Rating
Inherent Risk			
• Country Level	H	Fiduciary training provided by World Bank Adequate staff to be recruited to support with this operation Disbursing linked to verified result (ER payment)	S
• Entity Level	S		S
• Project Level	S		S
Overall Inherent Risk – M			
Control Risk			
• Planning and Budgeting	S	Adoption of comprehensive operational manual clearly defining the budgeting, the accounting, the reporting processes and the internal control.	M
• Accounting	S		M
• Internal Control	S		M
• Funds Flow	S	Disbursement linked to verified result (ER payment) Use of CAS to secure the disbursement through the country system	M
• Financial Reporting	S	Cleary financial reporting arrangements	M
• Auditing	S	Recruitment of independent and qualified external auditor to support the Court of Account	M
Overall Control Risk	***S***		***M***
Overall FM Risk	***S***		***M***

24. In the case that the DPM is not being implemented or used in a manner acceptable to the World Bank, the World Bank's remedy is to withhold all or part of the next ER payment. The supervision will be complemented by reporting review.

FM Action plan

Action	Responsible	Deadline
Develop operations manual for the implementation of the BSP	MEDD/MEF	By the effectiveness date
Recruit a qualified FM specialist at BNCCCR level to support the existing team managing proceeds of carbon benefits	BNCCCR	3 months after ERPA signature
Recruit additional accountant at FAPBM level	FAPBM	3 months after agreement signature
Open CAS to receive the carbon benefits	MEDD/MEF	1 month after the agreement signature
Open segregated accounts at acceptable commercial bank	MEDD/ FAPBM	1 month after the agreement signature
Recruit the external auditor	BNCCCR	6 months after the effectiveness

ANNEX 8: Adjusted Country Partnership Framework Summary in light of COVID-19, prepared in June 2020 with some updates provided in January 2021

1. **The adverse economic and fiscal impact of the COVID-19 crisis in Madagascar was very substantial in 2020.** The exponential rise of the COVID-19 pandemic and the containment measures implemented across the world are expected to lead this year to a global recession about three times deeper than in 2009.[35] As of January 29, 2021, Madagascar had 19,065 confirmed cases of COVID-19. Global trade and travel disruptions as well as domestic containment measures are expected to result in the first recession since the 2009 crisis, with gross domestic product (GDP) predicted to contract by 2 percent in 2021 in the baseline scenario, compared to an estimated growth rate of 5.2 percent just prior to the coronavirus outbreak. Assuming successful containment measures, conditions are expected to stabilize in the second half of 2021, with export sectors recovering in 2021 against the backdrop of a modest pickup in global demand, while domestic activity benefits from an ambitious infrastructure program. Under baseline assumptions, growth would recover to a subdued rate of 2.8 percent in 2021, about half the pre-COVID estimate.[36] Overall, the effect of the coronavirus outbreak is expected to shave off about 9 percentage points to predicted GDP per capital levels over a two-year period.

2. **The impacts of the crisis could reverse past progress in poverty reduction and deepen fragility.** Formal employment has been significantly impacted by contracting activity in tourism and manufacturing sectors, notably textiles and apparel, while revenues from informal jobs in large urban areas affected by lockdowns will be significantly reduced. A household survey conducted in June 2020 estimated that total employment contracted by 7.7 percent as a direct result of the crisis. In this context, extreme poverty (US$1.90/day) is predicted to increase in 2020 to 76.8 percent, up from 74.5 percent in 2019, undoing three years of consecutive declines. Vulnerable populations in urban areas, notably women and youth, are particularly exposed to economic hardship and poverty traps, reflecting strict confinement measures. The economic and social impacts of the crisis remain highly uncertain in a rapidly evolving situation, with risks remain largely tilted to the downside, including the possibility of social unrest or renewed political volatility. Madagascar has historically experienced cycles of political instability and has only recently completed a peaceful democratic transition. Although it has made notable progress over the last year, the country is still vulnerable to weak state institutions, as well as challenges related to elite capture of the state and its institutions. These factors are at the heart of state fragility in Madagascar, and links to other sources and drivers of fragility, including regional imbalances and inequalities that have contributed to the historical neglect of the lagging regions such as the south, and that undermine social cohesion and compromise state-society relations.

3. **Impacts of the current crisis on both poverty and stability could be compounded by further shocks, particularly from natural disasters.** Madagascar is estimated to face average annual loss of US$100 million from tropical cyclones alone. This is in addition to recurrent droughts and floods. Natural disasters could lead to the displacement of large numbers of people and the need to house them in emergency shelters. This could hamper COVID-19 containment measures, while a resulting resurgence of the pandemic could undermine economic recovery. The risk of such cascading effects underlines the importance of buffers such as that available through the Catastrophe Deferred Drawdown Option (Cat DDO)[37] and of putting in place sovereign risk transfer for extreme climate events. The GoM plans to put in place sovereign catastrophe insurance for

[35] See World Bank. 2020. Global Economic Prospects, June 2020. Washington, DC: World Bank.
[36] IMF projections used for the preparation of the second tranche of the RCF discussed at the IMF Board of Executive Directors on July 30, 2020 are more optimistic, at -1 percent in 2020 and 4.2 percent in 2021.
[37] The Cat DDO's remaining balance of IDA funds is US$35 million.

tropical cyclone risk as part of the Cat DDO implementation.

4. **The World Bank Group has adjusted its Country Partnership Framework in response to COVID-19**. The significant impacts of the pandemic on Madagascar have had a major impact on Madagascar's development financing needs over the next two years requiring adjustments to the WBG country program. In line with the World Bank Group COVID-19 Crisis Response Approach Paper from June 2020, resources have been realigned to support priority actions aimed at saving lives threatened by the virus; protecting the poor and vulnerable; securing the foundations for the private sector; and strengthening policies and institutions for increased resilience based on transparent, sustainable debt and investments. Program adjustments include: i) reallocation of portfolio resources through activation of CERC and restructuring and reallocations of existing programs; ii) developing new operations responding to the pandemic that were not envisioned in the original CPF program (e.g. Pandemics preparedness program); and, iii) reprioritization of the CPF pipeline to advance operations that were planned for later years (from FY22/23 to FY21) while delaying selected new operations in infrastructure.

5. **World Bank support under the Relief Phase will require an additional US$210 million in IDA financing that was not anticipated under the CPF.** In addition to the Madagascar COVID-19 Response Development Policy Financing (P174388) approved on August 29, 2020, this phase of the response mobilizes resources from within the portfolio through activation of CERC and restructuring and scaling up of existing programs. So far, the World Bank has allocated US$46 million to support the Government's health, social, education, water and sanitation plans, and plans to leverage an additional US$100 million to finance the Multisectoral Emergency Plan through other CERCs. Support to the agricultural sector, including the rice sub-sector, will be provided through an IPF which will finance measures to increase agricultural productivity and food security. In total, IDA support for the relief phase will total US$226 million (Table A.8.1). Most project resources reallocated and mobilized for pandemic response through activation of CERC components will be replenished through additional financing operations during FY21. Hence together with the DPF, new IDA lending for the Relief phase of pandemic response that was not planned in the CPF will amount to US$210 million.

Table A.8.1. Adjustments to the CPF to Support COVID-19 Response (figures in US$ million)

Response Phase	Portfolio reallocations, incl CERC	New/ Unplanned operations	CPF Operations brought forward	CPF operations adjusted but proceeding as planned	Total
Relief	136	90			226
Restructuring		152	150		302
Resilient Recovery			100	350	450

Sources: World Bank Group.

6. **The Restructuring Phase is supported through US$250 million in IDA financing, US$32 million from the Global Partnership for Education (GPE), and US$20 million from the Global Financing Facility (GFF)**. GPE support will come through an additional financing to the Basic Education Project and will aim to assist the Government to implement its strategic plan in an effort to curb the spread of the pandemic and to ensure educational continuity at home during the pandemic-induced confinement period, prepare for reopening of post-containment classes and strengthen the resilience of the system in the face of natural disasters, whether resulting from cyclones or the COVID-19 pandemic. A new Pandemic Preparedness Project of US$120 million,

including US$20 million from the GFF, will support government's efforts to implement the recommendations of a recent assessment of the country global health security systems and further reinforce the country's capacity to respond to future pandemics of COVID-19 magnitude. Building on a strong track record in social protection, a planned US$150 million social protection project has been brought forward from FY23 to help build resilience to future shocks. Altogether, this Phase of the response adds US$152 million in financing that was not anticipated in the CPF while reprioritizing and bringing forward US$150 million from later years.

7. **The Resilient Recovery Stage is supported by US$450 million in IDA Financing.** Of this amount, US$350 million represents operations that will be delivered as planned in FY21 with adjustment in design as needed to make them COVID-19 resilient and take advantage of new opportunities to ensure a more sustainable, inclusive and resilient future in a world transformed by the pandemic. In addition, one project has been brought forward, the Additional Financing for Madagascar Integrated Growth Poles and Corridor SOP-2 Project (P175172) approved November 25, 2020 which builds on a proven and successful Madagascar growth poles approach. This is part of a strongly complementary approach whereby the ongoing Growth Poles Project is being restructured to scale-up immediate support to the private sector during the COVID-19 crisis, with additional funds from the portfolio-level CERC, while the new proposed Growth Poles Project will provide significant support for the subsequent economic recovery, with an expanded sector and geographical coverage, and a focus on economic transformation including through digital entrepreneurship. Infrastructure related projects, a key pillar of the economic recovery, have been postponed until FY22 to accommodate the program changes outlined above.

8. **The World Bank COVID-19 response is closely coordinated with the International Finance Corporation (IFC) response.** In line with the Approach paper, IFC's strategy for the country will be delivered in 3 phases. Phase 1 – Rescue: IFC is supporting the Government's emergency response, with a focus on: (i) agriculture for livelihoods and jobs; (ii) light manufacturing for health response; and (iii) financial sector. Phase 2 - Restructuring: IFC will provide support through (i) restructuring assistance to the financial sector, corporates and key sectors; and (ii) advisory to government on private sector support. Phase 3 - Recovery: IFC will help mobilize private investment to drive solutions for key development challenges by (i) supporting the expansion of access to power, the development of sustainable railroad and port infrastructure; (ii) helping to build competitive global value chains; and (iii) leveraging digital platforms to support smallholder farmers and MSMEs. IFC has continued disbursing in the agribusiness sector (US$3.3 million) in support of small holder farmers and has been deploying its available small and medium enterprise (SME) risk sharing facility (US$6 million) with a systemic bank as a crisis response. It is also in negotiation with a systemic bank for a medium-term loan (US$10 million). Furthermore, IFC is at different stages of discussing new financing and early disbursements for clients in the agriculture and financial sectors (for a total amount of US$19.3 million).

9. **The overall World Bank Group response, including this operation, is aligned with the Government's Multisectoral Emergency Plan as well as the activities of other development partners**. The World Bank is playing a critical role to further strengthen donor response. These efforts have paid off, resulting in a coordinated response on budget support measures. Similar efforts were carried out to rally donors around the response on health, social protection and private sector development which are financed through a coalition of donors and leveraging the donor coordination platforms. The Multisectoral Emergency Plan supported by this operation has served as a platform for identifying priority needs and coordinating donor support.

10. **Further adjustments to the country program in response to heightened fragility risks are also planned**. Based on the number of conflict-related fatalities Madagascar experienced in 2019, the country meets the quantitative eligibility criteria for the Prevention and Resilience Allocation (PRA) under the IDA19 Fragility, Conflict, and Violence envelope. Management is preparing a PRA eligibility note that would be submitted to the Board of Executive Directors in Q4 of FY21. This eligibility note will, among other things, clarify how the World Bank Group portfolio will be recalibrated to support the Government’s strategy to prevent further escalation of conflict/violence, and to directly address the pertinent drivers of conflict/violence.