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Report No: 145755-FJ

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

PROJECT APPRAISAL DOCUMENT

ON A

PROPOSED CARBON FINANCE TRANSACTION

IN THE AMOUNT OF UP TO US$12.5 MILLION

TO THE

REPUBLIC OF FIJI

FOR A

FIJI CARBON FUND EMISSION REDUCTION PROGRAM

July 1, 2020

Environment and Natural Resources, and Blue Economy Global Practice
East Asia and Pacific

CURRENCY EQUIVALENTS
(Exchange Rate Effective May 31, 2020)

Currency Unit =	Fiji Dollars (FJD)
FJD 1.00 =	US$ 0.45
US$ 1.00 =	FJD 2.22

FISCAL YEAR
August 1 – July 31

ABBREVIATIONS AND ACRONYMS

BSM	Benefit Sharing Mechanism
BSP	Benefit Sharing Plan
CCA	Climate Change Act
CCID	Climate Change and International Cooperation Division
CI	Conservation International
COP	Conference of Parties
CPMU	Central Program Management Unit
CSO	Civil Society Organization
ER	Emissions Reduction
ERPA	Emissions Reduction Payment Agreement
ERPD	Emissions Reduction Program Document
ER-PIN	Emissions Reduction Program Idea Note
ESMF	Environmental and Social Management Framework
FAO	Food and Agricultural Organization
FCPF	Forest Carbon Partnership Facility
FFHCOP	Fiji Forest Harvesting Code of Practice
FGRM	Feedback and Grievance Redress Mechanism
FMT	Facility Management Team
FPIC	Free, Prior, and Informed Consent
FREL	Forest Emissions Reference Level
FRL	Forest Reference Level
FRR	Financial Rate of Return
FW	Forest Warden
GAP	Gender Action Plan
GCF	Green Climate Fund
GDP	Gross Domestic Product
GEF	Global Environment Facility
GHG	Greenhouse Gas
GIS	Geographic Information System

GIZ	German Agency for International Cooperation (*Deutsche Gesellschaft fuer Internationale Zusammenarbeit*)
GoF	Government of Fiji
GRS	Grievance Redress Service
IDLUP	Integrated District Land Use Planning
IMF	International Monetary Fund
IPCC	Intergovernmental Panel on Climate Change
LEDS	Low Emissions Development Strategy
M&E	Monitoring and Evaluation
MMR	Monitoring, Measuring, and Reporting
MoE	Ministry of Economy
MoF	Ministry of Forests
MRV	Monitoring, Reporting, and Verification
MSD	Management Services Division
NDP	National Development Plan
NFI	National Forest Inventory
NFMS	National Forest Monitoring System
NGO	Nongovernmental Organization
NPV	Net Present Value
PDO	Project Development Objective
PF	Process Framework
PFM	Public Financial Management
PMU	Program Management Unit
POM	Project Operational Manual
PSP	Permanent Sample Plots
PPMU	Provincial-level Program Management Unit
REDD+	Reduce Emissions from Deforestation and Forest Degradation, and Foster Conservation, Sustainable Management of Forests, and Enhancement of Forest Carbon Stocks
RPF	Resettlement Policy Framework
R-Package	Readiness Package
R-PP	Readiness Preparation Proposal
RSC	REDD+ Steering Committee
SBI	Subsidiary Body for Implementation
SC	Steering Committee
SCD	Systematic Country Diagnostic
SESA	Strategic Environmental and Social Assessment
SORT	Systematic Operations Risk-Rating Tool
SPC	Secretariat of the Pacific Community
TAP	Technical Advisory Panel
tCO_2e	Tons of Carbon Dioxide Equivalent
TLTB	iTaukei Land Trust Board
TOR	Terms of Reference
UNCCD	United Nation Convention to Combat Desertification
UNFCCC	United Nations Framework Convention on Climate Change
YMST	Yaubula Management Support Team

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DATASHEET

BASIC INFORMATION

Country	Project Name	
Republic of Fiji	Fiji Carbon Fund Emission Reduction Program	
Project ID	Financing Instrument	Environmental and Social Risk Classification
P163484	Carbon Finance (CN)	Category B

Financing & Implementation Modalities

[ ] Multiphase Programmatic Approach (MPA)	[ ] Contingent Emergency Response Component (CERC)
[ ] Series of Projects (SOP)	[ ] Fragile State(s)
[ ] Disbursement-linked Indicators (DLIs)	[X] 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)	
[X] Other: Emission Reduction Payment Agreement (ERPA)	

Expected Project Approval Date	Expected Project Closing Date	Expected Program Closing Date
July 3, 2020	December 30, 2025	December 30, 2025

Bank/IFC Collaboration

Proposed Development Objective(s)

The objective of the Project is to make payments to the Program Entity for measured, reported and verified Emissions Reductions (ERs) from reduced deforestation, forest degradation and enhancement of forest carbon stocks (REDD+) at the national level in Fiji and to ensure that paid amounts are distributed according to an agreed benefit sharing plan.

Components

Component Name	Cost (US$, millions)

1.	Measurement, reporting, and verification and payment of the ERs generated by the project	12.5
2.	Distribution of ER Payments as per the Benefit Sharing Plan	0

Organizations

Borrower: Republic of Fiji

Implementing Agency: The Ministry of Forests

PROJECT FINANCING DATA (US$, Millions)

[ ] Counterpart Funding	[X] Trust Funds	[ ] Parallel Financing

Total Project Cost:	Total Financing:	Financing Gap:
	12.50	0.00
12.50	Of Which Bank Financing (IBRD/IDA): 0.00	

Financing (in US$, millions)

Financing Source	Amount
Forest Carbon Partnership Facility Carbon Fund (FCPF CF)	12.50
Total	12.50

INSTITUTIONAL DATA

Practice Area (Lead)

Environment & Natural Resources

Contributing Practice Areas

Climate Change, Gender

Climate Change and Disaster Screening

Gender Tag

Does the project plan to undertake any of the following?	
a. Analysis to identify Project-relevant gaps between males and females, especially in light of country gaps identified through SCD and CPF	Yes
b. Specific action(s) to address the gender gaps identified in (a) and/or to improve women or men's empowerment	Yes
c. Include Indicators in results framework to monitor outcomes from actions identified in (b)	No

SYSTEMATIC OPERATIONS RISK-RATING TOOL (SORT)

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

COMPLIANCE

Policy

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

[ ] Yes [X] No

Does the project require any waivers of Bank policies?

[ ] Yes [X] No

Safeguards Policies Triggered by the Project	Yes	No
Environmental Assessment OP/BP 4.01	X	
Natural Habitats OP/BP 4.04	X	
Forests OP/BP 4.36	X	
Pest Management OP 4.09	X	
Physical Cultural Resources OP/BP 4.11	X	
Indigenous Peoples OP/BP 4.10	X	
Involuntary Resettlement OP/BP 4.12	X	
Safety of Dams OP/BP 4.37		X
Projects on International Waterways OP/BP 7.50		X
Projects in Disputed Areas OP/BP 7.60		X

Legal Covenants

The focus of the supervision responsibilities of the World Bank, as Trustee of the Forest Carbon Partnership Facility (FCPF), will be on the performance of the Program's safeguards system (which will integrate the necessary safeguard documents to comply with the Operational Policies). The Program Entity [Ministry of Economy] will need to ensure that this system and related documents are implemented in a satisfactory manner. The World Bank will not supervise the safeguards aspects of all individual underlying activities of the Emissions Reductions Program (ER Program). The Emission Reductions Payment Agreement (ERPA) will include specific provisions on third party monitoring to determine level of adherence of underlying activities with safeguard documents and the Program Entity's risk management system. The World Bank will review the information from third-party monitoring and the Grievance Redress Mechanism (GRM), along with the Program's Entity's self-reporting to determine whether or not to make the ER payments under the ERPA to the Program Entity.

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 (BSP) during the 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 BSP 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 BSP, provided that the Program Entity notifies the Trustee and the Trustee accepts such coordinated timelines. The Trustee reserves the right to initiate separate monitoring of the implementation of the Safeguards Plans and/or the BSP 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.

Conditions of Effectiveness of Sale and Purchase

Type	Description

Benefit Sharing Plan	Submission of a final BSP which, based on the advanced draft version of the BSP provided by the date of this Agreement, takes into account specific guidance to be provided by the Trustee, following consultations with Carbon Fund Participants, on the outstanding issues that need further clarification in the final version of the Benefit Sharing Plan.
Transfer of Title to ERs	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.

Team Composition			
Bank Staff			
Name	**Role**	**Title / Specialization**	**Unit**
Anis Wan	Task Team Leader	Sr. Operations Officer	SEAE1
Rama Chandra Reddy		Sr. Carbon Finance Specialist	SCCFM
Haddy Sey		Sr. Social Development Specialist	SEAS1
Evaron Doris Masih		Financial Management Analyst	EEAG2
Markus Pohlmann		Sr. Counsel	LEGEN
Xiaoxin Shi		Counsel	LEGEN
Joan Toledo		Finance Analyst	WFACS
Janardhanan Ramanujam		Finance Analyst	WFACS
Jehona Gashi		Program Assistant	SEAE1
Luke Delainavure Vueta		Team Assistant	EACFF
Jeremy Wallace		Team Assistant	EACNF
Extended Team			
Name	**Title**	**Title / Specialization**	**Location**
Carly Green		Carbon Accounting Specialist, Consultant	
Pene Ferguson		Environmental Safeguards Specialist, Consultant	
Sreeshankar Sivasankaran Nair		Natural Resource Management Specialist, Consultant	

I. STRATEGIC CONTEXT

A. Country Context

1. **Fiji is a small island nation in the South Pacific Ocean with a population of 870,000, and an area of 18,000 km^2 on 332 islands, among which 110 are inhabited.** Most of the population lives on two large

islands, Viti Levu and Vanua Levu. Just under half of the population lives in rural areas and derive part of their livelihood from agriculture. Fiji is a multiethnic society comprising 56.8 percent of indigenous Fijian people (iTaukei), 37.5 percent Fijians of Indian descent, and 5.7 percent other ethnic groups. It is the second largest and most industrially advanced economy in the Pacific region, after Papua New Guinea with substantial services and manufacturing sectors. Its dependence on sugar and garments has declined over time, with tourism becoming the leading sector and currently accounting for about 38 percent of the gross domestic product (GDP). Centrally located in the region, Fiji also serves as a regional hub for transportation, business, and telecommunications and houses several important regional institutions.

2. **Fiji is prone to natural disasters such as cyclones, floods, and earthquakes, incurring average annual losses of about 2 percent of GDP.** These losses increase environmental pressures and affect productive investments and service delivery. Vulnerable groups, including the poor, suffer the most from these shocks. In response, the Government of Fiji (GoF) has identified 'no-regrets' options for key sectors, including forestry, that provide both climate mitigation and resilience benefits. In 2014, a 'Green Growth Framework for Fiji' was formulated and endorsed by the Cabinet aiming to guide the design of a Five-Year Development Plan (2015–2020), recognizing the need to manage population growth and urbanization, unsustainable consumption and resource use and infrastructure deficiency, and impact of climate change and natural disasters. The new National Climate Change Policy (2018–2030) has the vision of "A resilient and prosperous Fiji, in which the wellbeing of current and future generations is supported and protected by an equitable, socially inclusive, low carbon, and environmentally sustainable economy." The new policy states that a sustainable forestry sector remains a key priority for Fiji's national climate change response.

3. **The GoF is committed to reducing emissions reductions (ERs) and investing in resilience that will help the country in mitigating the impacts of climate change and natural hazards.** Since 2013, the Government's spending on investments to strengthen resilience has grown fourfold, from F$89 million to F$359 million in FY2016–FY17. Fiji has also demonstrated international commitment. It is a signatory to the United Nations Framework Convention on Climate Change (UNFCCC) and has been playing an active role in the negotiations, chairing the Alliance of Small Island States, G-77 groups and the UNFCCC Subsidiary Body of Implementation (SBI). It has also actively participated in negotiations concerning efforts to 'reduce emissions from deforestation and forest degradation, and foster conservation, sustainable management of forests, and enhancement of forest carbon stocks' (REDD+[1]), as a member of the Coalition of Rainforest Nations. In November 2017, Fiji chaired the Conference of Parties (COP) 23, becoming the first small island developing state to preside over the COP—the annual round of the ongoing United Nations climate negotiations—held in Bonn, Germany.

B. Sectoral and Institutional Context

4. **Fiji has large forest resources relative to its land area.** More than half of the total land area, or about 1.1 million ha, is covered with diverse types of forests. Native forests of mainly indigenous species

[1] Reduce Emissions from Deforestation and Forest Degradation, and Foster Conservation, Sustainable Management of Forests, and Enhancement of Forest Carbon Stocks

constitute the largest share of Fiji's forest resources, covering 47.5 percent of the total land area.[2] More than 80 percent of the total land area is under communal ownership and about 90 percent of the total forest area is owned by indigenous landowners (iTaukei mataqali). With forests covering such a large proportion of Fiji's land area, forest sector governance is very important yet challenging as there are many laws, policies, and reform processes relevant to the forest sector and REDD+.

5. **Deforestation and forest degradation are present in Fiji.** Fiji has an annual deforestation rate of 1.1 percent, which is equivalent to losing about 10,000 ha on average of forests per year.[3] On forest degradation**,** closed forests areas are being converted to open forest (closed forest area decreased by 7,500 ha and open forests area increased by 13,790 ha between 1991 and 2010). Forecasts indicate that by 2025 the area of closed forests would stand at 524,476 ha with the open forest area increasing to 483,634 ha.[4]

6. **Agriculture continues to be the backbone of Fiji's economy and the main driver of deforestation, while commercial logging on the other hand constitutes the main driver of forest degradation.** Clearing of forest, particularly for subsistence, and semi-commercial and commercial agriculture, predominantly for taro and kava cultivation, constitute the main drivers of deforestation. Other main drivers of deforestation include conversion of forest lands to pasture for animal grazing; unplanned infrastructure development, including construction of roads and dams; and urban development and tourism facilities. Conventional logging on the other hand, is identified as the main driver of forest degradation. In Fiji, commercial logging largely follows conventional practices which allow for the removal of all merchantable species. Logging (mainly planned but not always controlled), timber extraction, collection of firewood, and the growth of invasive vine and tree species are the main drivers of forest degradation.[5] A more detailed list of the key drivers of deforestation and forest degradation per island is presented in Annex 2.

7. **The Fiji REDD+ Readiness process[6] started over a decade ago.** In 2009, Fiji started developing its National REDD+ Program, with the support of the Secretariat of the Pacific Community (SPC) and the German Agency for International Cooperation (*Deutsche Gesellschaft für Internationale Zusammenarbeit*, GIZ) project 'Coping with Climate Change in the Pacific Island Region'. One of the first achievements of the national REDD+ process was the development of a national REDD+ Policy in 2010. Fiji continued its

[2] Mangroves make up approximately 5 percent of Fiji's forest. Continual large-scale tourism development and urban expansion along the coastal areas have been identified as the main drivers of mangroves clearance. The Ministry of Lands and Mineral Resources manages the state land, including mangroves. Coastal communities are known to harvest mangroves on state land for subsistence purposes (for example, cremation and firewood) but are not allowed to sell wood collected from mangroves. For the effect of the ER Program, mangroves are not considered as forests and thus, were not included when calculating the Forest Reference Emissions Level (FREL).

[3] University of Hamburg. 2018. *Forest Reference Emission Level - Fiji: Reference Period 2006–2016*. Consultant Report. Hamburg, Germany.

[4] Global Forest Resources Assessment Country Reports: Republic of Fiji. 2015. Food and Agricultural Organization of the United Nations (FAO), Rome, Italy.

[5] Fiji Emissions Reductions Program Document (ERPD). 2019. Government of Fiji.

[6] REDD+ Readiness helps countries set up the enabling environment conditions to implement REDD+ and receive potential future results-based payments to reward countries for the successful efforts to reduce emissions from deforestation and forest degradation, and foster conservation, sustainable management of forests, and enhancement of forest carbon stocks (REDD+). According to the Forest Carbon Partnership Facility (FCPF), REDD+ Readiness process includes the designing of national REDD+ strategies; developing reference emission levels; designing measurement, reporting, and verification systems; and setting up national REDD+ management arrangements, including proper environmental and social safeguards.

REDD+ Readiness process and in 2012, it began developing its Readiness Preparation Proposal (R-PP). The R-PP included the relevant activities necessary for Fiji to achieve REDD+ Readiness. As part of this process, in 2015, US$3.8 million was granted to finance, between 2015 and 2019, REDD+ Readiness activities outlined in the R-PP. An additional financing of US$2 million was approved in February 2018 by the FCPF Participants Committee to strengthen and finalize the work under way to further advance Fiji's REDD+ Readiness. As part of its REDD+ Readiness preparation process, the GoF developed an ER Program 'Reducing emissions and enhancing livelihoods'. The ER Program provides the platform to develop integrated and sustainable land use activities that will contribute to reducing pressure on forests, controlling conversion of natural forests for other land use purposes, and supporting local livelihoods. By doing so, the ER Program will generate ER units measured in tons of carbon dioxide equivalent (tCO_2e) to be purchased by the FCPF's Carbon Fund. In exchange for the ER units generated, the country will receive payments that will be used to reward those carrying out efforts to reduce deforestation and forest degradation and enhance carbon stocks. Fiji Carbon Fund's ER Program will be among the first of such programs internationally and the first one in the South Pacific region.

8. **The Forestry Department, under the Ministry of Forests (MoF), is the lead agency, national focal point for REDD+, and the implementing agency for the FCPF Readiness and Carbon Funds.** The preparation of the ER Program and the REDD+ National Strategy is undertaken by the National REDD+ Unit (housed in the MoF) with support from the REDD+ Secretariat and the Technical Working Groups, as well as the REDD+ development partners, such as GIZ.

C. Higher Level Objectives to which the Project Contributes

9. **The Carbon Finance transaction is fully consistent with the Systematic Country Diagnostic (SCD) of FY2017 (P160757), the Country Engagement Note for FY2015–FY2017 (Report No. 93708-FJ), and the Government's climate change policy** (2018–2030)**.** The SCD identifies three pathways and cross-cutting issues: (a) stronger growth, (b) better access to services by all, and (c) building of resilience, which are closely linked to sustainable natural resource management and capacity building that are supported by the ER Program. Building rural resilience requires that the Government develop an integrated set of policies to address the drivers of natural resource degradation. This requires (a) reviewing the consistency of sectoral policies, particularly in forestry, agriculture, mining, tourism, and fisheries, to eliminate negative incentives that lead to conversion or degradation of forests; (b) strengthening the enforcement of regulations, such as the forest harvesting code, and promoting good agricultural practices to guide agricultural intensification; and (c) expanding afforestation and reforestation programs. The ER Program also contributes to the principles of the Green Growth Framework given its broad cross-cutting nature and its emphasis on promoting sustainable livelihoods of local communities and 'green' economic development.

10. **The REDD+ agenda and the carbon finance transaction are consistent with the SCD as it aims to enhance forest productivity and improve contribution to livelihoods and economic development.** The proposed ER Program is also aligned with the World Bank's corporate commitments on forests and climate change. Implementation of the Fiji REDD+ framework will directly support several interventions under the World Bank Group Forest Action Plan focus areas (sustainable forestry and forest-smart interventions) and cross-cutting themes (climate change and resilience, rights and participation, institutions and governance). The proposed ER Program would also contribute to the overall World Bank Group's corporate commitment to increase climate finance from 21 percent to 28 percent. The Fiji Country

Partnership Framework currently underway covers the priority areas for partnership cooperation from FY2020–FY2024.

11. **The activities of the ER Program are well ingrained in the country's national development policies.** The ER Program is developed in line with the National REDD+ Policy, is structured to respond to various national priorities, and contributes toward the country's overall vision of increased resilience and sustainable development. The importance of a sustainable forest sector and the National REDD+ Program is specifically mentioned in various plans and policies, including the 5-Year and 20-Year National Development Plan (NDP) (2017–2036), Low Emissions Development Strategy (LEDS) (2018-2050), and the National Climate Change Policy (2018–2030).

12. **Fiji's NDP (2017–2036) makes specific reference to the ER Program.** In addition, the NDP outlines a series of strategies aimed at strengthening efforts on forest conservation, sustainable forest harvesting practices, and climate change mitigation and adaptation that closely follow the ER Program's intentions. Relevant strategies include increasing forest areas (5,300 ha reforested above business as usual by 2022); expanding conservation forest areas (increase by 5 percent by 2022); developing a National Plantation Policy; formulating a National Land Use Plan; establishing long-term leasing mechanism(s) to support forest conservation, forest concessions, and plantation leases; developing a plan to enact a low-impact logging legislation; extending the logging licenses to be more than one year to avoid unsustainable extraction; and introducing a new regulatory framework for indigenous and pine forests.

13. **The activities of REDD+ Strategy are reflected and supported in Fiji's LEDS.** The country LEDS draws the plan for the decarbonization of its economy in the long term with the ultimate objective to reach net-zero emissions by 2050. The development of the LEDS responds to Article 4, paragraph 19 of the Paris Agreement and is aligned to the national-level objectives of the NDP (2017–2036) and the Green Growth Framework. The LEDS provides a framework for progressive revision and enhancement of targets under Fiji's Nationally Determined Contribution and provides guidance on the implementation of low emission strategies for critical sectors where real ERs can be achieved. While Fiji's Nationally Determined Contribution is specific to the energy sector, it refers to the importance of enhancing national accounting to incorporate the mitigation potential of Fiji's forest sector, through the National REDD+ Program, and other critical sectors.

D. Government of Fiji's Emissions Reduction Program (ER Program)

14. **The GoF's ER Program is a part of the Carbon Fund portfolio of ER Programs.** Fiji's ER Program Idea Note (ER-PIN) was accepted in the Carbon Fund pipeline in early 2016 and a Letter of Intent was signed in July 2016 between the GoF and the World Bank for the purchase of up to 3 million tons of ERs from the ER Program. In July 2019, the GoF presented its ER Program to the Carbon Fund Participants Committee. Acknowledging the extensive efforts made by Fiji and the high quality of the Emissions Reduction Program Document (ERPD), the Carbon Fund Participants Committee approved Fiji's ERPD unconditionally, whereby Fiji was officially accepted into the portfolio of both Tranche A and Tranche B of the Carbon Fund.

15. The ER Program aims to address critical drivers of deforestation and forest degradation by facilitating processes that would result in changing the mindsets and behavior of local resource owners to support the overarching aim of improving the forest sector's contribution toward fulfilling Fiji's NDP

(2017–2036) in the medium and long term. During the readiness phase, an analysis was conducted on Fiji's drivers of deforestation and forest degradation and potential consequences of forest loss in aggravating the risk of climate change through flash floods, landslides, extreme droughts, forest fires, and siltation and loss of topsoil. Agriculture expansion and poorly planned infrastructure development have been identified as the major drivers of deforestation.[7] Conventional logging, on the other hand, has been identified as Fiji's main driver of forest degradation. Allocation of resources to the ER Program will not only address the above-mentioned key drivers in relevant sectors but also bring these sectors to collaborate with the MoF in the development of the integrated district land use plans (IDLUPS).

16. **The Government's ER Program area for Fiji will comprise the islands of Viti Levu, Vanua Levu, and Taveuni.** With 1,045,309 ha of forest area on 1,685,742 ha of land, the program covers 90 percent of the total land mass and 94 percent of the forest cover in Fiji. REDD+ activities will be implemented on a subnational scale, usually as community projects, which are supported and administered by the Government and partners on a larger congregative level. The underlying activities of the program are structured under three strategic components:[8]

- **Component 1: Strengthening Enabling Conditions for Emission Reductions.** This component involves IDLUP to promote integrated landscape management and strengthen forest governance and law enforcement. It also aims to invest in an improved forest information system to support forest sector planning and decision-making.

- **Component 2: Promoting Integrated Landscape Management.** This is the core component of the ER Program and is expected to have the largest contribution to the reduction of emissions and enhancement of removals by sinks. It will focus on

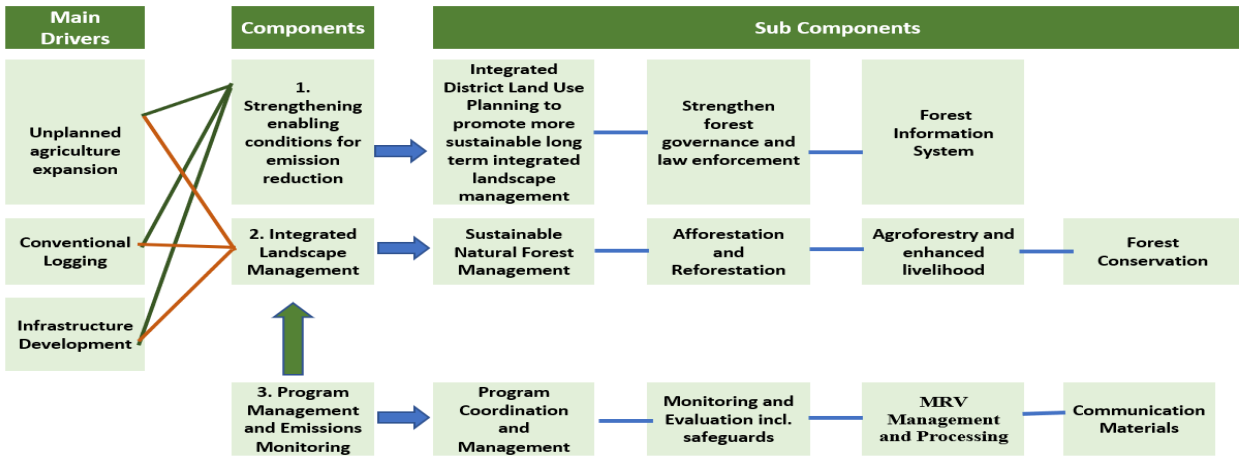
    - Sustainable natural forest management contributing to reduction of forest degradation;
    - Afforestation and reforestation and softwood and hardwood plantations, contributing to the enhancement of forest carbon stocks;
    - Afforestation and reforestation to restore ecosystem services;
    - Promotion of agroforestry and enhanced livelihoods, contributing to reduction of deforestation pressure; and
    - Promotion of forest protection, to conserve and restore natural forests.

- **Component 3: Program Management and Emissions Monitoring.** This component includes the program administration and financial management of the ER Program. It also includes monitoring and evaluation (M&E); safeguards compliance; a monitoring, reporting, and verification (MRV) system; and communication and awareness raising programs for the ER Program implementation.

[7] Annex 2 includes a detailed description of the drivers of deforestation and forest degradation, its underlying causes, and agents.

[8] The three strategic components listed are for Fiji´s ER Program, which are not to be confused with the two components of the carbon finance transaction described in section II. B. Implementation of activities under the ER Program's strategic components will result in the generation of ERs to be sold by the GoF to the Carbon Fund.

Figure 1. Overall Design of the ER Program



17. **The selection of priority REDD+ activities is based on carbon impact, biodiversity and livelihoods enhancement, and the interest of the owners and users in joining the program.** Activities identified to have a high carbon ER potential include afforestation/reforestation (mainly on unused and degraded grasslands), enrichment planting of poorly stocked and/or degraded commercial plantations, implementation of the Fiji Forest Harvesting Code of Practice (FFHCOP) with reduced impact logging in active logging sites, and agroforestry and alternative livelihood and protection of indigenous forests under present or potential threat from logging and infrastructure development. The program will focus on improving sustainable approaches to logging, improving forest governance, and introducing climate-smart crops and agroforestry. It will also aim to reduce the impact of some of the crops currently driving deforestation and forest degradation in the country, such as kava and taro.[9]

18. The ER Program accounting area hosts 11 of the 14 provinces (detailed description of the ER Program accounting areas is available in Annex 1). The key characteristics include the following:

- The 11 provinces account for 89 percent of the country's total land area, which hosts 97 percent of the 2017 population.

[9] Benefits from the proposed activities have the potential to have wide-ranging impact beyond carbon. Large-scale landscape restoration across the ER Program area will benefit current and future generations to ensure clean air, water, and reduced siltation and flash floods, as well as protection of Fiji's endemic species. On island systems such as Fiji, the impact would reach beyond the immediate landscape where the ER Program activities are undertaken but extend to support vibrant marine life through reduced siltation and pollutants entering estuaries. The spin-off would therefore be cross cutting and not limited to the forest sector. For instance, application of agroforestry and climate-smart agriculture in designated agriculture land will not only address food security but also reduce siltation, which would revitalize coastal marine environments. Establishment of tree woodlots in the upper and mid-slopes would retain and allow slow release of water and contribute toward flood mitigation. Adoption of sustainable forest management principles such as reduced impact logging, diameter limit tables, and management of large areas of forest using sustainable principles will not only address forest degradation and deforestation but will also contribute to livelihoods; income generation and employment; carbon sequestration; and water, soil. and biodiversity conservation. Establishment of protected forest areas will create a network or forest corridors that will not only support biodiversity but also protect fragile head waters and ensure supply of clean drinking water to all urban centers along the coastal areas of the ER Program area.

- The Province of Ba has the highest population count attributed to the increase in township boundaries and drift toward the townships and city. There are three towns and a city within the provincial boundary.

- The Province of Rewa is the most densely populated, attributed to rural-urban migration to Suva City, which is the main administrative (Government) and business center.

- The Province of Namosi has the lowest population count but has relatively good-size land area, being twice the size of Rewa; however, it is well known for its mountainous and rugged terrain.

II. PROJECT DEVELOPMENT OBJECTIVE

A. PDO

19. The objective of the Project is to make payments to the program entity for measured, reported, and verified ERs from reduced deforestation and forest degradation, and enhancement of forest carbon stocks (REDD+) at the national level in the Republic of Fiji and to ensure that paid amounts are distributed according to an agreed benefit sharing plan.

B. Project Beneficiaries

20. The project beneficiaries are identified as actors who should receive benefits because of their rights and/or contribution to delivery of ERs. Beneficiaries identified across all the ER Program activities can be summarized into three main categories:[10]

- **Owners of the land who consent to a REDD+ lease.** Potential beneficiaries under this category include (a) private registered landowners (freehold); (b) land use units (Land Bank) in terms of designated land (iTaukei) leased on behalf of the landowning units under provisions of the Land Bank regime; (c) the iTaukei landowning units that lease their land through the iTaukei Land Trust Board (TLTB) (this may be indigenous land, state land, or private-owned land) and Ministry of Land on account of state lands.

- **Community holders of REDD+ leases who register to adopt ER Program activities.** Potential beneficiaries under this category include (a) registered iTaukei landowning unit members (as a single unit or consolidated with other units) leasing own lands through joint enterprise under the TLTB process under lessors' representative trust; (b) registered iTaukei landowning unit members leasing own land through a trust under the TLTB for REDD+ lease provisions; and (c) potential investors leasing iTaukei land through the TLTB, Land Bank, or Ministry of Land solely for the purpose of ER Program activities (investors may be

[10] The Forest Bill 2016 requires that all actors seeking to implement REDD+ activities 'register' with the MoF. In addition, Clause 21 of the Forest Bill 2016 refers to the issue of Forest Management License. This clause may be expanded to reflect REDD+ activities (referred to in this document as a REDD+ License). This is supported by the Climate Change Act (CCA) which links the carbon sequestration rights to leases, licenses, or concessions. The carbon sequestration property rights may be in a term that is equal to or greater than the permanence period (Climate Change Bill 2019 section 66(3)b).

smallholder farmers or companies interested in taking part in ER Program activities on both iTaukei and state land).

- **Members of villages/communities with access rights to lands included in a REDD+ lease who form a REDD+ Community Trust.** Potential beneficiaries under this category include (a) other landowning units residing in the same village with no ownership rights to ER Program activities area but have access and user rights; (b) other iTaukei peoples classified as 'dependents' under section 2 of the iTaukei Land Act (Cap 133) who had separated from the tribe they belong to by descent in the same social settings with landowning units; and (c) other members of the general population in surrounding communities of the ER Program activity area with traditional customary access and/or access and use by arrangement, such as tenancy at will or informal 'vakavanua' arrangements.

21. The beneficiaries must meet the eligibility criteria and the amount of benefits will be based on meeting certain conditions. Interested parties willing to partake in the ER Program will be directed to the TLTB or Ministry of Lands and Mineral Resources to apply for REDD+ lease. The Climate Change Bill 2019 links the carbon sequestration property right to the lease (section 65[2]). Carbon sequestration property right may be granted by the Register of Titles upon the consent of the Conservator of Forests. This will ensure the systematic registration of all ER participants under REDD+ and support clear definition of beneficiaries under different categories of engagement. The benefit sharing plan (BSP) includes the eligibility criteria and conditions for the identified beneficiaries, including: those that have legal rights to carbon; those essential to facilitate/enable results (e.g. government, private sector, NGOs etc.), those incurring costs when implementing ER-P activities; resource stewards (communities that collectively maintain/support REDD+ activities) and; those whose behavior needs to change (sustainable land use and communal stewardship).

C. PDO-Level Results Indicators

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

(a) Volume of ERs measured and reported by the Program Entity, verified by an independent reviewer, and transferred to the FCPF Carbon Fund (ton CO_2eq)
(b) Payments received from the FCPF Carbon Fund for ERs generated by the ER Program (US$)
(c) ER payments distributed in accordance with agreed Benefit Sharing Plan (yes/no).

III. PROJECT DESCRIPTION

A. Project Components

23. **This operation has two components:** (a) Measurement, reporting, and verification (MRV) and payment of ERs generated by the Project; and (b) Distribution of the ER payments as per the Benefit Sharing Plan.

24. **Component 1: Measurement, reporting, and verification (MRV) and payment of the ERs generated by the project.** The payment from the Carbon Fund under the ERPA will be based on verified ERs measured and reported by the program entity. In the ERPD endorsed by the Carbon Fund Participants in July 2019, Fiji presented an approach to measure ERs in the ER Program. The same approach was used

when Fiji estimated its baseline emissions, which was rigorously assessed by an independent Technical Advisory Panel (TAP) against the requirements stipulated in the Carbon Fund Methodological Framework.

25. The Forest Management Services Division (MSD) under the MoF is the unit responsible for the measurement and reporting of information relating to greenhouse ERs generated from forest lands as well as safeguards and biodiversity. The MSD will measure the activity data annually and will report on ERs every other year. The MoF will report to the Climate Change and International Cooperation Division (CCICD) of the Ministry of Economy (MoE). The CCICD will then report the monitoring results to the FCPF Carbon Fund. An independent verification will take place three times during the ERPA period and will be carried out by a third party using the agreed technical standards stipulated in the Carbon Fund Methodological Framework following the submission of the government verifier monitoring report. Verified volumes of ERs will be paid for at an agreed unit price as stipulated in the ERPA. FMT will hire the third-party independent verification monitor. The verification mechanism has been discussed and agreed upon by all the Carbon Fund countries, donors and the Bank, which is also described in the General Conditions of Carbon Fund and the ERPA. As part of these transactions, ERs will be transferred from the program entity to the FCPF Carbon Fund through a central carbon registry.

26. **Component 2: Distribution of ER payments as per the Benefit Sharing Plan.** The proceeds from verified ER payments will be shared according to an agreed BSP prepared by the GoF, designed through a highly consultative process and based on the criteria in the Carbon Fund Methodological Framework and in a manner that is acceptable to the World Bank. The BSP builds on existing laws, regulations, and standard operating procedures. It is informed by a number of existing models including (a) the TLTB lease, (b) Ministry of Lands and Mineral Resources - Land Bank, and (c) Ministry of Lands and Mineral Resources distribution of mineral royalties under the Fair Share Mineral Act 2018 and the Forest Decree 1992 (as well as provisions in the Forest Bill). Building on these models, the BSP will use REDD+ License as the vehicle to deliver benefits to REDD+ License holders. REDD+ lease issued under (a) and (b) above is a prerequisite for the issue of a REDD+ License by the MoF to register REDD+ ER Program beneficiaries.

27. Payments from the FCPF Carbon Fund will be made to the MoE. After verifying the monitoring report submitted by the MoF recommending release of payments to beneficiaries, the MoE will make payments to the MoF from the pool assigned to net carbon benefits. The MoF will then distribute benefits to beneficiaries in accordance with the agreed proportions as outlined in the BSP. Distribution of benefits to all beneficiaries will be made according to the BSP for use of carbon funds proposed by the MSD Unit/REDD+ Unit, in consultation with REDD+ Steering Committee (RSC), based on the registered REDD+ beneficiaries, lease agreements, and the MoF's monitoring report. The institutional arrangements currently in place supporting REDD+ initiatives at the divisional and provincial levels would coordinate the registration process for all beneficiaries under the MoF. Key institutions that have a role to play in the facilitation of sharing net carbon benefits will support the delivery of benefits. These institutions include Provincial/District Councils under the Ministry of iTaukei Affairs, Ministry of Rural and Maritime Development, Divisional Working Group, and the REDD+ Unit under the MoF.

28. The type and amount of net carbon benefits for each group are shown in table 1. These take into consideration appropriate incentives for participation in activities that generate emission reductions and removals and award the beneficiaries for their contributions to generation of ERs, costs involved including opportunity costs, and other incentives such as non-carbon benefits linked to the activities. The

beneficiaries share 85 percent of the net carbon benefit after operational costs (10 percent maximum) and performance buffers (5 percent) are set aside.

Table 1. Types of Carbon Benefits for Each Beneficiary

Beneficiaries	Types of Carbon Benefits		Total (%)
	Monetary	Non-monetary	
Private Sector	@20%	Not applicable	20
Community/village/settlement	@10%	@10% support tree planting aimed at communities to supplement supply of tree seedlings, equipment may include nursery and associated implements, basic firefighting tools and other agriculture-based economic incentives to support economic well-being.	20
Smallholder Farmers	@25%	@10% support for agroforestry opportunities targeted at smallholder farmers would include apiculture incentives and vanilla, cocoa, and coffee planting materials to diversify and promote agroforestry.	35
National Trust of Fiji Nongovernmental organizations (NGOs)	@20%	Not applicable	20
Provincial Council	@5%	Not applicable	5

29. More information on the type of benefits and beneficiaries, the guidelines and eligibility criteria to participate as a beneficiary in the ER Program, the distribution mechanism, institutional arrangements, and fund flow among other relevant key aspects of the BSP are available in the advanced draft BSP. An advanced draft BSP has been reviewed by and found to be acceptable by the Carbon Fund Participants. A final BSP is required before the first payment. While the BSP is expected to contain the general guidelines for benefit sharing, the GoF will develop a Project Operational Manual (POM) that will include specific provisions on performance monitoring and verification of activities and the operational procedures for benefit sharing.

B. Carbon Finance Aspects

30. **The instrument for the operation is carbon finance through an ERPA.** As the trustee and delivery partner of the FCPF Carbon Fund, the World Bank will make payments for greenhouse gas (GHG) emission reductions that are independently verified during implementation. According to the international framework for REDD+, Fiji has proposed an emissions/removals baseline based on historical rates of change in forest cover and quality (reference emission level) and intends to use their National Forest Monitoring System (NFMS) established using Readiness funds to measure, verify, and report future emission reduction during program implementation. Payments under the ERPA will be made upon the independent verification of the emission reductions (a combination of reduced emissions and enhanced carbon sequestration compared with the forest reference level [FRL]) and confirmation that safeguard instruments and the BSP have been properly implemented according to the ER Program monitoring report.

31. **It is expected that the implementation of the carbon finance operation will cover a five-year period starting in 2020.** The implementation period will officially start after the ERPA signing and will end

in December 2025 before the end of the lifetime of the Carbon Fund. The ERPA signing is expected to take place during July 2020. The GoF has requested payment of retroactive ERs and has fulfilled the two conditions for retroactive ERs: (a) unconditional acceptance of the ER Program into the Carbon Fund portfolio (accepted in July 2019) and (b) clearance of the ER Program's safeguards due diligence report by the World Bank's regional safeguards adviser (cleared by RSA in March 2020). The GoF proposes to request payment for retroactive ERs starting from July 19, 2019 when Fiji was unconditionally accepted into the Carbon Fund portfolio.

32. **The World Bank financing for this operation is provided by the carbon finance under the FCPF.** The draft financing plan for the total ER Program estimates US$42.45 million for the five-year implementation time frame. The ER Program budget will be financed by government budget, international sources, Carbon Fund contributions under the FCPF through World Bank, and private sector contributions. The ongoing FCPF Readiness Project in Fiji already supports the development of a National REDD+ strategy and an enabling policy framework, as well as capacity building for REDD+ at the national and subnational levels. The FCPF Carbon Fund now builds on Fiji's enhanced readiness to engage in carbon finance, which has great potential to leverage other sources of funding, including from development partners and private sector.

33. **The net ERs available for transfer to the Carbon Fund are estimated at 2.52 million tCO_2e during the ERPA period.** This estimate was calculated after deducting a series of buffers to the ex-ante ERs estimates to account for uncertainty and reversal risk.[11] Gross ex ante ERs for the implementation period were estimated at 3.5 million tCO_2e, which represents a 43 percent reduction in emissions and enhances removals by sinks from the business-as-usual estimates of the FRL. Table 2 details the ex-ante GHG emission reductions and removals of the ER Program.

34. **Measuring and monitoring of emissions and/or removals against Fiji's reference level will result in reporting emissions/removals every two years.**[12] Monitoring of activity data (for example, harvest volumes and land use change) will occur annually. Landsat medium (10 m–30 m) resolution and remote sensing imagery will be used to identify the potential forest change areas, and ground surveys and/or high-resolution remote sensing imagery will be used for annual activity monitoring. For the monitoring of ground data sources, emission factors are estimated from a combination of national data (for example, from National Forest Inventory [NFI] and permanent sample plots [PSPs] using the Intergovernmental Panel on Climate Change [IPCC] default values). The ERPA payments will take place according to a BSP agreed with beneficiaries before the ERPA signature.

[11] According to the buffer guidelines, a conservativeness factor of 8 percent deforestation and reforestation, a 15 percent uncertainty buffer for forest degradation (which relies on so-called proxy methods), and a 26 percent reversal risk buffer were applied to the estimated total expected emissions of the country under the program.
[12] This may change based on the results of the ERPA negotiation between the GoF and the FCPF.

Table 2. Ex-Ante GHG ER and Removals of the ER Program

	A	B	C = A – B	D	E = C – D
ERPA term year t	**FREL (tCO_2e/year)**	**Estimation of Total Ex Ante Emissions (including removals) under the ER Program (tCO_2e/year)**	**Gross Estimated ERs**	**Expected Set Aside to Reflect the Conservativeness Factor and Risk of Reversals (tCO_2e/year)**	**Total Estimated Net ERs/Carbon Removal Benefit (tCO_2e/year)**
2020	1,636,804	1,081,113	555,691	160,098	395,593
2021	1,636,804	1,092,686	544,118	156,975	387,143
2022	1,636,804	824,884	811,920	231,046	580,874
2023	1,636,804	836,457	800,347	227,923	572,424
2024	1,636,804	826,353	810,451	231,854	578,597
Total 2020 2024	**8,184,020**	**4,661,493**	**3,522,527**	**1,007,896**	**2,514,631**
Average annual (2020–2024)	**1,636,804**	**932,299**	**704,505**	**201,579**	**502,926**

C. Project Costs and Financing

35. **By design, the ERPA financing is results based and is therefore ex post.** That is, upon independent verification of reported ERs, payments will be made to the authorized program entity. A total of 2.52 million tCO_2e is the expected number of ERs that will be generated during the ERPA period (2020–2024).[13] Gross ex ante ERs for the implementation period were estimated at 3.5 million tCO_2e, which represents a 43 percent reduction in emission and enhances removals by sinks from the business-as-usual estimates of the FRL. As the ERPA payments are results based, the actual performance determined after ER reporting and verification may be higher or lower than estimated.

36. **The expected value of the ERPA is US$12.5 million assuming US$5 per tCO_2e.** This value is based on calculations on the ERs potential conducted for the elaboration of Fiji's ERPD and is within the range of the ER volume offered according to the Letter of Intent signed between the FCPF and GoF, whereby the country committed to selling up to 3.5 million tCO_2e. More information on the net ERs available for transfer to the Carbon Fund and the series of buffers applied according to the FCPF guidelines for accounting uncertainty and reversal risks is available in Annex 4.

37. **Fiji's ER Program has received unconditional approval to join the Carbon Fund.** During the last Carbon Fund meeting held in July 2019, the Carbon Fund approved the GoF's ERPD unconditionally, when Fiji was officially accepted into the Carbon Fund portfolio. The program implementation period will officially start after ERPA signature (expected by July 2020). It is expected that the GoF will seek retroactive financing dating back to July 2019 and propose three reporting periods, with the first period starting in July 2019. The projected payments include interim payments, which may occur based on reported but yet

[13] The ERPA term is subject to negotiation. It is expected that the last reporting period will end in December 2024 and the corresponding final payments be made in 2025. The ERPA terminates with the transfer of the final payment.

to be verified ERs. The expected delivery of units and payments for the verified ERs is summarized in table 3.[14]

Table 3. Expected ERs Payments per Reporting Period over the Project Period (US$, millions)

Reporting Period	Payments	Number of ERs Delivered (tCO_2e)	Expected Disbursements after Verification
Reporting period 1: July 2019–December 2020	Payment period 1: June–December 2021	300,000	1,500,000
Reporting period 2: January 2021–December 2022	Interim payment: December 2021	n.a.	1,250,000
	Payment period 2: June–December 2023	1,000,000	3,750,000
Reporting period 3: January 2023–December 2024	Interim payment: December 2023	n.a.	1,500,000
	Payment period 3: June–December 2024	1,200,000	4,500,000
Total		**2,500,000**	**12,500,000**

Note: The GoF will most likely request this payment schedule for the ERs to be delivered.

D. Rationale for Bank Involvement and Role of Partners

38. **The World Bank Group's comparative advantage is based on its track record of engagement and lessons learned and global knowledge and experience built up over a sustained period of engagement in forestry, agriculture, and climate change sectors.** In the case of Fiji, the World Bank has been supporting the country in its REDD+ Readiness process as a delivery partner under the ongoing FCPF REDD+ Readiness Grant Project (P151209). The REDD+ Readiness Grant is being implemented to design and support the REDD+ Readiness process and ER Program. In addition, the World Bank has extensive experience through supporting similar projects in Africa, Asia, and Latin America under the FCPF, Global Environment Facility (GEF), and BioCarbon Fund, which has been and will continue to be shared with Fiji. This includes the World Bank's unique expertise in providing technical assistance to support the design and implementation of large-scale ER Programs, such as technical aspects related to MRV, carbon accounting, benefit sharing, Strategic Environmental and Social Assessment (SESA), and so on.

39. **The design of Fiji's ER Program has benefited from development partners' support.** The development partners involved include GIZ, Conservation International (CI), GEF, and the Green Climate Fund (GCF). Implementation of the ER Program will continue to be coordinated with these partners to ensure its objective is realized and synergies achieved.

- **GIZ** has been a longtime partner in supporting Fiji's REDD+ Readiness preparation process. Together with the SPC, the GIZ, through the project 'Coping with Climate Change in the

[14] The ER Program design had anticipated two verifications. The Government will most likely request retroactive and two interim payments. Retroactive payments would cover the early phase of the program and, if adopted, will result in a total of three reporting periods and verifications. If interim payments are accepted, which has been approved for other countries, (for example, Mozambique and Ghana), payments schedule will result in five payments starting in 2021 and ending in 2025.

Pacific Island Region', supported the development of a National REDD+ Policy in 2010. The project served as a flagship and training area for the Pacific region. GIZ will continue to support Fiji in capacity building at the local level for REDD+ implementation.

- **CI** collaborates with communities to improve natural resource management and livelihoods, from the mountains to the coasts to the sea, using an approach called 'ridge to reef to ocean'. Furthermore, CI has been a key partner in supporting Fiji in its REDD+ Readiness preparation phase. Specifically, CI has supported some of the key studies, such as the identification of drivers of deforestation and forest degradation, REDD+ Strategy Options, and the study on benefit sharing mechanism (BSM). It is currently developing Fiji´s BSP commissioned by the GoF.

- **The GEF** provides US$2.1 million financing to facilitate the implementation of the ER Program. This funding will support investments in restoration of degraded forests and enhanced carbon stocks.

- **GCF.** Still under preparation, it is expected that CI will work with the World Wildlife Fund to submit a proposal to GCF called 'The Greater Sea Reef', where the forestry component is some US$8–US$10 million focusing on Macuata, Ra, and Ba Provinces—basically the northwest parts of Vanua Levu and Viti Levu encapsulating the Greater Sea Reef off Macuata.

40. **Nongovernment agents' (private sector, communities, and so on) participation and engagement in the program has been ensured through extensive stakeholder consultations at various levels.** A stakeholder analysis to determine the consultation process was carried out early in the REDD+ process, during the scoping work that preceded REDD+ policy development. Consultations have been carried out throughout the REDD+ process with indigenous communities, non-indigenous commercial investors, private sector, government, NGOs/civil society organizations (CSOs), academic and research institutions, international agencies, faith-based organizations, urban-based indigenous decision-makers, National iTaukei Resource Owners Council, provincial and district representatives from the 11 provinces, community groups, and statutory bodies. Subsequent efforts in recognition of the importance of stakeholder consultation and participation resulted in the development, validation, and endorsement (by the RSC) of the REDD+ Consultation Strategy and Consultation Plan and a series of key analytical studies. An identification of the main actors and beneficiaries and their rights of influence, roles, and responsibilities in the program, among other features, has been carried out as part of the REDD+ Readiness and the BSP processes.

E. Lessons Learned and Reflected in the Project Design

41. **The ER Program reflects the institutional capacities gained during the country's REDD+ readiness phase.** Fiji's readiness phase commenced in 2009 through the GIZ REDD+ Project, the lessons of which have been incorporated into the ER Program. From 2015 till now, the ongoing FCPF Readiness Project has been characterized by extensive stakeholder consultations, awareness, and capacity building from the policy level to local communities and highly successful technical training on the MRV component. The FRL, NFMS, and SESA, developed under the Readiness Project, are extremely helpful and are being fully used in the design and implementation of the ER Program.

42. **Vigorous stakeholder consultations were undertaken to ensure transparent stakeholder information sharing and broad community support and the full and effective participation of relevant stakeholders.** Focus of these consultations was on affected indigenous peoples and local communities. Specific consultations were carried out in selected representative communities to inform the design of the ER Program and possible non-carbon benefits to consider. Consultations on the proposed ER interventions and its potential impacts/risks commenced on November 29, 2016, and concluded on February 27, 2017, with field visits by multidisciplinary teams to the proposed ER Program accounting area and included work with villages and districts, which contributed to the SESA process.[15] Additional consultations in July and August 2018, including Taveuni in Cakaudrove Province of the Northern Region (which was not included in the original field-based studies), were undertaken and consultations specifically targeted women and vulnerable households in selected ER Program provinces were also undertaken in the language of choice requested by each community group. In Nakauvadra, in the Province of Ra of the Western Division of Viti Levu, consultations were undertaken with traditional landowning iTaukei communities and where leasehold Indian-Fijian communities are located, especially communities that relied, to some extent, on livelihoods derived from the forests. Most of the iTaukei communities consulted, irrespective of gender and economic status, understood the importance of forest resources to their material and spiritual well-being.

43. **During consultations, participants had the opportunity to express their concerns.** Concerns related to the ER Program included the potential impact upon their livelihoods, thus the need to identify sustainable livelihood activities that would benefit the households, and provision of income support during the period it would take to restore their livelihoods. As part of the SESA process, an Environmental and Social Management Framework (ESMF) was drafted to ensure that the program would minimize and mitigate any negative impacts while ensuring that the positive impacts from program implementation are equitably shared.

44. **The design of the ER Program was also based on the results of a series of analytical products and consultations funded by the FCPF REDD+ Readiness Preparation Grant (P151209).** Activities related to REDD+ Readiness Preparation have contributed to strengthening the MoF's technical capacities and improving interinstitutional coordination for the sustainable management of forests. The MoF's technical capacities have been strengthened through the design and supervision of key studies and REDD+ safeguards instruments required for the preparation of the ERPD.[16] These studies have informed the selection of the ER Program components and the REDD+ National Strategy. Interinstitutional coordination has been improved by the development of a governance framework for REDD+. Section IV of this document addresses the institutional and implementation arrangements for REDD+ and the ER Program.

[15] Majority of the intervention were guided by the Consultation Strategy and Plan which advocated methodologies through workshops, meetings, written comments, informal get-togethers, focus group discussions, websites, Facebook, and Twitter, which have proven to be effective. Further information on consultation can be found in section 5 of the ERPD, SESA, and the REDD+ Readiness Package (R-Package).

[16] Some relevant REDD+ instruments and studies include the development of a SESA, a clear definition of forest and agroforestry systems, FREL, and training of staff in technologies for MRV of GHG of the forest sector. Relevant studies include analyses on the drivers of deforestation and forest degradation, land ownership, carbon rights, and benefit-sharing mechanism, among others.

IV. IMPLEMENTATION ARRANGEMENTS

A. Institutional and Implementation Arrangements

45. Given its diverse geography,[17] Fiji has developed a solid REDD+ governance that includes different structures at the national, regional, and site levels to ensure effective coordination for implementation of the program activities.

Coordination at the National Level

46. The Forestry Department, under the MoF, is the lead agency, national focal point for REDD+, and the implementing agency for the FCPF Readiness Fund. The preparation of the National REDD+ Program and the REDD+ National Strategy is undertaken by the National REDD+ Unit with support from the REDD+ Secretariat, Technical Working Groups, and international and national consultants mobilized.

47. The RSC's responsibility is to coordinate and facilitate implementation of the Fiji REDD+ Program. The RSC, a multi-stakeholder committee comprising representatives of the key stakeholder groups identified as being relevant for REDD+, serves to ensure that (a) the multisector REDD+ agenda is implemented and (b) the safeguards identified under Fiji's REDD+ Policy are complied with. The RSC plays both governing and advisory functions as it provides the administrative oversight for REDD+ activities, including the ER Program. The Deputy Conservator of Forests serves as the chairperson of the RSC.

48. Members of the RSC at the national level include the following:

- The MoE, which acts as the national focal point for the UNFCCC and coordinates with the MoF in representing Fiji's REDD+ agenda at international meetings
- The Ministry of iTaukei Affairs (responsible for developing and promoting policies to ensure good governance and welfare of the iTaukei)
- The TLTB (the custodian of iTaukei land in the country)
- The Ministry of Environment (the national focal point for the Convention on Biological Diversity)
- The Ministry of Lands and Mineral Resources (looks after state land, including mangroves)
- The Ministry of Agriculture (the lead agency for the agricultural sector and the national focal point for United Nation Convention to Combat Desertification [UNCCD])
- The Ministry of Provincial Development (responsible for administering government activities at the provincial level)
- Ministry of Rural and Maritime Development
- Natural Disaster and Meteorological Services
- The Ministry of Youth and Sports.

[17] Fiji is administratively divided into three divisions, that is, Northern, Western, and Central-Eastern. Under the native hierarchical system, the areas are divided into three traditional confederacies, which are further subdivided into 14 provinces. There are 11 townships and two cities. The ER Program accounting area hosts 11 of the 14 provinces.

49. Representatives of NGOs carrying out REDD+ activities contribute to the development of national-scale M&E, provide inputs to guidelines on safeguards, and ensure compliance of national procedures. Private forestry sector (timber industry) plays an important role in reducing forest degradation. Fiji Pine Limited and Fiji Hardwood Corporation Limited support and identify opportunities for REDD+ activities pertaining to plantations. REDD+ iTaukei resource owner representatives ensure that landowners' rights and interests are addressed as most of Fiji's forests are owned by indigenous communities. The Department of Women under the Ministry of Women, Children, and Poverty Alleviation is also part of the RSC.

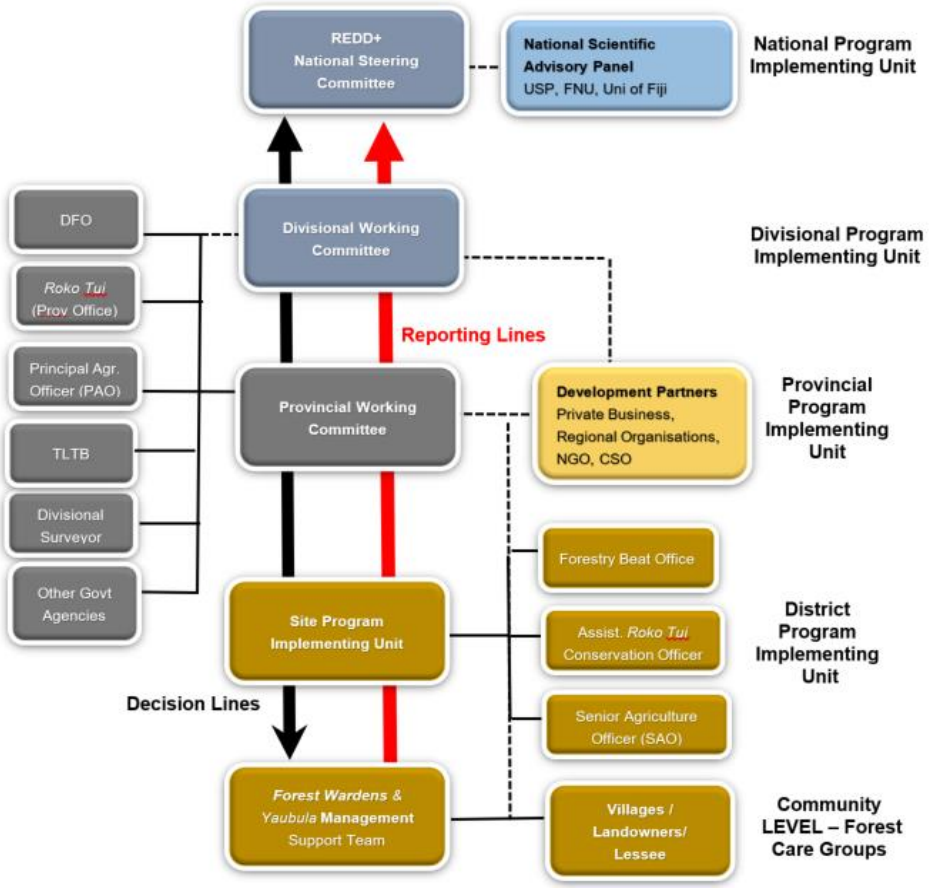
Coordination at the Regional Level

50. The MoF has overseen the REDD+ Readiness Project through the RSC, and the REDD+ Unit, which sits within the Forestry Department of the ministry. At the sub-regional level, REDD+ activities are supported by the REDD+ Divisional Working Groups. Members of the REDD+ Divisional Working Group consist of the Chairperson (designated commissioners); senior administrators of all government agencies involved; private entities; NGOs under the RSC; conservation officers at Provincial Council Offices; forest wardens (FWs); representatives of land care groups (for example, commodity clusters such as kava and taro); and representatives of forest watch groups.

Coordination at the Site-level Implementation

51. At the site level where the REDD+ activities would happen, the forestry beat officer will be assisted by the FW to lead site-level implementation of activities and will be supported by the agriculture extension officers. Community monitoring will be led by the Provincial Council Office's chief executive officer or Roko Tui and/or conservation officer. The FW will be the point of contact for the villages. The FW will work closely with the Yaubula Management Support Teams (YMSTs) as well as other voluntary community groups such as the land care groups and commodity cluster groups. The FW will be required to (a) report on the progress of implementation of ER Program activities at the site level, (b) report on landowner grievances and issues that require immediate intervention and redress; (c) report on opportunities that may arise and strengthen ER Program's national position, and (d) advise on most plausible options for efficient implementation and delivery of ER Program products and services with the greatest impact. Reports are submitted monthly to the District Divisional Forest Officer who will submit them to the REDD+ Divisional Working Group.

Figure 2. Governance and Implementation Arrangement of ER Program from National to Site Level



Source: Fiji's ERPD. June 3, 2019.
Note: Private business includes all forest sector enterprises operating in the ER Program accounting area.

B. Results Monitoring and Evaluation Arrangements

52. The M&E approach for the results of Fiji's ER Program will be done as detailed in the following paragraphs.

53. **ER monitoring periods.** ERs generated because of the implementation of the ER Program will be measured annually and in tCO_2e coinciding with the main PDO indicator. ERs will be measured by monitoring GHG emissions from deforestation and comparing them with an FRL of 1,636,804 tCO_2e per year. The methodology to be applied for estimating emission removals will be consistent with that used to estimate the FRL. For monitoring, measuring, and reporting (MMR), Fiji will employ an integrated approach to the NFMS. The integrated approach includes monitoring of activity data using Landsat remote sensing and periodic ground measurements (surveys) throughout all major forest types in Fiji in addition to the NFI and PSP program traditionally used to measure emissions factors. This analysis will be complemented with community monitoring and participatory forest monitoring, consisting of training of participating communities in the use of the geographic information system (GIS) by the MSD staff to map planted lands and fire scars.

54. **Reporting periods.** The MoF is responsible for the overall management of Fiji's NFMS. The NFMS enables reporting on information relating to GHG emissions. The MoF will coordinate the measurement and reporting of ERs. Measuring and monitoring of emissions will result in reporting emissions/removals in three reporting periods, followed by verification and ERPA payments in the year following the reporting period.

(a) **First reporting:** From July 2019 to December 2020. ERs target: 300,000 tCO_2e
(b) **Second reporting period:** From January 2021 to December 2022. ERs target: 1,000,000 tCO_2e
(c) **Third reporting period:** From January 2023 to December 2024. ERs target: 1,200,000 tCO_2e.

55. **Verification.** All ERs generated in the accounting area during the implementation period from July 2019 to December 2024 will need to be verified by an independent evaluator before the ERPA payments. The verification will take place three times during the ERPA period and will be carried out by a third party following the submission of a monitoring report[18] by the Government.

56. **ER transaction system.** ERs sold to the Carbon Fund and those set aside in the buffer will be registered in Fiji's transaction registry[19] under its National REDD+ registry or in a centralized transaction registry managed by the FCPF, if the national registry is not ready at the time of the first payments.

57. **Interim progress reports.** During the ERPA term, performance indicators for each mitigation measure, implementation of safeguards instruments, and implementation of the BSP will be monitored through regular World Bank supervision missions (at least every semester) and documented in interim progress reports and ER monitoring reports, in form and substance satisfactory to the World Bank.

58. **Non-carbon benefits.** The NFMS enables reporting on information relating to GHG emissions reductions and removals from forests as well as safeguards and biodiversity. The new structure of the MSD includes the establishment of units to facilitate the MMR of ERs (see figure 5.3). New units include a forest biometrics section responsible for ground data and safeguards and an expanded remote sensing and GIS section responsible for mapping and database management. The database unit will also be responsible for supporting implementation and analysis of data collected using the NFMS.

C. Sustainability

59. **Fiji's ER Program is based on Government policy commitments made at the national level.** Specifically, the ER Program is reinforced by the following:

(a) **REDD+ structures and processes are closely linked or embedded in existing national structures**. The enhancement of these through the ER Program can have a ripple effect on

[18] According to the ERPA general conditions, the monitoring report means a report provided by the program entity setting out the following information on the previous reporting period: (a) the number of ERs generated by the ER Program; (b) the occurrence of any reversal event(s); (c) any inability, in full or in part, to transfer title to ERs or to the trustee or any title contest by any contesting party; and (f) all other data as may be required to be collected and recorded by the ER monitoring plan.
[19] The ER transaction registry is a system that creates (that is, issues) ER units 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 ER units and transactions; and supports accounting for non-permanence risk management (buffer reserves).

national structures, including governance, such as improvement of the MoF's institutional and technical capacities on MRV, and application of free, prior, and informed consent (FPIC) guidelines.

(b) **Inclusion of the ER Program and its underlying activities in midterm development plans:** 5-Year and 20-Year NDPs, Transforming Fiji, Green Growth Framework, and Fiji's LEDS.

(c) **Alignment with national sectoral policies including the National Climate Change Policy (2018–2030)** and the new Climate Change Act (CCA) (currently presented to Parliament for approval). With this new law, the GoF aims to set out a plan for the country to achieve net-zero carbon emissions by 2050. The new law makes specific reference to the ER Program. It is at the public consultation stage and is expected to be approved by July 2020. In the unlikely event that the Climate Change Bill is not passed within the time required by the FCPF (12 months after ERPA signing), the fallback position under Fijian common law is that the right to the carbon in forest trees on land remains with the respective owner including where the land has been leased, and therefore provided lawful and valid consent has been given by such landowner, the forest carbon may be transacted to the FCPF for the purposes of the Republic of Fiji's Emission Reductions Programme.

60. **The implementation of the program will generate 2.52 million tCO_2e net ERs and generate payments for verified ERs of up to US$12.5 million.** Although the implementation period of the ER Program is five years, it is expected that the implementation and execution of activities aiming at strengthening the enabling conditions for REDD+ and promoting an integrated landscape management are expected to introduce large-scale transformational change that will reduce deforestation and forest degradation in a sustainable manner. Moreover, it is expected that the country will reinvest the ER payments in successful practices, including the protection of forests and improvement of the productivity of the forest sector, and improving the livelihoods of the local population. From an economic viewpoint, reinvestment of payments will continue to strengthen productivity of the sector while generating additional climate benefits and thus create a positive productive cycle for the coming years. In this sense, benefits of the program (carbon and non-carbon) are expected to expand well beyond the five-year implementation period of the ER Program. Section V.A. presents a summary of the analyses employed to estimate the potential financial and economic benefits associated with the implementation of the ER Program.

V. PROJECT APPRAISAL SUMMARY

A. Technical, Economic, and Financial Analysis

Technical Analysis

61. **The ER Program has been developed in accordance with the methodological framework of the FCPF Carbon Fund.** The Methodological Framework includes a series of technical criteria (38) and indicators (78) built around five sections: (a) level of ambition, (b) carbon accounting, (c) safeguards, (d) sustainable program design and implementation, and (e) ER Program transactions. For guaranteeing compliance with the FCPF Methodological Framework, an independent TAP conducted a series of desk reviews and country visits. TAP's assessment process was initiated in December 2017 with a remote desk

review of an early draft version of the Fiji ERPD, before the World Bank and TAP mission to Fiji on January 20–26, 2019. The first assessment concluded on February 1, 2019. TAP conducted a second desk review between April 4 and 19, 2019, of the March 28, 2019, Advanced Draft which reflected discussions during the January mission. Between June 4 and 20, 2019, TAP reviewed the June final ERPD versions, including the annexes. In July 2019, the GoF presented the ERPD at the Carbon Fund 20th meeting held in Washington, D.C. The Carbon Fund Participants acknowledged the extensive efforts made by Fiji and the high quality of the country's ERPD. The Carbon Fund Participants decided to include Fiji's ERPD into the portfolio of both Tranche A and Tranche B of the Carbon Fund and authorized the World Bank to initiate and lead negotiations for the ERPA signing, in accordance with the ERPA negotiations process and subject to completion of World Bank due diligence and final World Bank approval.

62. **The design of the ER Program has considered relevant technical elements.** The approach for estimating emissions and removals follows the IPCC guidelines. In line with this, emissions factors were estimated from a combination of national data from the NFI and PSPs using IPCC default values. Annual monitoring of activity data will be collected using Landsat medium (10 m–30 m) resolution and remote sensing imagery to identify the potential forest change areas, and either ground surveys and/or high-resolution remote sensing imagery to verify the identified areas of change. Ground surveys are key, as it is unlikely that areas subject to afforestation and reforestation will be visible through satellite imagery. Ground surveys will also collect information on other community-based activities related to timber harvesting, replanting, establishment of new forests, and minimizing fire incidents. Ground surveys will be based on the existing relationships or new arrangements between the MSD of the MoF and timber industry stakeholders and communities.

63. **The BSP has been developed through a highly participatory process to ensure that all relevant stakeholders are represented.** The benefit-sharing arrangements of the ER Program build on the customary landownership of the indigenous people (the iTaukei) for most of the forestland and are recognized by the GoF. Considering this, the BSP is informed by the country's existing BSMs, which are institutionalized with strong legal frameworks and functional institutional support ensuring efficient delivery of each mechanism. The initial design and institutional arrangements presented in the ERPD were developed based on a recent study carried out for this purpose. The study on the BSM has set clear guidelines on stakeholder perceptions on all elements of benefit sharing, including objectives and principles; identification of beneficiaries; allocation between beneficiary groups; eligibility criteria for beneficiaries; conditionality of benefits; delivery of benefits; disclosure, communication, and dissemination of information; monitoring of BSM and feedback and grievance redress mechanism (FGRM). An advanced BSP has been found acceptable by the Carbon Fund Participants and disclosed publicly in-country and on the World Bank's website. A final BSP is required before the first payment.

Financial and Economic Analysis

64. The financial and economic analysis was conducted to assess the contribution of the project to society's welfare and inform the decision of whether to invest in a project. The analysis gives monetary value to the benefits (positive welfare) and to the costs (negative welfare) effects of the project by applying a discounted cash flow analysis. Discounting allows the comparison of future costs and revenues in present day terms. For the financial analysis, a discount rate of 12 percent is used, with sensitivity analysis also conducted to assess how project net benefit changes with differing discount rates.

65. The financial analysis takes into consideration the costs and revenues that constitute financial flows between actors and for which actual functioning market exists, while the economic analysis integrates externalities such as environmental cost and benefit, for example, biodiversity, carbon, soil productivity, or avoided losses due to natural catastrophes.

Financial Analysis

66. The financial analysis considers the total costs of the program over a period of 20 years that will be incurred by the GoF and the various implementation agencies. These were estimated at US$212.57 million (valued at current costs). To account for the financial benefits of the program implementation, forest products from natural and plantation forests and agricultural products were valued at current market prices. In total, the benefit will amount to US$755 million over 20 years. The financial analysis also incorporates carbon revenue and uses the agreed US$5 per ton value of carbon. The financial analysis does not consider potential shadow carbon revenues resulting from this transaction.

67. Based on these estimates the financial rate of return (FRR) is not calculable for the ER Program as the project's net present value (NPV) after five years is negative US$33.16 million assuming a discount rate of 12 percent. The FRR increases to 14.5 percent after 10 years and results in a positive NPV of US$4.7 million. The FRR after 20 years is 28.1 percent and the NPV of the project is estimated to be US$87.39 million. This analysis indicates that the financial returns from the program investment are justified in the medium and long term.

Economic Analysis

68. The economic analysis assumes additional economic benefits for the national economy by integrating into the analysis carbon shadow revenues resulting from this transaction. The costs remain the same as in the financial analysis. The economic analysis incorporates a social discount rate of 6 percent. The economic analysis results in a positive NPV of US$33.3 million over 5 years, US$150.5 million over 10 years, and US$454.8 million over 20 years. The economic rate of return varies strongly due to the higher return resulting from financial returns and shadow carbon revenues and a lower discount rate, 66.4 percent after 5 years, 82.8 percent after 10 years, and 84.3 percent after 20 years. Annex 8 includes a sensitivity analysis run for the different carbon revenues and social discount rates employed for the analysis.[20]

B. Fiduciary

(i) Financial Management

69. An assessment of the project's financial management arrangements and review of fund flows from the FCPF Carbon Fund to beneficiaries according to the BSP concluded that the project meets the minimum World Bank financial management requirements. Fiji's public financial management (PFM) system has had several improvements in recent years to address its weaknesses and challenges through comprehensive PFM reform improvement programs, the latest being 2019–2024. The main principles for

[20] The detailed financial and economic analysis was made following the World Bank's 2017 Guidance Note on shadow price of carbon in economic analyses.

the financial management 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.

70. The financial management risk of the project is assessed as 'Substantial', after mitigation measures. The main actions required to be completed before the ERPA effectiveness include (a) appointing a full-time project accountant implementing agency to be trained on the World Bank financial management requirements and disbursement procedures and (b) developing a project financial management manual as part of the POM, describing in detail the roles and responsibilities of the concerned parties, as well as the proper procedures, internal controls, and oversight mechanisms based on the BSP. The MoF will set up a Program Management Unit (PMU) (including a dedicated project accountant) or use the existing PMU setup within the REDD+ Unit and provide all guarantees to be operated in a way that meets the requirements of the ERPA and World Bank. A dedicated account for the ER Program will be opened by the MoE at the Reserve Bank of Fiji and will operate in accordance with the Public Financial Management Act 2004. Semiannual interim financial reports and project financial statements will provide information for fund monitoring and audit reports to be published.

(ii) Procurement

71. Not applicable.

C. Social and Environment (including safeguards) [21]

72. A national SESA of the ER Program was prepared by the REDD+ Unit to inform the preparation of the REDD+ Strategy, ER Program, and safeguards instruments. The process that lasted for more than two years was informed by site visits, consultations, key informant interviews, and workshops and was overseen by the REDD+ Safeguards Working Group. The social context is underpinned by land tenure—90 percent of land is communally owned by iTaukei and is inalienable. In the more remote areas or in less fertile areas (including upland areas), the population is mostly iTaukei and the people are more likely to be living subsistence lifestyles and using forests for agriculture, medicines, fiber, timber, and other non-timber forest products. Much of the lower fertile land has been converted to agriculture, plantation forestry, urban areas, and tourist accommodation through leases on iTaukei land by non-iTaukei, Government, and commercial operators. The populations in these more developed areas are more ethnically diverse. The SESA concludes that rural iTaukei households living on the ER Program islands rely on the forests to a significantly greater extent than the rural non-iTaukei households.

73. The SESA notes that poverty has been declining in Fiji (from 39.8 percent in 2002 to 28 percent of the population in 2014), with a higher incidence of poverty in the rural areas (37 percent) compared to urban (20 percent) and little difference between male- and female-headed households. Food security is an issue in some districts more than others, based on the risks of natural disasters and the transition from semi-subsistence to semi-commercial farming.

[21] A Project Information Document/Integrated Safeguards Datasheet has been cleared by the Regional Safeguards Service and disclosed on the World Bank's Operations Portal.

74. The environmental context is typical of islands across the Pacific. Endemic and native flora and fauna with restricted ranges are at risk of extinction because of habitat destruction and introduction of pests and invasive species. Over half (56 percent) of terrestrial endemic species have been assessed as threatened, with 32 percent listed as critically endangered. Because of the iTaukei land tenure there are very few Government-managed sanctuaries and conservation areas. The SESA lists critical habitats across the ER Program area such as (a) areas of cloud forest; (b) the Sovi Basin (largest remaining relatively undisturbed tract of lowland forest); (c) Kilaka Forest an area of relatively undisturbed upland forest (4.02 km^2); (d) mangroves; (e) riparian forests; (f) wetlands (including two Ramsar sites); and (g) several important bird areas, key biodiversity areas, and Alliance for Zero Extinction sites listed by NGOs.

75. The ER Program has been designed to improve forest habitats and the livelihoods of Fijians. Overall, the project is expected to have positive environmental benefits and the recommended Category is B. The purpose of the ER Program is to promote a reduction in the rates of deforestation and degradation as well as measures to protect and conserve forests. Therefore, the impacts are expected to be mostly positive. As forest cover improves so too will the associated benefits associated with forests, including healthier natural habitats, not only as a sink for carbon but also for the many environmental/social services forests provide, such as watershed protection, provision of important habitats, sustainable sources of non-timber forest products, and other forest-based livelihoods. However, there would be potential negative impacts associated with implementation of the program. The SESA, prepared under OP/BP 4.01, has identified risks that require management and a series of safeguards instruments have been prepared to meet the World Bank safeguard policies, including the ESMF, a Resettlement Policy Framework (RPF), and a Process Framework (PF).

Social

76. The key social risks identified in the SESA and Gender Action Plan (GAP) are the following:

(a) The restriction of people's access to forest resources, the activities for strengthening and implementing policies controlling conversion of natural forests, and forest governance and law enforcement may have the potential for reduced access to forest and non-timber forest product resources for forest-dependent communities through improvements to forest governance. Possible short-term reduction in the volume of non-timber forest products may result in food insecurity or less income for non-timber forest products that are sold. Some possible impacts on livelihoods, that is, improved governance may not include unfettered or continued access to all forest areas. OP/BP 4.12 is triggered, and a PF was prepared to mitigate any potential access restriction.

(b) The inequity of impacts on poorer or vulnerable people (including women) who may have restrictions on access to resources and may not have the ability or means to engage in the process and take advantage of benefits the PF will be used to mitigate such impacts.

(c) Changes in livelihoods and levels of incomes from the introduction of land use planning, climate-smart agriculture and sustainable livelihoods, forest conservation, and formalized protection of forest areas.

(d) Land boundary conflicts.

(e) Women and vulnerable groups not being part of decision-making.

(f) Inaccurate expectations of the monetary and non-monetary benefits from the ER Program.

77. Risks will be mitigated using the ESMF PF as well as extensive and ongoing consultations and engagement activities to raise awareness and allow the full engagement and contribution of beneficiaries and potentially affected people in the ER Program activities and BSP.

78. The Government's ER Program is designed to mainstream gender issues to ensure that gender differential impacts are addressed. A gender analysis in the ER Program area was conducted and a GAP with specific results indicators for monitoring was completed. The GAP will promote gender equality impacts and mitigate possible risks and negative impacts. The GAP has three approaches: (a) provide opportunities for and strengthen the role of women in program activities, (b) address limited availability of sustainable livelihoods and gender equality in livelihood opportunities, and (c) and support the monitoring and dissemination of information about environmental sustainability and social risks to men and women as part of safeguards. Furthermore, the benefit sharing approach and the program design process, safeguards implementation, forest-dependent participation, and citizen engagement issues all include efforts to ensure and enhance female involvement. The M&E indicators will be disaggregated by gender. Overall, the gender aspects address the strategic and practical needs of indigenous iTaukei women while ensuring equity in the process. All proposed enabling environment and investment activities will be screened through the gender lens for effective mainstreaming.

79. **OP/BP 4.10 is triggered.** The ER Program is likely to generate significant social benefits to include benefits for indigenous peoples where the ER Program implementation will occur predominately on the customary lands of indigenous peoples (referred to as iTaukei). The application of this policy will ensure that consultations regarding the ER Program interventions are culturally appropriate and inclusive and provide evidence of broad community support for REDD+ activities on their lands. The REDD+ Unit will continue to consult with iTaukei and non-indigenous peoples (mainly Fijians of Indian descent) to ensure that they participate in and benefit from REDD+ activities in a culturally appropriate way and that adverse impacts on them are avoided or, where not feasible, minimized or mitigated. As a key process to ensure this policy requirement, FPIC consultation will be conducted with affected iTaukei peoples, ascertaining their broad community support to the project.

80. An Indigenous Peoples Policy Framework has not been prepared as the majority of beneficiaries will be indigenous peoples. Elements of an Indigenous Peoples Policy Framework have been incorporated into the ER Program, ESMF, RPF, and PF. The ESMF includes provisions for ensuring that the design of ER Program activities would integrate the elements of project-specific Indigenous Peoples Plan.

81. An FGRM developed for Fiji's REDD+ is inclusive and participatory, responsive, and respectful encompassing the need for FPIC of not only for affected indigenous iTaukei peoples but also the Indo-Fijians. The FGRM has been designed under the enabling laws of Fiji's Constitution and existing laws, local customary grievances used, and policies and regulations pertaining to land and resource access and development. Its development considers the identification and analysis of legislation and policy that affects REDD+, analyzes existing institutional capacity and mechanisms used to respond to and resolve conflict, and identifies existing and potential grievances and conflicts that may arise because of implementing REDD+ projects. The FGRM is primarily designed for intervention as an alternative dispute

resolution mechanism at a semiformal level of grievance redress of customary/informal systems to complement but not replace the existing FGRMs and legal mechanisms.

82. An FGRM for the ER Program area is in place to address potential conflict relating to land/boundary disputes during implementation of the ER activities. The ESMF includes an FGRM to provide the framework within which complaints about safeguards and benefit sharing compliance can be handled, grievances will be addressed, and disputes will be settled quickly. As part of overall implementation of the subproject, the FGRM will be established by the Environmental and Social Unit of the ER Program Provincial-level Program Management Units (PPMUs). It will be readily accessible, handle grievances, and resolve them at the lowest level as quickly as possible. The key process and elements of the FGRM include procedures for submission of complaints and grievance resolution, responsible person, and contact information. The complaints could be received verbally; written; or by telephone, fax, or email. They could be sent to the local authorities, PPMU, or the independent environmental monitoring consultants and will be logged in the record system and sent to the responsible persons for further action. To facilitate the complaint process, subproject information leaflets will be prepared and distributed at the subproject sites to provide practical information about grievances to local residents, including contacts and addresses. The FGRM also refers to the World Bank's Grievance Redress Service (GRS) and indicates that communities and individuals affected by the program may submit their complaints to the World Bank's independent Inspection Panel which determines whether harm occurred, or could occur, because of noncompliance with World Bank safeguards policies and procedures. The website address to provide information on how to submit complaints to the World Bank's GRS is also provided.

83. **BSP.** The BSP ensures that the carbon benefits are distributed among various beneficiaries at different levels in a transparent, inclusive, and fair manner with effectiveness, efficiency, democracy, flexibility, and comprehensiveness through proper consultation process with all relevant stakeholders and local communities. The BSP under the REDD+ ER Program builds on existing laws, regulations, and standard operating procedures. The REDD+ BSP is informed by a number of existing models including (a) the TLTB lease, (b) Ministry of Lands and Mineral Resources - Land Bank, and (c) Ministry of Lands and Mineral Resources distribution of mineral royalties under the Fair Share Mineral Act 2018 and the Forest Decree 1992 (as well as provisions in the Forest Bill). Building on these models, the BSM for the FCPF ER Program in Fiji will use REDD+ License as the vehicle to deliver benefits to REDD+ License holders. Application of the models will secure land lease titles that provide legal rights to carbon stored in trees on the lands leased. In alignment with existing legal instruments, REDD+ lease is a prerequisite to the issue of a REDD+ License issued by the MoF to register REDD+ ER Program beneficiaries. The Fair Share of Mineral Royalties Act provides overall guideline on sharing of the gross carbon revenue as discussed and endorsed by REDD+ stakeholders—where no less than 80 percent of proceeds from ER revenue is directed to beneficiaries. The net carbon benefit will be allocated to different beneficiaries in accordance with discussions and agreements formulated across broad stakeholders, where each beneficiary is allocated a proportion of the net carbon benefit.

84. **The key potential beneficiaries are** (a) iTaukei landowners, who consent to a REDD+ lease; (b) holders of REDD+ leases who register to adopt the ER Program activities; and (c) members of villages/communities with access rights to lands included in a REDD+ lease who form a REDD+ Community Trust. The BSP is a framework designed to set key principles while allowing for some flexibility to meet the national, provincial, and local circumstances and respect the traditional knowledge and culture of local

communities in natural resource management. The BSP encourages active participation of all relevant stakeholders at different levels to contribute to the ER targets.

85. **The BSP focuses on identifying key challenges and mitigation role of key agencies** adopting a hybrid approach that blends existing and anticipated legal frameworks through the issuance of REDD+ leases and REDD+ License to register beneficiaries that will share the net carbon benefits from the ERPA. In this respect, the BSP focuses on core role of the MoF and its support to the successful implementation of the ER Program, including performance-based rewards to all beneficiaries. The BSP design is based on best practices such as linking with other ongoing initiatives, best use of the existing institutional arrangement, such as the TLTB and Land Bank, and capacity building. The BSP describes both the stakeholder functions and the conditions for accessing benefits.

86. **REDD+ BSP is shaped by the determination of carbon rights, which are defined by the Legal instruments** that safeguards the interest of resource owners like iTaukei Land Trust Act (Cap 134) and iTaukei Land Trust (leases and licenses) Regulations and the Land Use Decree 2010 with the accompaniment of land use regulations. The MoE verifies the report from the MoF and makes payments to the MoF from the pool assigned to net carbon benefits. The MoF will distribute benefits to beneficiaries[22] through standard operating procedures in place in according to the REDD+ Beneficiary Register, in accordance to the agreed upon proportion or as recommended by the Forestry Board and endorsed by Minister of Forestry and Minister of Economy.

Environment

87. **This program is classified as Category B because it mainly consists of actions and measures aimed at reducing the rates of deforestation and degradation** to protect and conserve forests in the areas of intervention. Any potential environmental impacts and risks stemming from the implementation of on-the-ground activities are expected to be moderate, localized, short term, and manageable. The following environmental operational (safeguard) policies apply: Environmental Assessment (OP/BP 4.01), Natural Habitats (OP/BP 4.04), Forests (OP/BP 4.36), Pest Management (OP 4.09), and Physical Cultural Resources (OP/BP 4.11).

88. **The environmental risks associated with the ER Program and identified in the SESA** are (a) conversion of high-value forests and other habitats from climate-smart agriculture and plantation forestry, (b) loss or decline of soil fertility from intensive agriculture, (c) further invasion of pest species where areas are left fallow or forest disturbances occur, (d) contamination from pesticide use for controlling agricultural pests and invasive species, and (e) degradation of other habitats following restrictions on forest use and/or forest conservation. Risks will be mitigated by detailed screening and scoping of environmental risks during the development of ER Program activities and the BSP and site-specific/risk-specific management plans implemented and monitored throughout the implementation period.

[22] The MoF has standard operating procedures in place to authenticate beneficiaries in accordance to the REDD+ Beneficiary Register. Beneficiaries are registered by the MoF at the issue of REDD+ License. Apart from technical aspects, license conditions include submission of land titles, proof of residence, bank account details, and tax identification number.

89. **The ESMF provides an adequate system to identify, assess, and manage environmental and social risks of the ER Program** and meets the requirements of OP/BP 4.01, OP/BP 4.04, OP/BP 4.09, OP/BP 4.11, OP/BP 4.10, and OP/BP 4.36. Risks will be primarily mitigated through significant consultation and awareness raising with communities and stakeholders to enhance benefits and avoid impacts or when impacts are unavoidable identify mitigation and compensation measures. As a key process to ensure that OP/BP 4.10 is addressed, FPIC (Free, Prior and Informed Consent is used rather than Free, Prior, and Informed Consultation as required by OP/BP 4.10 because the former is a national requirement in Fiji) will be conducted with affected iTaukei peoples and their broad community support to activities would be ascertained. Therefore, the GoF requested to use such language in relation to the affected iTaukei peoples and their broad community support to activities. The ESMF also outlines extensive capacity building to ensure that several dedicated safeguards specialists are employed to manage the environmental and social risk screening, prepare and implement safeguards instruments, and ensure that M&E is completed and provides relevant information for World Bank supervision. The ESMF also addresses the environmental and social risks of the BSP and the implementation of the BSP will be subject to the same screening and assessment process.

90. **The safeguards approach** reflects that the specific activities of the ER Program area are largely financed through (a) government programs; (b) international sources provided by international organizations, including Carbon Fund payments; and (c) the private sector. For the ER Program activities financed by the World Bank, the World Bank will be responsible for supervising and ensuring compliance of the activities with the applicable safeguards instruments developed under this project (for example, existing impact assessments, ESMF, Environmental and Social Impact Assessment, and other safeguards frameworks and plans) and adequate mechanisms for safeguard management and monitoring. The World Bank will retain full responsibility for safeguards compliance and oversight for these projects. For the ER Program activities financed by other donors as highlighted earlier, the MoF has conducted due diligence to assess if the safeguards of the respective donor at the program level are consistent with the World Bank's safeguards policies and requirements of the ER Program's ESMF before project effectiveness. For the ongoing bilateral donors' projects, in addition to the due diligence, the MoF has also conducted a due diligence to assess if the donor's safeguards are properly applied. The due diligence report has been reviewed and cleared by the World Bank's regional safeguards adviser and the ER benefit from these interventions can be included in the BSP. The World Bank would not be responsible for any prior review, clearance, or supervision of such activities. Activities in the ER Program accounting area, which may in some way contribute to ERs but are not mentioned in the ERPD, will be deemed to be not part of the ER Program, and the World Bank would bear no responsibility for review or oversight either at the transaction or program level.

91. **The World Bank will conduct system-level reviews and field-based spot checks on the implementation** of how the safeguards for the environmental and social risks are working. The World Bank's primary responsibility for oversight would be to assess whether the environmental and social management systems established by the program entity address and respect all aspects of the safeguard plans that apply to the ERPA operation. Furthermore, World Bank accountability and due diligence would be related to (a) its role in the development, approval, and implementation of the safeguard system which will apply to the ER Program and ERPA and (b) the World Bank's role in the review, approval, and compliance oversight of specific activities or projects implemented as part of the ER Program, or within the ERPA accounting area, depending on the source of financing for those activities. The implementation of the BSP will also be supervised by the World Bank.

92. **The MoF is responsible for safeguard implementation, monitoring, and training related to the ER Program.** A national-level multisectoral body (RSC) is in place and would coordinate all activities relating to program implementation and monitoring. In addition, a Central Program Management Unit (CPMU) is already in place and will serve as the body responsible for managing the implementation and oversight of the safeguard instruments and in turn would be supported by the provincial- and district-level institutional arrangements. Both social and environmental safeguards specialists will be hired at subnational levels to support the implementation of safeguards.

93. **Capacity development.** The World Bank will commence a series of trainings on safeguards instruments for the national-level environment and social safeguards staff within the CPMU once they are hired, to build safeguards implementation capacity. In addition, training will be extended to the Project Implementation Units at the provincial and district levels to include awareness raising on REDD+ and sensitization to socioeconomic and environmental and biodiversity issues. It is expected that specific training on the project's safeguard instruments will be focused on staff and other stakeholders at the local level where most decisions on resource management are taken.

94. Furthermore, during implementation of the program, in addition to safeguards training, technical assistance will be provided for staff of the PPMUs and district-level PMU during the first two years. The CPMU will conduct at least two safeguard training workshops (one on environment and one on social) per year for the PPMUs focusing on the contents of the ESMF and requirements for preparing safeguard documents, especially ESM, and Resettlement Action Plans. Technical training on issues related to safeguard issues and other related aspects, including field trips, will also be carried out at least once a year for the first two years.

95. **The program for capacity building on safeguards is included in subsections of the ESMF.** The objective of safeguards training and technical assistance is to ensure that staff and local communities have adequate knowledge and understanding of government regulations and safeguard requirements to take timely actions. The CPMU will mobilize consultants to provide training on safeguard policy and monitor and report on performance of safeguard policy to the World Bank. The CPMU will also mobilize independent monitoring consultants to supervise implementation of the Resettlement Action Plan (if needed). The PPMUs will also mobilize safeguard consultants (individual or organizations) to support them in the implementation of safeguard measures for the subproject. The safeguards staff and consultants will ensure that safeguards measures (ESMP/RPF) are fully integrated into the subproject planning and implementation cycle as well as help the CPMU/PPMUs to prepare safeguards monitoring reports, as required. The consultants will also ensure that technical assistance on environment and social safeguards is provided to local communities so that they could perform their functions effectively.

96. **The GoF would be responsible for ensuring that the requirements of applicable safeguards instruments** (that is, ESMF, RPF, PF, and GAP) are complied with. The World Bank will conduct system-level safeguards supervision. This will include periodic spot checks in the accounting area to ensure compliance.

97. **Scope of the program safeguards application.** The World Bank's safeguards policies apply to the entire ER Program irrespective of financing source. Because the ESMF and other safeguard frameworks provide clear guidance on how to comply with the safeguards of the program, future projects that are financed by international donors (for example, GCF) and are located within the program area and

contribute to the program objectives need to adopt and follow the safeguards of the program. This can be done by signing a Memorandum of Understanding between the MoF and the project owner before approval of the bilateral donor's project. The Memorandum of Understanding will cover background of the ER Program and the project objective and commit to comply with the safeguards of the program, implementation arrangements, M&E, and reporting.

98. **Safeguard implementation, monitoring, and capacity building.** As the program entity, the MoF, through its CPMU supported by the PPMU, will be responsible for implementing and monitoring the program environmental and social safeguard instruments (ESMF, RPF, and Process Framework). At the program level, at least two program safeguard staff of the CPMU will review the safeguard implementation progress, take actions as necessary, and report the results as part of the program safeguard monitoring report to be submitted to the World Bank on a six-month and yearly basis. Close consultation with the World Bank on specific issues will be maintained. At the field level, the BSP will be included in the PMU's implementation of the ER Program and communities will be instrumental in coordinating and contributing to implementing collaborative approaches to forest land management, forest protection and biodiversity conservation, and reporting. At the subproject/activity level, at least two safeguard staff of the subproject/activity owner (PPMUs) will be responsible for monitoring and monthly reporting. Third-party monitoring consultants, which includes environmental and social specialists, will be mobilized by the MoF and will be retained until the end of the program. During implementation, appropriate trainings will be provided to the CPMU, PPMUs, consultants, local community representatives, and other program stakeholders on the safeguard instruments to be applied to the program.

99. **Public consultation and information disclosure.** During preparation of the safeguards program documents (SESA, ESMF, RPF, and PF), relevant stakeholders (sectors engaged in land use at the national, provincial, and districts levels; NGOs; faith-based organizations; women's organizations; and so on) have been consulted. The ESMF, RPF, and PF were prepared based on the results of the ERPD and the consultations involved in that process and the SESA process, which included extensive qualitative and quantitative consultations. Stakeholders from the household level to the national and international level have been consulted on the SESA. These consultations commenced in July 2017, although for the past two years there have also been consultations of an iterative nature. Consultation sessions on the ESMF at the provincial level occurred in all three provinces up to and including mid-September 2019. Before the additional consultation held in 2019, detailed consultations were also undertaken during 2018 and 2019 and were specifically used in the development of the ESMF. Consultations with relevant stakeholders on the RPF and PF were conducted from June/July 2019. Inputs from these consultations were used in updating the ESMF, RPF, and PF. The feedback from the various consultations have been incorporated into the program design and the final draft of the program safeguard instruments. The final environmental and social safeguards instruments, recently cleared by the regional safeguards adviser, have been disclosed locally and on the World Bank's website on March 30, 2020. The Appraisal Stage Integrated Safeguards Data Sheet of the project has also been disclosed at the World Bank's Operations Portal on February 12, 2020. During program implementation, the consultation and participation plan developed by the Central REDD+ Unit will be used together with the FPIC guidelines.

VI. GRIEVANCE REDRESS SERVICES

100. **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.** The Grievance Redress Service 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 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 Bank Management has been given an opportunity to respond. For information on how to submit complaints to the World Bank's corporate Grievance Redress Service, please visit http://www.worldbank.org/en/projects-operations/products-and-services/grievance-redress-service. For information on how to submit complaints to the World Bank Inspection Panel, please visit www.inspectionpanel.org. Materials being developed to disseminate the project feedback and grievance redress mechanism will also contain information on how to access the Bank's Grievance Redress Services.

VII. KEY RISKS

A. Overall Risk Rating and Explanation of Key Risks

101. **The overall risk of the operation is Substantial.** The REDD+ Readiness process presents a high level of risk as it requires extensive stakeholder engagement and coordination at all levels and involves important changes to the existing institutional framework and policies. There are sensitive social issues associated with the implementation of the program such as land tenure, benefit sharing, and the FGRM. Land leasing arrangements are complex, land valuation methods vary, and not all land is clearly registered or surveyed. Land in Fiji is mostly held as customary land. About 87 percent of the country's total area is iTaukei land—owned or reserved for indigenous Fijians. Most of this land is collectively owned by the traditional clans and cannot be sold and land lease arrangements are often cited as a key constraint to sustainable agricultural land use. Although formal grievance procedures for iTaukei land disputes are evident, this is not comprehensive or fully inclusive of all parties involved. As such, there is a risk of excluding Fijians of Indian descent, other ethnic groups, women, and vulnerable persons, including those without secure land tenure. These arrangements may have the potential to cause negative impacts, conflicts, or disputes within mataqali (landowning unit) and between the Government, mataqali, and leaseholders when not effectively addressed for implementation of the ER Program and the BSP.

102. The key risks and proposed mitigation measures based on the SORT (Systematic Operations Risk-Rating Tool) are presented below:

103. **Sector strategies and policies risk is rated Substantial.** Even though Fiji's ER Program received unconditional approval to join the Carbon Fund portfolio, it has been noted that further provisions are needed to clarify the Government's ability to transfer ER titles from landowners to the World Bank as trustee of the Carbon Fund. In this sense, it is expected that the GoF will need to provide the ER Title Transfer Documentation, including a government letter and legal opinion. Most importantly, a draft CCA needs to be passed to transfer title to the Carbon Fund. The draft CCA has specific provisions for REDD+

and ER Program that are deemed sufficient to serve as evidence to demonstrate Fiji's ability to transfer ER titles. There is a risk of the CCA not being passed by the Parliament before the ERPA effectiveness. The risk would be mitigated through provision of a government letter indicating Fiji's strong commitment to having the CCA passed on time, and in an unlikely event of the CCA not being passed, the Government will promptly notify the trustee to seek alternative ways to demonstrate its ability to transfer title pursuant to the road map described in the legal opinion.

104. **Technical design risk is rated Substantial.** The ER Program is based on priority activities to address the main drivers of deforestation, forest degradation, and carbon enhancements with anticipated investment finance and, thus, is expected to generate ERs against the business-as-usual scenario (the reference level). Despite the solid preparatory work, there is still a substantial risk that ERs to be generated will not be as much as originally envisaged because of technical challenges to implement the program and accurately monitor, report, and verify the forest areas and ERs and external factors such as extreme climate events. On the positive side, the GoF has significantly strengthened its institutional capacities for forests and ERs monitoring during the ongoing Readiness Project and the World Bank team will continue to provide strong support to the MSD and MRV team to further enhance their MRV capacity, and also support the MoE, MoF, and REDD+ Unit to improve coordination and collaborate to achieve successful implementation of the program. The Facility Management Team (FMT) will also work closely with the MoE and MoF to provide technical support to the National Registry and provide training regarding links to the Central Registry established at the World Bank.

105. **Institutional capacity for implementation and sustainability risk is rated Substantial.** This program is a complex operation, with interventions across multiple sectors and levels of government and involving a wide array of stakeholders. Because of the Readiness Grant, the MoF has been able to strengthen its capacities, especially in MRV of emissions from the forest sector. The institutional arrangements for implementation of the ER Program at the provincial levels will mirror the national level with REDD+ Working Groups already in place at the divisional and provincial levels. Nonetheless, the Government has no experience in administering a project of this nature (results-based payments) and complexity. The risk will be mitigated through strengthened institutional capacity building and implementation support from the task team and the World Bank country office based in Fiji and through seeking support from high-level management in the MoF and MoE. The MoF also plans to use the help of the REDD+ Unit to work on the ER Program, which has experience working on the FCPF Readiness Project.

106. **Fiduciary risk is rated Substantial.** Overall financial management risk is rated Substantial. Although this operation is a carbon transaction that will not entail procurement activities, it is expected that the executing entities will receive the ER payments and distribute them among beneficiaries in accordance with the BSP. At the project level, substantial risks exist in utilization of funds efficiently and economically for intended purposes and lack of capacity at the PMU level to implement the project and control mechanisms including budgeting, funds flow, staffing, and external auditing. Mitigation measures include the following:

- Employing a full-time project accountant at the PMU.
- Having the World Bank task team provide strengthened implementation support and training to meet the World Bank Group's fiduciary standards.

- Equipping the PMU with staff who have experience with the FCPF REDD+ Readiness Projects.
- Developing the project financial management manual as part of the POM. This manual will describe in detail the roles and responsibilities of the concerned parties, as well as the proper procedures, internal controls, and oversight mechanism.
- Auditing the project's financial statements, including the BSP, by an auditor acceptable to the World Bank, in accordance with terms of reference (TOR) acceptable to the World Bank.

107. **Environment and social risks are rated High.** The combined environment and social risk rating is high due to the key social risks identified in the SESA, ESMF, PF, RPF, and GAP are the following:

(a) The restriction of people's access to forest resources because of the introduction of land use planning, strengthening of forestry governance and law enforcement, and promotion of climate-smart agriculture and sustainable livelihoods and forest conservation and formalized protection of forest areas.

(b) The inequity of impacts on poorer or vulnerable people (including women) who may have restrictions on access to resources and may not have the ability or means to engage in the process and take advantage of benefits.

(c) Changes in livelihoods and levels of incomes from the introduction of land use planning, climate-smart agriculture and sustainable livelihoods, forest conservation, and formalized protection of forest areas.

(d) Risks of land boundary conflicts.

(e) Risks of women and vulnerable groups not being part of decision-making.

(f) Managing expectations of the monetary and non-monetary benefits from the ER Program.

108. Risks will be mitigated through extensive and ongoing consultations and engagement activities to raise awareness and allow the full engagement and contribution of beneficiaries and potentially affected people in the ER Program activities and BSP.

109. The environmental risks identified in the SESA and ESMF are (a) conversion of high-value forests and other habitats from climate-smart agriculture and plantation forestry, (b) loss or decline of soil fertility from intensive agriculture, (c) further invasion of pest species where areas are left fallow or forest disturbances occur, (d) contamination from pesticide use for controlling agricultural pests and invasive species, and (e) degradation of other habitats following restrictions on forest use and/or forest conservation. Risks will be mitigated by detailed screening and scoping of environmental risks during the development of the ER Program activities and the BSP and site-specific/risk-specific management plans implemented and monitored throughout the implementation period.

110. There are contextual risks relating to institutional capacity that will require support and oversight by the task team. New staff will be required to implement the safeguards instruments and manage an M&E program for safeguards. The ESMF identifies a detailed program of training and capacity building to

raise the capacity of the REDD+ Unit, Divisional Working Groups, and the REDD+ Safeguards Working Group to apply the safeguards instruments and comply with the World Bank safeguards policies.

111. **Stakeholders risk is rated Substantial.** There is a substantial risk of not generating the expected ERs because of the lack of engagement of relevant stakeholders, especially of iTaukei landholders without leases within the priority areas of the program. A consultation and participation plan has been developed and implemented under the REDD+ Readiness Grant Project. Extensive consultations have been carried out to ensure that the relevant stakeholders understand the scope, responsibilities, and potential benefits of the program and to ensure transparency and proper representation of beneficiaries. Further consultations, awareness raising and capacity-building activities for the ER Program will be conducted at the national and local levels, including the following categories: (a) the National RSC including all sectors engaged in land use; (b) focus groups representing forest-dependent communities and indigenous peoples; (c) Provincial Council heads, the so-called Roko tui; (d) the private sector (Fiji Pine Trust, Fiji Mahogany Trust, Fiji Pine Ltd, and Fiji Hardwood Corporation); and (e) civil society and academia. Risks are also related to the management of expectations regarding benefits from the ER payments. Further consultations will be conducted to avoid raising unrealistic expectations and providing appropriate arrangements for partners to participate in and benefit from the ER Program. The Government has publicly disclosed the advanced draft BSP.

112. **Financial risk is rated Substantial.** The draft financing plan estimates a total ER Program budget of US$42.446 million for the five-year implementation time frame. The ER budget will be financed by domestic and international sources, Carbon Fund contributions, and private sector contributions. A total of 80 percent of financing is from the Government and international sources while the remaining 20 percent will be funded by the private enterprises in Fiji. Some project proposals included in the ERPD are well planned and advanced but have not been approved and thus have not fully secured financing from the international and domestic sources. Therefore, there is a substantial risk that in case any of the planned financing does not materialize or is delayed, the relevant activities may not be implemented in time and thus ERs will not be fully generated by the end of the ERPA period. This risk will be mitigated through the task team's continuous engagement and close working relationship with the MoE and MoF to ensure provision of additional budget in case there are any financing gaps. The Government is in the process of reviewing and approving a three-year budget for the required funding and the MoE has committed to providing additional funding to ensure successful implementation in case some other funding sources[23] do not materialize.

[23] The GoF is also seeking additional sources of financing through the GCF and potential World Bank financing through IDA or the PROGREEN Fund.

VIII. RESULTS FRAMEWORK AND MONITORING

Development Objective Indicators FY (Target Value)

Indicator Name	Baseline	YR1 (2020)	YR2 (2021)	YR3 (2022)	YR4 (2023)	YR5 (2024)	YR (2025)	End Target (2025)
Volume of CO_2 Emission Reductions measured and reported by the Program Entity, to be verified by a Third Party, and transferred to the FCPF Carbon Fund	0	0	300,000	0	1,000,000	0	1,200,000	2,500,000
Payment by the FCPF Carbon Fund for CO_2 Emission Reductions generated by Fiji's ER Program (USD $)	0	0	1,500,000	1,250,000	3,750,000	1,500,000	4,500,000	12,500,000
Emission Reductions payments distributed in accordance with agreed Benefit Sharing Plan	No	-	Yes	Yes	Yes	Yes	Yes	Yes

Monitoring and Evaluation Plan
COUNTRY: Fiji

Project Development Objective: The objective of the Project is to make payments to the Program Entity for measured, reported and verified Emissions Reductions (ERs) from reduced deforestation and forest degradation, and enhancement of forest carbon stocks (REDD+) at the national level in the Republic of Fiji and to ensure that paid amounts are distributed according to an agreed benefit sharing plan..

Project Development Objective Indicators

Indicator Name	Core	Unit of Measure	Baseline	End Target	Frequency	Data Source/Methodology	Responsibility for Data Collection
Name: Volume of CO_2 Emission Reductions measured and reported by the Program Entity, verified by a Third Party, and transferred to the FCPF Carbon Fund		tCO_2e	0	2,500,000	yearly	MRV System	MoF
Description:							
Name: Payments received from the FCPF Carbon Fund for ERs generated by the ER Program (USD)		USD $	0	12,500,000	yearly	ER Registry	World Bank
Description:							
Name: Emission Reductions payments distributed in		Yes/No	No	Yes		Progress Report	MoF

Indicator Name	Core	Unit of Measure	Baseline	End Target	Frequency	Data Source/Methodology	Responsibility for Data Collection
accordance with agreed Benefit Sharing Plan							
Description:							

ANNEX 1. Description of Accounting Area

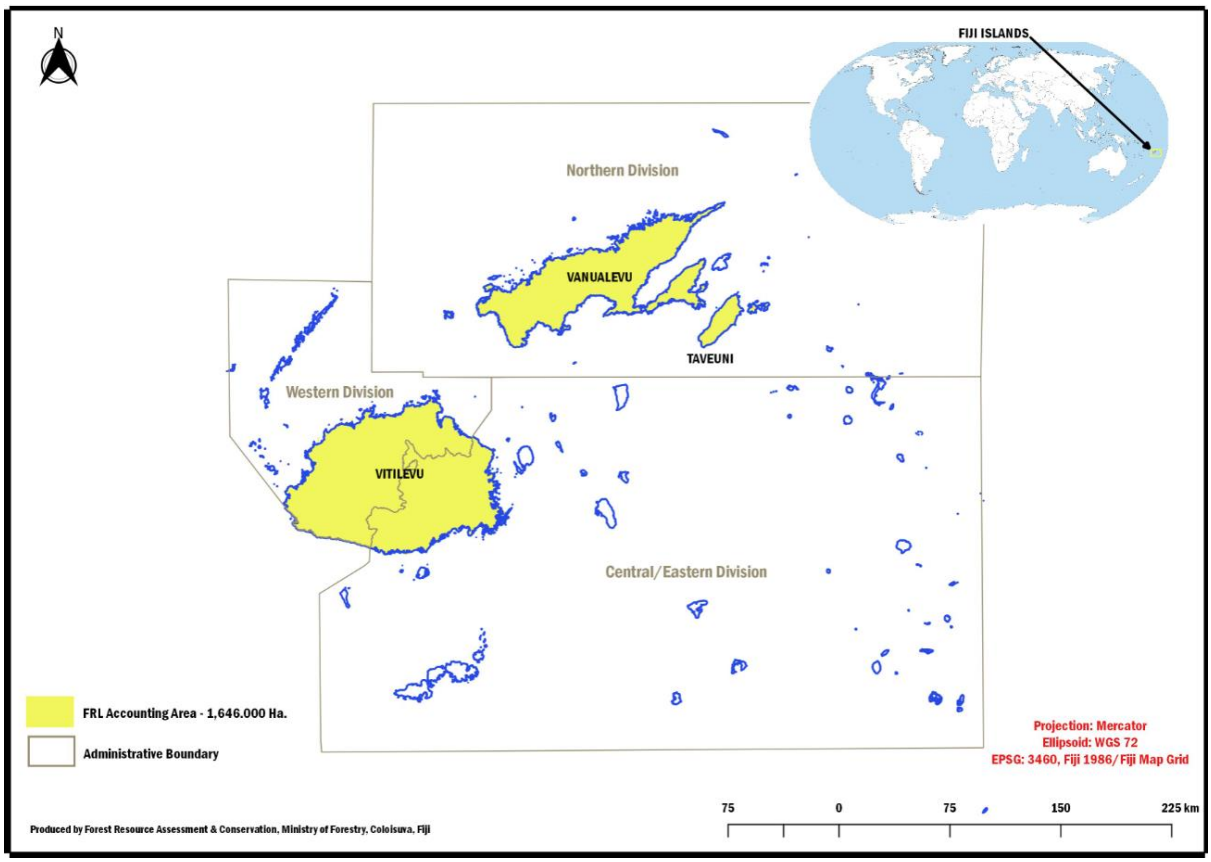
1. The Fiji islands (located 12 - 20 S and 177 E – 177 W) is a group of volcanic islands in the South Pacific comprising of more than 332 islands of which 110 are inhabited. The country has a land area of approximately 18,376 km^2 and an EEZ of 1,290,000 km^2. The country is endowed with forests, minerals and fish resources, and with a diverse race of people rich in culture and tradition.

2. Fiji is administratively divided into 3 divisions, that is, Northern, Western and Central-Eastern (figure 1.1). Under the native hierarchical system, the areas are divided into 3 traditional confederacies, which are further subdivided into 14 provinces. There are 11 townships and 2 cities.

3. The ER Program accounting area hosts 11 of the 14 provinces. The key characteristics include:

- The 11 provinces account for 89 percent of the country's total land area which hosts 97 percent of the 2017 population;
- The Province of Ba has the highest population count attributed to the increase in township boundaries and drift toward the townships and city; there are 3 towns and a city within the provincial boundary;
- The Province of Namosi has the lowest population count but relatively good-sized land area being twice the size of Rewa; however, it is well known for is mountainous and rugged terrain;
- The least populated Province is Bua, where very little economic activity occurs. The only major economic activity has been the Bauxite mining that began in 2009 as well as the installation of wood-Chipper by Tropik Woods Industries Ltd.
- The Province of Rewa is the most densely populated attributed to rural-urban migration to Suva City, which is the main administrative (Government) and business centre;

Figure 1.1. Map of ER Program Accounting Area



Proposed ER Program Accounting Area.

4. The proposed ER Program accounting area include the three largest islands, Viti *Levu*, *Vanua Levu* and *Taveuni.* These islands are generally mountainous and have the three highest peaks in Fiji, with landforms that rise abruptly from the shore; the summit of Mount Tomaniivi on Viti *Levu* with an elevation of 1,324 m above sea level. The western aspects of Fiji are in a rain shadow and have marked dry season. The total land area of the ER Program accounting area is 1.6 m ha. covering 89 percent of Fiji's total land area (table 1.1 and figure 1.2).

5. The ER Program will directly affect 97 percent of Fiji's population. The composition of the population varies between the three larger islands however, given that 90 percent of the land in the ER Program falls within iTaukei lands (table 1.1); the main target group will consist of iTaukei communities. Equally important are tenant farmers on iTaukei land who have lease titles on such lands allowing full right of ownership while the lease is in force.

Table 1.1. Area, Population, Growth Rates, and Municipalities of the 11 Provinces Covering the ER Program Accounting Area

Divisions	Province	Area (km^2)	No of districts	No of Villages	Census 2007		Census 2017		Municipality (Towns/Cities)
					Population	Person/km^2	Population	Person/km^2	
WESTERN	Ba	2,459	21	107	232,000	94	247,780	101	Tavua, Ba, Nadi and Lautoka City

Divisions	Province	Area (km^2)	No of districts	No of Villages	Census 2007		Census 2017		Municipality (Towns/Cities)
					Population	Person/km^2	Population	Person/km^2	
	Nadroga - Navosa	2,835	22	121	58,400	21	58,931	21	Sigatoka
	Ra	1,340	19	89	29,470	22	30,432	23	Rakiraki
CENTRAL	Naitasiri	1,700	16	121	161,000	95	177,687	105	Nausori
	Namosi	570	5	28	6,900	12	7,871	14	Navua
	Rewa	272	9	52	100,800	371	108,016	397	Lami, Nausori and Suva City
	Serua	830	4	24	18,250	22	20,031	24	
	Tailevu	760	22	146	55,700	73	64,552	85	Nausori
Viti *Levu* Island		**10,766**	**118**	**688**	**662,520**	**62**	**715,300**	**66**	
NORTHERN	Bua	1,380	9	50	14,200	10	15,466	11	Nabowalu
	Cakaudrove	2,816	16	132	49,350	18	59,469	21	Savusavu
	Macuata	2,004	12	112	72,440	36	65,983	33	Labasa
***Vanua Levu* Island**		**6,200**	**37**	**294**	**135,990**	**22**	**140,918**	**23**	
Aggregate land areas include group of islands within provinces		**16,966**	**155**	**982**	**798,510**	**47**	**856,218**	**50**	

Source: CIA-World Facts Database.
Note: Eastern division includes the islands and group of islands of Rotuma, Kadavu, Lau. and Lomaiviti

Table 1.2. ER Program Accounting Area

ER Program Area	Total Area (ha)	% of ERPD area	% of Fiji Land mass	Population (2017)	% of ERPD Population	Highest Elevation
Viti *Levu*	1,038,900	63.48	56.54	715,300	81	Mt. Tomaniivi (1,324 m a.s.l)
Vanua Levu	554,257	33.87	30.16	140,918	16	Mt. Sorolevu (1,023 m a.s.l)
Taveuni	43,400	2.65	2.36			Mt. Uluiqalau (1,242 m a.s.l)
other areas in Fiji	81,630	0.00	4.44	28,669	3	negligible
Aggregate land area does not include group of islands	**1,636,557**	**89%**		**884,887.00**	**97%**	
TOTAL FIJI WIDE	**1,837,600**					

Source: MoF 2016 Key Statistics total population of Fiji is 884,887.

6. The ER Program area contains 95 percent of the national forest cover or 1,048,464 ha and includes 863,755 ha of native forests, 72,754 ha of pine plantations, the entire mahogany plantations and 52,387 ha of mangroves (Table 1.3).

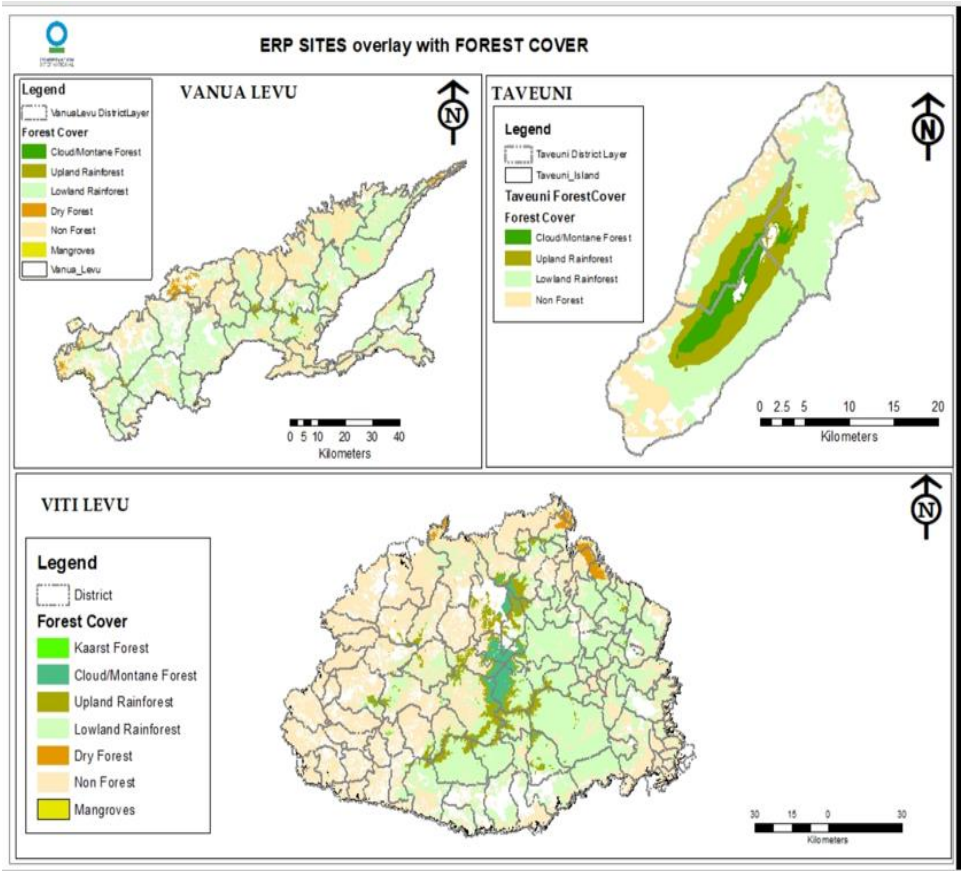
Table 1.3. Forest Cover in the ER Program Area

Forest Types	National Total (Ha)	ER Program Accounting Area (Ha)				
		Viti *Levu*	*Vanua Levu*	*Taveuni*	Total	% of Total
Natural Forest	914,868	517,702	314,361	31,712	863,775	**94**
Pine Plantation	76,472	43,637	29,117	—	72,754	**95**
Mahogany Plantation	59,548	45,835	13,713	—	59,548	**100**
Mangrove	54,189	27,523	24,864	—	52,387	**97**
Total Forest Cover	**1,105,077**	**634,697**	**382,055**	**31,712**	**1,048,464**	**95**
Land Area (Ha)	1,837,600	1,038,900	554,257	43,400	1,636,557	
Forest Cover %	**60**	**61**	**69**	**73**	**64**	

Source: NFI (2005–2009).

7. Fiji's remaining native forest is confined mainly to areas of high rainfall and elevation as well as steep slopes, with much of the accessible lowland forest cleared for timber production, converted for agriculture or other land uses. On Viti Levu, the occurrence of the native forests is predominant in the hills of Naitasiri, Nadroga/Navosa and Ra and spreading onto the slopes of Ba, around the summit of Mt. Tomaniivi. On Vanua Levu, the native forests occur mainly within the Provinces of Cakaudrove and Macuata, around the islands highest peak, Mt. Sorolevu.

Figure 1.2. Forest Cover Map of the ER Program Accounting Area and Forest Cover Map (2010)



ANNEX 2: Drivers of Deforestation[24]

1. The analysis of drivers of deforestation and forest degradation was undertaken at a national level with assessment undertaken across the accounting area. Results from the drivers' analysis, SESA, R-PP and ER-PIN indicate six direct drivers identified as follows:

- Forest conversion to agriculture;
- Poorly planned infrastructure development;
- Conventional logging;
- Natural disasters;
- Invasive species;
- Mining.

2. The drivers of deforestation and forest degradation vary between the three main islands in the ER Program accounting area. Given the results of assessment in Fiji's ER-PIN, study on Drivers of Deforestation and Forest Degradation, self-assessment of the R-Package; the RSC and REDD+ stakeholders identified agriculture conversion, poorly planned infrastructure development and conventional logging as the critical drivers of deforestation and forest degradation. Key drivers that have a direct impact on ER Program interventions are discussed below.

Drivers of Deforestation

Conversion to Agriculture (root crop and others)

3. Agriculture continues to be the backbone of Fiji's economy employing about 60 percent of the population and accounting for roughly ¾ of the total collective GDP from agriculture, forestry, and fishing industry in 2014. However, the sector has progressively declined its share in total economic activity due to decline in the sugar subsector and the rapid growth in tourism and infrastructure development.

4. There are more than 60 commodities listed in the 2009 National Agriculture Census, cultivated by more than 63,622 farmers operating 65,000 farms (MoA 2014). More than 75 percent of all households in Fiji engage in agriculture, livestock production, forestry, or fishing (UNCCD National Focal Point, 2007; GoF, 2015a; Akram-Lodhi, 2016). The agriculture industry is primarily driven by sugarcane and kava (known locally as "yaqona"). Other major crops include rice, taro (known locally as "dalo"), cassava, sweet potato, ginger, banana, and other vegetables. Tropical Cyclone (TC) Winston (category 5) hit Fiji in 2016, which impacted 62 percent of population and resulted in an estimated loss and damage across all sectors at FJ$2.85 billion (Esler, 2016).

5. One of the key contributors to deforestation is indiscriminate clearing of forests, particularly for subsistence, semi-commercial and commercial agriculture, predominantly for taro and kava cultivation. While taro market prices have been stable, the increasing market demand and price for kava has made it the most popular alternative for many rural landowners. Kava cultivators are predominantly iTaukei subsistence farmers who are transitioning to semi-commercial operation.

6. In the accounting area, farmers on Viti Levu commonly transition forest-on-farms to agroforestry, or forest-on-farms to grazing livestock for cattle, goats, and sheep. Commercial production is characterized by monocrop planting of either kava or taro in large tracts of land. Ginger

[24] The full citation to the cited references can be found in the ERPD.

has a stable market demand and is planted on slopes with good drainage. Farmers also practice forest clearing to prepare planting areas, but it is not as widespread as kava and taro.

7. On Vanua Levu, in the Provinces of Macuata, Bua and Cakaudrove, including the island of Taveuni; trees-on-farms are noted to transition to commercial root crop production – predominantly taro and kava in addition to aquaculture and settlements. Expansion of kava production is characterized by upland cultivation, often with mixed crop of taro/kava followed by fallow period of 3-6 years.

8. On the island of Taveuni, agriculture activity is characterized by commercial production of monocrop kava or taro in large tracts of land. At the same time, subsistence cultivation is practiced using traditional farming systems of agroforestry/mix cropping regime.

9. Farmers in rural and semi-urban areas are either landowners or lease holders. Landowners have right of access to use their land for sustenance and commercial cultivation.

10. Tenant farmers are issued 30- year Agriculture Lease from the iTaukei Lands Trust Board or the Department of Lands. The iTaukei Lands Trust Board issues leases on communally owned iTaukei lands while the Department of Lands issues leases on state lands. Lease holders with forest-on-farms can clear-fell these forests for agricultural production. Often, lease holders are commercial or semi-commercial farmers with holding of 2.5 to 5ha.

11. Although not identified as a key driver to deforestation and forest degradation, commercial livestock farming is confined to the wetter areas of Viti Levu and Vanua Levu on land classified under land capability V-VII. Agriculture Census in 2009 indicate that 44 percent of farms with livestock operate in areas of less than 1 ha, some 35 percent of farms have areas of less than 5 hectares and 20 percent of farms with areas over 10hectares. This indicates that more smallholder farms with insufficient farmland maintain cattle on farms. Such small-scale farmers across the accounting area practice subsistence livestock farming. Among iTaukei communities' cattle are often let loose into forests for grazing. Roaming livestock in the forest not only is a threat to hygiene in natural creeks but also impedes natural regeneration of forest. On the other hand, semi-commercial farmers on leased lands clear-fell trees-on-farms to support cattle rearing. Clearing of forest for pastures not only results in forest loss but also has high probability of contributing toward forest degradation.

Unplanned Infrastructure Development

12. The Study on Drives of Deforestation and Forest Degradation identified several types of forest conversion to infrastructure. These include construction of roads, hydropower dams for electricity; urban development and resettlement; tourism and other infrastructure. Fiji does not have a National Land Use Plan, which is a major constraint to resource allocation and management in the rural sector and is of critical importance to ensure rationalized infrastructure development that considers impacts on all land-based resources such as forest, agriculture, minerals, rivers and streams (GoF, 2015a).

13. **Road and transport:** An estimated 4,254 km of road network exist in Fiji of which 1,483km are sealed. Main logging roads in newly logged forest are often upgraded for public assess by the Ministry of Rural, Maritime Development and Natural Disaster following logging operations; providing opportunities for settlements and conversion of forest to monocrop or mixed crop production systems. As such, the underlying catalyst for road construction is the need to meet economic and social needs of rural populations to access markets, urban centers, health and education services.

14. **Hydropower:** The government's goal of bringing electricity to rural communities as a means of addressing poverty has driven the country toward hydroelectric development. Around 60 percent of the country's electricity requirements are met from renewable energy sources (62 percent hydroelectric, 4 percent biomass, 1 percent wind), with imported petroleum for thermal generation meeting the remaining 33 percent (Department of Energy, 2014). Fiji's potential for additional hydroelectric power generation in the accounting area is significant, particularly through micro-dams. Fiji aims to have 100 percent renewable energy by 2036 (NDP).

15. Urban development and resettlement - Rural-Urban Drift: Increasing population and the influx from rural to urban areas have resulted in significant urban development ensuing in encroachment on first-class arable land, and the construction of homes on top grade agriculture soils. Conversion to real estate of prime agriculture areas have pushed agriculture to the marginalized rolling (unsuitable) hills of land capability class V-VII.

16. Tourism: Fiji's tourism industry has grown dramatically over the past decade. Over 650,000 tourists visit Fiji annually. In 2012, tourism contributed 18 percent of GDP while in 2016, tourism had increased to contribute 39 percent of GDP. The increasing influx of tourists coming into the country pose increasing pressure on and competition for natural resources between agriculture, infrastructure, housing and tourism (Narayan, 2015). Continual large-scale tourism development and urban expansion along coastal areas habitats are drivers of coastal carbon emission through mangroves clearance.

17. Unplanned infrastructure development poses a significant threat to forest areas. A critical underlying cause is increasing population which contributes to the influx of migration from rural to urban areas that has resulted in urban development on first-class arable land along the coastal flatlands of the ER Program area. Conversion to real estate of prime agriculture areas have pushed agriculture to the marginalized rolling hills with land capability class V-VII. Forest lands fall under this land capability classification.

18. Rapid expansion of cities and towns is prominent in the absence of a National Land Use Plan. A major barrier identified in the Drivers Study is the absence of a National Land Use Plan, posing as a crucial constraint to resource allocation and management of natural resources in rural areas. It is of critical importance to ensure rationalized infrastructure development that considers impacts on all land-based resources such as forest, agriculture, minerals, rivers and streams (GoF, 2015b).

19. Current efforts to address this is acknowledged through efforts by the iTaukei Lands Trust Board Master Plan for the entire coastal area on the island of Viti Levu. The Master Plan is an integrated land use plan that sets forth local goals, objectives and policies for community growth and/or redevelopment over the next 20-30 years. The plan covers coastal area approximately 10km inland from the shoreline around the whole of Viti Levu. It serves as a guide for existing and future land use while indicating zonation of natural resource allocation. Once approved by the Ministry of Local Governance and Town Planning, the Master Plan may serve as an ordinance, subdivision regulation for ensuring capital improvements are consistent with stakeholder/community goals and institutional policies as expressed in the Master Plan.

Agents for Deforestation

20. For commercial agricultural exploitation, agents include commercial farmers who are lease holders on either native or Crown Land. On *Taveuni*, private landowners make up a large portion of commercial farms. Other agents involved with the driver for forest conversion to agriculture production includes:

- Government development policies driven by national efforts toward food security (in terms of self-sufficiency and import substitutions) and export substitution – line agencies such as the Ministry of Agriculture, Ministry of Waterways and Environment, MoF, Ministry of Lands and Mineral Resources;

- International market demands and key players in the marketing channel such as buyers of commodities at mill-gate, all private business entities that are involved with agriculture inputs, pre-harvest, post-harvest processing and sale (domestic and export) of all agricultural produce.

- Supporting agencies such as the Fiji Crop and Livestock Council, responsible for coordinating and aggregating large and small producers cultivating crops other than sugar;

- Local population, who are employed in the sector to meet market demands for agricultural produce.

- Lease holders, landowners and all players driven by self-interest to maximize profit through participation in the agriculture sector;

- The Ministry of Tourism, tourism industry and all related sectors whose growth has placed increasing demand on domestic agriculture production in addition to imports.

21. Infrastructure development has generally been driven by national efforts in pursuit of economic development and improved livelihoods. Key actors include:

- The Ministry of Infrastructure & Transport, who is responsible for policy formulation, planning, regulation, coordination, and implementation of services relating to transportation and public utilities;

- The Department of Town and Country Planning, whose role is to control and regulate land use Fiji;

- Quasi government organizations such as Energy Fiji Ltd., Fiji Roads Authority and Water Authority of Fiji;

- Local population, who require infrastructure development for improved standards of living and to accommodate population growth;

- The Ministry of Agriculture, Sugar, and Land Resettlement, responsible for relocating farmers when their leases expire;

- Commercial agriculture producers, whose expansion necessitates improved infrastructure to deliver products to market and ports;

- The Ministry of Tourism, along with hotels and tourism agencies, whose growth has placed increased demand on Fiji's energy production and transportation infrastructure.

- The Department of Environment, who is required to conduct an EIA for any development proposals, as well as to enforce environmental codes and standards.

- Tourists, with their increasing demand for infrastructure, products social and ecosystem services.

Underlying Causes for Deforestation

22. Three key factors are highlighted in the Study on Drivers for Deforestation include economic, social and cultural. Farmers in rural areas aspire to meet market demands to support domestic economic pressures such as education for family members, improve standard of living and other economic needs at the household level. Key agriculture commodities for communities at the forest frontier include kava and taro. Improved market access and strong global demand for kava and taro have driven production in the accounting area. The trend is anticipated to increase with increasing demand and consumer preferences from international markets such as New Zealand, Australia and the European market for kava. In terms of infrastructure development, strong performance of the tourist sector, driven by robust economic development has resulted in the influx of infrastructure development including roads, hotels, and other support structures. Fiscal tax incentives associated with construction and tourism tax measures have also directly supported and encouraged infrastructure development particularly along Fiji's coastal area.

23. Non-renewal of agriculture leases has caused an influx in migration of farmers from rural to urban areas, particularly from sugarcane producing areas. As a result, about 51 percent of Fiji's population live in urban areas, and this is expected to increase to 60 percent by 2030 when some 13,141 leases issued since 1997 under the Agricultural Landlord and Tenant Act will expire. Continued pressure is anticipated as the Fiji Bureau of Statistics projects one million people in Fiji by 2030. Increasing population and visitor numbers are believed to influence consumption patterns which are driven by raising incomes, better standards of living, change in consumer preferences and an increase in consumption of processed foods such as sausages, tin meat and others. A good proportion of the communities visited during field work were young and youthful. Statistics support this observation where the median age of Fiji's population is 27.5 years with 69 percent below the age of 40.

24. Kava is a valued traditional drink in Fiji with important cultural values. Extreme shortage of kava in the wake of Tropical cyclone Winston has escalated the price to an all-time high. Many subsistence farmers have transitioned to semi-commercial operations. The shift in aspirations is driven by economic gain but the mind-set and farming technique are limited to the small operations leading to excessive inefficiencies. For instance, kava production on small subsistence scale can accommodate up to seven kava stems in one raised mound where 100 raised mounds make a small farm. The scale of semi and commercial operation incorporates no less than 2,500 mound per hectare. Application of small-farm technique (seven stems per mound) have inefficiencies that may result in more expansion and clearing of forests.

25. Given the land tenure system in Fiji, local decision-making and governance have an impact on all aspects of natural resource use. While infrastructure developments have supported commercial farmers, driven by self-interest to maximize profits to shift from subsistence to semi-commercial and commercial agriculture leads to intensive land resource utilization, and potentially adverse impact on ecosystem services.

Drivers of Forest Degradation

Conventional Logging

26. Commercial logging in Fiji largely follows conventional practices which allows the removal of all merchantable species in a logging coupe that have a girth of 35 cm and above. In 2012, the FFHCOP

was revised, incorporating results from the Nakavu sustainable forest management research site. The results present diameter limits for key merchantable timber species. Coupled with the FFHCOP, conditions for application of reduced impact logging can be achieved in Fiji.

27. The Study on Drivers for Deforestation and Forest Degradation noted that rapid re-logging of native forest after coupe closure exacerbates forest degradation in the absence of restocking or restoration. Furthermore, the issue of Annual Licenses for timber extraction from logged native forests and constraints long-term planning, limiting investment in best practices for sustainable forest management. Although legal framework and policies allow for the issuance of long-term license, there are only 2 long-term licenses in Vanua Levu. Production from native forest have averaged at 50,731m^3/yr. during the FRL period 2006–2016. Other types of logging licenses include clear fell licenses and firewood licenses. Clear fell license is predominately applied to agricultural clearance and forest right license for harvest of mangroves (for cremation and firewood). Firewood license is also issued to collect waste logs from logging sites for sale to businesses with industrial boilers.

Agents for Forest Degradation

28. The following actors and agents have direct influence over the driver of conventional logging:

- The MoF, whose role is to regulate, develop, and enforce restrictions within the logging industry.
- Ministry of Waterways and Environment who are responsible for regulating Environment Impact Assessments under the Environment Management Act 2005;
- The Department of Lands and Department of Fisheries, who together – along with the MoF and Department of Environment – manage Fiji's mangrove resources; Department of Land for native logging in Crown Land as well as the establishment of Protected Area or Conservation Leases on all types of land tenure on behalf of the MoF.
- TLTB, whose consent is required for licenses to harvest timber on iTaukei land.
- Logging companies associated with timber harvests applying the FFHCOP includes Fiji Pine Ltd. & Fiji Pine Trust, Mahogany Industry Council, FHCL, Fiji Mahogany Trust; and landowners and loggers who are involved in pine, mahogany logging, post-harvest, processing, branding and marketing.
- Landowners, who either fell trees themselves or consent to activity on their property by commercial logging operations.
- Local population, with their demand for building materials and cleared land for expansion.
- Buyers of wood and timber that contribute to increased domestic and international demand on timber production.

Underlying Causes for Forest Degradation

29. Demand for timber to meet infrastructure development is driving local and international market prices while providing much motivation for maximization of log extraction and utilization. Underlying factors associated with consumer preferences have seen an insatiable demand for forest products in building projects; particularly for dark tainted local timber species.

30. The demand for construction materials over the past three years have been driven by investment in tourism projects such as the Grand Pacific Hotel, Denarau Casino Development, and others. Additionally, housing demands from increasing urban population as well as rehabilitation after Tropical Cyclone Winston has boosted demand for timber to an all-time high.

31. Fiji's tourism industry has grown dramatically over the past decade to become the lead economic sector. Over 650,000 tourists visit Fiji annually. In 2012, tourism contributed 18 percent of GDP while in 2016, tourism had increased to contribute 39 percent of GDP. The increasing influx of tourists pose cumulative pressure and competition for natural resources including agriculture, road infrastructure and housing (Narayan, 2015). Continual large-scale tourism development and urban expansion along coastal areas are drivers of coastal carbon emission through mangroves clearance. Rapid expansion of cities and towns is prominent in the absence of a National Land Use Plan. A major barrier identified in the Drivers Study is the absence of a National Land Use Plan, posing as a crucial constraint to resource allocation and management in the rural sector. It is of critical importance to ensure rationalized infrastructure development that considers impacts on all land-based resources such as forest, agriculture, minerals, rivers and streams (GoF, 2015b).

32. Current land use in the accounting area is reflected in Table 2.1 with indication of important land use associated with deforestation and forest degradation.

Table 2.1. Key Drivers in Accounting Area

ER Program Island	Current Drivers of Deforestation and Degradation by Island			
	Deforestation	**Relative Importance**	**Degradation**	**Relative Importance**
1. Viti Levu Central and Western Divisions 10,388 km²	Logging (Conventional)	++	Selective logging	+++
	Settlement	++	Settlement	++
	Infrastructure, (esp. roads)	++	Infrastructure, (esp. roads)	++
	Agriculture crops subsistence agriculture	++	Agriculture crops subsistence agriculture	++
			Sugarcane (mainly historical)	++
	Plantations - pine woodlots	+++	Pine woodlots	++
			Mahogany plantations in the natural forest	+++
	Plantation pine waste wood – Firewood	+++	Firewood	++
	Tourist investments (loss of mangroves)	++	Tourist investments (loss of mangroves)	++
			Cyclones locally severe, intense rainfall may cause more damage than the wind	+++
			Fire from sugarcane burning	++
2. Vanua	Logging (Conventional)	+++	Conventional logging	+++

ER Program Island	Current Drivers of Deforestation and Degradation by Island			
	Deforestation	**Relative Importance**	**Degradation**	**Relative Importance**
	Plantations/ wood lots conversion of natural forest	++	Plantations/ wood lots conversion of natural forest	++
			Pine wood lots	++
	Subsistence agriculture	++	Subsistence agriculture	++
	Taro	++	Taro	++
	Kava	+++	Kava	+++
			Firewood, copra dryers	++
	Infrastructure	++	Infrastructure	++
	Mining (but can be locally severe)	+++	Mining	+++
			Cyclones locally severe, intense rainfall may cause more damage than the wind	++
			Fire from sugarcane burning	++
3. *Taveuni* (included in Cakaudrove province) Northern Division 434 km^2	Subsistence & Commercial agriculture	+++	Subsistence & Commercial agriculture	+++
	Taro	+++	Taro	++
	Kava	+++	Kava	+++
	Settlement	++	Settlement	++
	Infrastructure, (esp. roads)	++	Firewood	++
	Tourism related	++	Tourism related	++
			Cyclones locally severe, intense rainfall may cause more damage than the wind	++

ANNEX 3. Fiji's ER Program Measures

1. The ER Program aims to address critical drivers of deforestation and forest degradation, by facilitating processes that would result in changing of mindsets and behavior of local resource owners to support the overarching aim of improving the forest sector's contribution toward fulfilling Fiji's NDP 2017–2036 in the medium and long term

2. While the ER Program is targeted at the three largest islands in Fiji, 20 Districts in the ER Program accounting area have been selected for specific interventions however this does not limit any area from being involved. The selection of the 20 Districts was undertaken over two participatory meetings with RSC members. There was unanimous agreement to retain existing forest areas and apply the following criteria to select the 20 Districts (a) areas at high risk of forest loss and degradation; (b) areas with high degree of communities/settlements at the forest edge; (c) districts with high poverty rate at provincial level and (d) areas with known high biodiversity. A representation of the 20 Districts and the areas that the ER Program comprises is available in Annex 1. Although the ER Program budgeted activities will focus on the 20 Districts selected, other areas in the ER Program are open to voluntary commitment where participants may take part in any REDD+ activities of their preference but are expected to register, irrespective of whether they are within or outside of the 20 Districts above.

3. The scope of the ER Program, as outlined in the activities, outputs and outcomes would support the long-term goal of the Fiji Government to protect native forest, focus timber production on plantation or planted forest; increase economic parity and standards of livelihood of forest dependent communities through rationalization of resource use and application of alternative livelihoods. Allocation of resources would not only address key drivers such as unplanned infrastructure and agriculture expansion but also bring all sectors to collaborate with the MoF in the development of integrated land use management plans. Policy instruments such as the Fiji Rural Land Use Policy and National Forest Policy would be fulfilled as well as Fiji's NDP (2017–2036).

Theory of Change

4. The readiness phase has conducted analysis of drivers of deforestation and forest degradation and potential consequences of forest loss in aggravating the risk of climate change through flash floods, landslides, extreme droughts, bush fires and siltation and loss of topsoil. It is assumed that communities in the ER Program accounting area will aspire for restoration of habitat protection and improved ecosystem services.

5. Critical activity in the design of the ER Program involves preparation of multi-sectoral integrated land use plan at district level to allow rationalization of resource allocation and development of Integrated District Management Plans. Multi sector collaboration will strengthen enabling conditions for ER Program, not only raising awareness but generating interest for communities to engage and become part of the intervention. Implementation of Integrated District Management Plan involves REDD+ activities including sustainable forest management, carbon enhancement, avoidance of deforestation (alternative livelihood), agroforestry and forest conservation.

6. Quantifiable immediate results from the above activities would include outputs that facilitate the enabling conditions for implementation of REDD+ activities, including:

Component 1: Strengthening enabling conditions for emissions reduction

7. Focusing on strengthening existing frameworks, rationalize resource allocation and setting up of community-based monitoring systems aligned to local governance structures set up by the MoF and the Ministry of iTaukei Affairs.

8. Over the period of the ER Program, 20 Integrated District Land Use and Management Plans will be developed with support and commitment of 120 communities over an area of 510,319ha over 5 years.

Component 2: Effective coordination and implementation of integrated land use management

9. Aiming to apply and implement integrated land use plan at district level; this component focuses on addressing conventional logging, advocating improved standard of sustainable management of forest to include management of large tracts of forest, and adherence to the FFHCOP over 8,500ha (in 5 years). The component also aims to support restoration of degraded areas through afforestation and reforestation for plantation forest where Fiji Pine Ltd. will plant 2500ha per year and Fiji Hardwood Corp. Ltd. will plant 478ha for 3 years (2020-2022). At the same time community-based afforestation and reforestation in support of the Govt. initiative of 1million tree a year will establish an estimated 5,750ha by the end of 2024. There will also be efforts to set up agroforestry and alternative livelihoods to take the pressure off forest resource/habitats. Agroforestry will focus on restoration of riparian zones (5,000ha in 5 years) and shade grown agriculture by 5,000 in 5 years. A total area of 36,400 ha will be set aside as protected area by 2024 as a result of consultation, community endorsement and gazetting/leasing of the protected area.

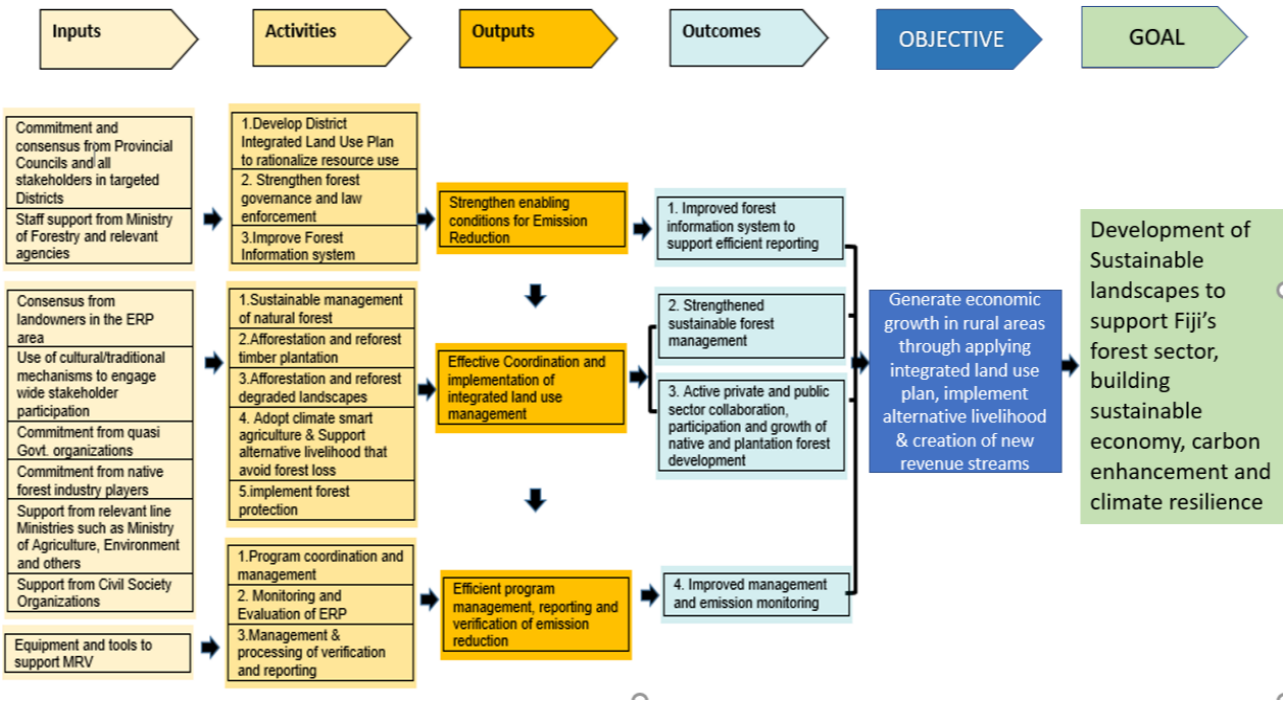
Component 3: Efficient Program Management, reporting and verification of Emission Reduction

10. Focusing on administrative support, Component 3 will monitor and evaluate implementation of above activities to enable efficient reporting that will allow response to prevailing conditions at the time of implementation. This component will also ensure timely delivery, reporting and dissemination of key learnings from ER Program activities.

11. Outcomes of the activities and above outputs would include (a) improved forest information system to support efficient reporting; (b) enhancing the adoption of sustainable forest management; (c) a vibrant public and private sector collaboration, participation and growth of both native and plantation forest development as well as (d) upgrade and improve emission reporting and verification.

12. Component 1 is considered an enabling environment for Component 2 to take place. The IDLUP will encourage intersectoral discussion, prioritize land use and result in agreement for resource zonation. All activities in Component 1 will provide the enabling conditions to implement ER Program activities. If IDLUP is planned and implemented, resource allocation and zonation of management areas would be discussed and agreed at district level. Information on all sector development including forestry would be available to all stakeholders and development would become strategic in alignment to the NDP 2017-2036. Similar assessment for all the key components indicates that the ER Program would directly impact strategic infrastructure development, facilitate consistent supply of timber and reduce reliance on native forest. In the long run (beyond the project timeline), ER Program activities would decrease deforestation and forest degradation, improve emission removals, increase ecosystem services and ensure that local communities are more resilient to climate change.

Figure 3.1. Theory of Change for ER Program



13. The scope of the ER Program, as outlined in the activities, outputs and outcomes would support the long-term goal of the Fiji Government to protect native forest, focus timber production on plantation or planted forest; increase economic parity and standards of livelihood of forest dependent communities through rationalization of resource use and application of alternative livelihoods. Allocation of resources would not only address key drivers such as unplanned infrastructure and agriculture expansion but also bring all sectors to collaborate with the MoF in the development of integrated land use management plans.

Description of Key Activities of the ER Program

Component 1: Strengthen enabling conditions for emissions reduction

14. This component aims to address the drivers and underlying causes of deforestation and forest degradation resulting from indiscriminate unplanned forest clearing on farms and infrastructure development. The proposed activities support the implementation of government policies implemented in support of the *NDP 2017-2036*, Forest Policy 2007 and Rural Land Use Policy 2005.

Table 3.1. Activities Component 1: Strengthen Enabling Conditions for Emissions Reduction

Key Activities	Key Indicators	Key Agency to Implement	Financing
Subcomponent 1.1. Integrated District Land Use Planning (IDLUP) to promote more sustainable long-term integrated landscape management			

1.1.1 Development of Integrated District Land use plans (IDLUP)	• Integrated District Land Use Plans completed
	  • 2 districts in Yr.1
	  ○ 4 districts in Yr. 2
	  ○ 4 districts Yr. 3
	  ○ 4 districts Yr.4
	  ○ 6 districts in Yr. 5
		Lead Agency: MoF
		Collaborators:
		Ministry of Agriculture Land Use Division
		iTaukei Lands Trust Board
		NGO, CSO
			Govt funding

Key Activities	Key Indicators	Key Agency to Implement	Financing

1.1.2 Develop integrated community management plan	• Community workshop and consultation
	  • 4 in year 1
	  • 8 in year 2
	  • 8 in year 3
	  • 8 in year 4
	  • 12 in year 5
			Govt. Funding

Subcomponent 1.2. Strengthening forest governance and law enforcement			

1.2.1. Raise awareness on revised legal and regulatory framework, strengthen forest law enforcement	• 3 Awareness and training on the FFHCOP, SFM, Fire Management Strategy per year;
	• Establish Forest Care Groups
	  ○ 2 districts in Yr.1
	  ○ 4 districts in Yr. 2
	  ○ 4 districts Yr. 3
	  ○ 4 districts Yr.4
	  ○ 6 districts in Yr. 5
		Lead Agency: MoF
		Collaborators:
		Ministry of Agriculture, Ministry of iTaukei Affairs, Department of Lands
		Provincial Council
		District REDD+ WG
		NGO, CSOs
			Govt. Funding

1.2.2 Capacity building on forest laws enforcement and governance at community level	• 3 District level training per year on standard operating procedures TOR
	  ○ Community carbon enhancement
	  ○ Logging monitoring checklist on application of the FFHCOP
	  ○ Land leasing processes supporting long-term license
		Lead Agency: MoF
		Collaborators:
		Ministry of iTaukei Affairs
		Provincial Council
		District REDD+ WG
			Govt. Funding

1.2.3. Capacity building on forest laws enforcement at industry and trade level	• 2 inter agency training per year on forest law • 2 training per year on reporting process for non-compliance of forest related legislations	**Lead Agency: MoF** Collaborators: Ministry of iTaukei Affairs District REDD+ WG iTaukei Lands Trust Board Provincial Council NGO, CSOs Sawmillers Association	Govt. Funding
Subcomponent 1.3 Forest information system			
1.3.1. Upgrade Forest information & data base systems	• System Upgrade in YR 1 • One training & refresher course per year for the MoF staff on FIS processing	**Lead Agency: MoF** Collaborators: Ministry of iTaukei Affairs District REDD+ WG iTaukei Lands Trust Board NGO, CSOs Sawmillers Association	Govt. Funding
1.3.2 improved monitoring and reporting to feed forest information system	• One report per annum on compliance to Environment and social safeguards • Divisional REDD+ WG Quarterly Monitoring reports	**Lead Agency: MoF** Collaborators: Ministry of iTaukei Affairs District REDD+ WG	Govt. Funding

Component 2: Promoting Integrated Landscape Management

15. Component 2 encapsulates the main emissions reduction and removal activities. It is linked to Component 1 and designed to implement agreed allocation of land use resulting from the formulation of community based integrated land use planning and management guidelines. Land use zonation would support landscape management at district level with resource allocation aligned to Component 1. Successful implementation of Component 2 would result in the establishment of a network of land use zones including but not limited to (a) large forest estates managed under sustainable forest principles; (b) carbon enhancement in planation and community forestry; (c) agroforestry and alternative livelihoods to mitigate flooding and generate additional revenue streams to support livelihoods and (d) forest conservation to protect biodiversity.

16. The overall impact of the intervention is anticipated at 9,500 ha of avoided deforestation, 11,750 ha of carbon enhancement at community level and 7,532ha of carbon enhancement for plantation as well as 8,500 ha of forest implementing sustainable harvesting practices which would contribute to reduce forest degradation (Table 3.2.).

Table 3.2. Impact Profile for Promoting Integrated Landscape Management

Subcomponents				
Year	**2.1**	**2.2**	**2.3 and 2.4**	**2.5**
	Forest Degradation (Reducing volumes extracted to meet sustainable harvesting rates) (hectare)	**Enhancement of Carbon Stocks (Plantations)** (hectare - planting increased)	**Enhancement of Carbon Stocks (A/R)** (hectares planting increased)	**Forest Conservation (areas (ha) of deforestation avoided)**
2020	1700	1,698	1,550	1,300
2021	1700	1,698	1,950	1,300
2022	1700	1,698	2,350	2,300
2023	1700	1,219	2,750	2,300
2024	1,700	1,219	3,150	2,300
Total	**8,500**	**7,532**	**11,750**	**9, 500**

Table 3.3. Activities for Component 2: Promoting Integrated Landscape Management

Key Activities	Key Indicators	Key Agency to Implement	Financing
Subcomponent 2.1 Sustainable Management of Native Forests			
2.1.1 Land tenure clarification and SFM management planning	• 5 agreements between landowners and logging operators approved per year • 3 Forest Leases secured per year	**Lead Agency: MoF** Collaborators: Ministry of iTaukei Affairs iTaukei Lands Trust Board Sawmillers Association NGO, CSOs	Private Logging Companies
2.1.3 Implement & Monitor logging aligned to FFHCOP	• 10 sites monitored Quarterly • Results disseminated widely to all stakeholders through newsletter and social media	**Lead Agency: MoF** Collaborators: Ministry of iTaukei Affairs iTaukei Lands Trust Board Sawmillers Association NGO, CSOs	Govt. Funding
Subcomponent 2.2 Afforestation (plantation establishment)			

Key Activities	Key Indicators	Key Agency to Implement	Financing
2.2.1 Investments in reforestation, short and long rotation plantation - pine plantation	• Restocking of pine plantation with 2500ha/yr with a net total of 526,262tCO2e in 5 years • Monitoring report by the MoF once a year	**Lead Agency: MoF** Collaborators: Fiji Pine Ltd.	Fiji Pine Ltd.
2.2.2. Investments in reforestation, short and long rotation plantation investments - mahogany plantation	• Restocking of logged over MAHOGANY forest plantation at 780 ha/yr. between 2020-2022 • Monitoring report by the MoF once a year	**Lead Agency: MoF** Collaborators: Fiji Hardwood Corporation Fiji Mahogany Trust	Fiji Hardwood Corporation
Subcomponent 2.3 Afforestation /Reforestation (community-based tree planting)			
2.3.1. Implement landowner engagement through Fiji Pine Trust Extension Scheme	• Fiji Pine Trust facilitate registration of at least 4 groups in ER Program per year (each group with at least 25ha) • Establishment of 200ha pine woodlot per year	**Lead Agency: MoF** Collaborators: Ministry of iTaukei Affairs iTaukei Lands Trust Board Fiji Pine Trust Fiji Pine Ltd. Provincial Council NGO, CSOs	Govt. Funding GCF
2.3.3. Community based restoration for 4 million Trees	• Establish an incremental 400ha per year from 2020 at the baseline of 300ha. • Establishment of 4000ha by year 3 • At least 100 communities/mataqali register for intervention	**Lead Agency: MoF** Collaborators: MoF, Landowners Sawmillers Association NGO, CSOs	Govt. funding GCF GEF
Subcomponent 2.4 Afforestation/Reforestation (Riparian restoration/Alley Cropping/Livelihood)			
2.4.1 Implementation of Riparian restoration to mitigate flash floods	• Establish at least 6 sites annually at 300ha per site • 6 Reports of community consultation on traditional species used and preferred species for restoration. • At least 3 field schools for farmer-to-farmer exchange per year	**Lead Agency: MoF** Collaborators: Ministry of Agriculture Kava Commodity Clusters Fiji Crop and Livestock Association Kava Association Famers NGO	Govt. funding GEF GCF
2.4.2. Afforestation and restoration for ecosystem services	• Establish at least 5 sites annually at 00ha per site • 6 Reports of community consultation on traditional species used and preferred species for restoration. • At least 3 field schools for farmer-to-farmer exchange per year	**Lead Agency: MoF** Collaborators: Ministry of Agriculture Kava Commodity Clusters Fiji Crop and Livestock Association Kava Association Famers NGO	Govt. funding GEF GCF
2.4.3. Enhanced alternative livelihood and restoration	• Establish at 200ha of alternative intervention per year • 6 Reports of District alternative livelihood intervention	**Lead Agency: MoF** Collaborators: Ministry of Agriculture Kava Commodity Clusters Fiji Crop and Livestock	Govt. funding GEF GCF

Key Activities	Key Indicators	Key Agency to Implement	Financing
	• At least 3 field schools for farmer-to-farmer exchange per year	Association Kava Association Famers NGO	
Subcomponent 2.5 Forest Conservation.			
2.5.1. Implementation of natural forest conservation agreement (at the deforestation frontier	• Secure 60 percent community consensus at each priority site through FPIC process by 2023	**Lead Agency: MoF** • Collaborators: • Ministry of Waterways and Environment • iTaukei Lands Trust Board • Department of Lands NGO. CSOs	Govt. funding
2.5.2 Formalise protection of forest area under the Forest Decree 1992 and other instruments such as the TLTB Act	• At least 2 Discussion Paper drafted and submitted to Forestry Board per year • Endorse and enforce PA status at least one site per year • Secure at least 1 REDD+ Conservation Lease per year	**Lead Agency: MoF** • Collaborators: • Ministry of Waterways and Environment • iTaukei Lands Trust Board • Department of Lands • NGO. CSOs	Govt. funding GEF
2.5.3 Develop and Implement community-based Forest Protection Management Plan based on co-management regime between the Forest Management Enterprise and management body of the Protected Area	• At least 3 Community consultation using Open Standards and other tools to identify target specifies, key threat and management strategy for protection • 2 Forest Protection Management Plan formulated per year	**Lead Agency: MoF** • Collaborators: • Ministry of Waterways and Environment • iTaukei Lands Trust Board • Department of Lands • NGO. CSOs	Govt. funding GCF
2.5.4 Secure sustainable financing to support the long-term maintenance and upkeep of the forest protected area	• 2 Community and Stakeholder consultation develop - Business Plan • Secure Seed fund for sustainable financing of ER Program priority by 2023	**Lead Agency: MoF** • Collaborators: • Ministry of Waterways and Environment • iTaukei Lands Trust Board • Department of Lands • NGO. CSOs	Govt. funding

Note: These line items may be sponsored so place holder is set as the "Govt. Funding". These activities are typically supported by donor agencies and may be financed by interested investors for instance GEF and other sources

Component 3: Program Management and Emissions Monitoring

17. The overall project management and emissions monitoring can be divided into three subcomponents as show in Table 3.4. Associated budget for each component is outlined in Section 6.2. of the ERPD.

Table 3.4. Activities and Indicators for Component 3

Key Activities	How to implement; Lead Agency	Key Indicators	Financing Source
3.1.1 Implementation of Gender Action Plan	Lead: Ministry of Women, Children and Poverty Alleviation	Activities identified per-ERPA and those post-ERPA be undertaken according to the GAP	Pre-ERPA: FCPF-REDD+ World Bank FMT Grant Post-ERPA through Government Funding
3.1.2 Implementation of ESMF	Lead MoF	Ensure that all safeguards identified in ESMF are implemented	Government Funding
3.1.3 Support to organizational development and capacity building at the district and provincial level	Lead: MoF Institutional setup; coordination mechanism; program implementation manual; trainings; meetings	Functional Management structure of ER Program at national, Divisional and provincial level set up by 2022	Gov. funding
3.1.4 Support the overall implementation of ER Program (MSD Unit of the MoF)	Lead: MoF Institutional arrangement and approval from the MoE	Standard Operating Procedure developed to support institutional arrangements and reporting operational outcomes at national, Divisional and local levels	Gov. funding
3.1.5. Capacity development to change/ adjust work processes (including support to strengthening inter-departmental cooperation mechanisms) to better fulfil the MoF functions	Collaborators: Divisional REDD+ Working Groups In-house training for REDD+ staff Presentation at interdepartmental regular meetings		Gov. funding
3.2.1 Implementation of M & E for ER Program to measure effectiveness	Development of implementation plan for MRV; trainings; data collection and reporting	MRV plan implemented at national, divisional and provincial levels	Gov. funding
3.3.1. Equipment and Software support incl. vehicles and high-resolution satellite images	Lead: MoF Strict adherence to procurement processes	MRV data and information are periodically reported	Gov. funding
3.3.2 Measurement, Reporting of ER	Lead: MoF Development of implementation plan for M%E; trainings; data collection and reporting	M&E Guidelines	Gov. funding
3.3.3 Verification of ER	Lead: MoF Implementation of SOP for verification	Verification Reports	Gov. funding
3.3.4 Information	Lead: MoF	Communication Materials	

Key Activities	How to implement; Lead Agency	Key Indicators	Financing Source
dissemination	Implementation of Communication Strategy and Communication Plan	and Report	

18. A more detailed description of each subcomponent of the ER Program including the expected outcomes, the drivers impacted, the type of action for intervention, and the list of key actors is presented in Chapter 4.3. “Description and justification of the planned actions and interventions under the ER Program that will lead to ERs and/or removals” of the ERPD.

ANNEX 4: Expected Emissions Reduction [25]

Reference Period

1. The Reference Period of Fiji's ER Program provides an estimate of net historical forest-related emissions/removals for the period 2006 to 2016.

Forest Definition

2. For its National REDD+ Policy (MPI, 2011), Fiji has adopted the forest definition provided in FAO (2006):

> "Land spanning more than 0.5 hectares with trees higher than five meters and a canopy cover of more than 10 percent, or trees able to reach these thresholds in situ. It does not include land that is predominantly under agriculture or urban use. Forest is determined both by the presence of trees and the absence of other predominant land uses. Areas under reforestation that have not yet reached but are expected to reach a canopy cover of 10 percent and a tree height of five meters are included, as are temporarily unstocked areas, resulting from human intervention or natural causes, which are expected to regenerate. Includes: areas with bamboo and palms, provided that height and canopy cover criteria are met; forest roads, fire breaks and other small open areas; forest in national parks, nature reserves and other protected areas such as those of scientific, historical, cultural or spiritual interest; windbreaks, shelterbelts and corridors of trees with an area of more than 0.5 hectares and width of more than 20 meters; plantations primarily used for forestry or protected purposes. Excludes tree stands in agricultural production systems, for example in fruit plantations and agroforestry systems. The term also excludes trees in urban parks and gardens".

3. Fiji's most recent country report to the FRA [FRA-Fiji, 2015] lists four forest classes within its forest area, namely (i) closed forest, (ii) open forest, (iii) pine plantations, and (iv) hardwood plantations.

4. The 'strata' closed and open forest were not retained as the methods used to map forest areas did not produce reliable estimates of closed and open forest areas or forest area changes between these forest types. Additionally, a preliminary analysis of the NFI 2006 data did not demonstrate any significant difference between classified closed and open forest carbon stocks (see Annex 8-3 of the ERPD).

5. The decision to distinguish between Lowland and Upland Natural Forest was based on findings by Mueller-Dombois & Fosberg [1998], who identified significant changes in structural and floristic characteristics in forests in Fiji below and above approximately 600 m above sea level (a.s.l) Mueller-Dombois & Fosberg [1998] found that above 600 m a.s.l. Fijian forests show characteristics typical for mountain forests systems, whereas forest located below 600 m a.s.l. show characteristics of either tropical rain forests or tropical moist deciduous forests. An analysis of the NFI data supported the findings of this scientific study, whereby a significant difference was found between the carbon stocks estimated on NFI plots above 600m when compared to that below 600 m.

6. In a stepwise approach, a priority of the NFMS MRV (see Chapter 9) is to improve the NFI sample frame to capture carbon stocks and stock changes in open and closed forest within the upland and lowland strata. In parallel to NFI data collection improvements, the semi-automated algorithms

[25] The full citation to the references can be found in the ERPD.

for mapping land cover change will be calibrated to enable the capturing of changes in and between open and closed forest classes. These combined improvements will facilitate a move away from a proxy approach to monitoring and reporting degradation to a direct approach using a combination of remote sensing and ground-based data.

Mangroves are not listed under forest in Fiji's FRA country report, partly because the areas of mangrove, defined here as the habitat and entire plant assemblage in which species of the plant family Rhizophoraceae dominate, is located below the high tide water mark (that is, not considered as land). Moreover, mangrove was not included in the FRL because (i) at least three governmental agencies have regulatory jurisdiction over mangrove and, therefore, the MoF refrained from including mangrove in the FRL to avoid potential conflict between the agencies involved, (ii) mangrove may be considered under "Coastal Wetlands (Blue Carbon)" in the LEDS, and (iii) to ensure consistency with other reporting requirements (that is, FRA reporting). Also note that coconut plantations are not considered as forest in Fiji (see FRA-Fiji [2015] and Anonymous [2005]).

Estimated Reference Level

7. Historical emissions associated with deforestation and forest degradation and removals generated by reforestation and forest enhancement are estimated for Reference Period and presented in Table 4.1.

8. The contributions (in percent) of the different sub-sources and sub-sinks considered in the FRL on gross emissions, gross removals, and net emissions are shown in the series of graphs below.

Figure 4.1. Relative Contribution of Each REDD+ Activity to Gross Emissions

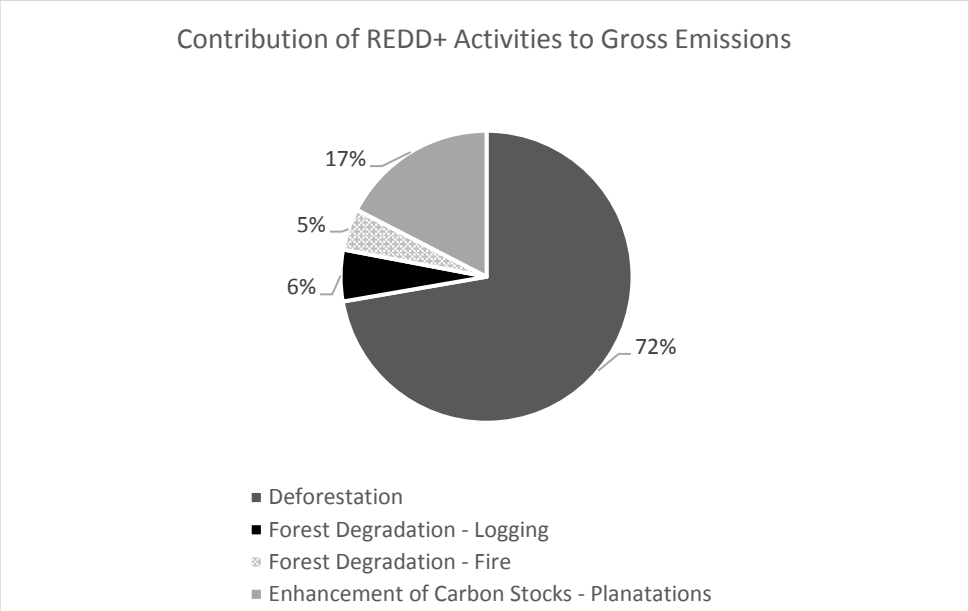


Figure 4.2. Relative Contribution of Each REDD+ Activity to Gross Removals

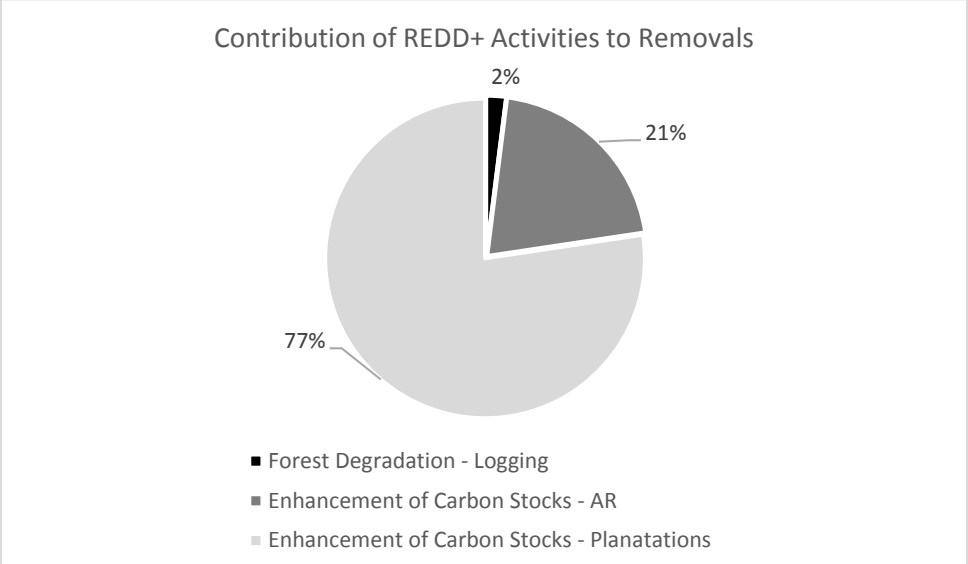


Figure 4.3. Relative Contribution of Each REDD+ Activity to Net Emissions/Removals

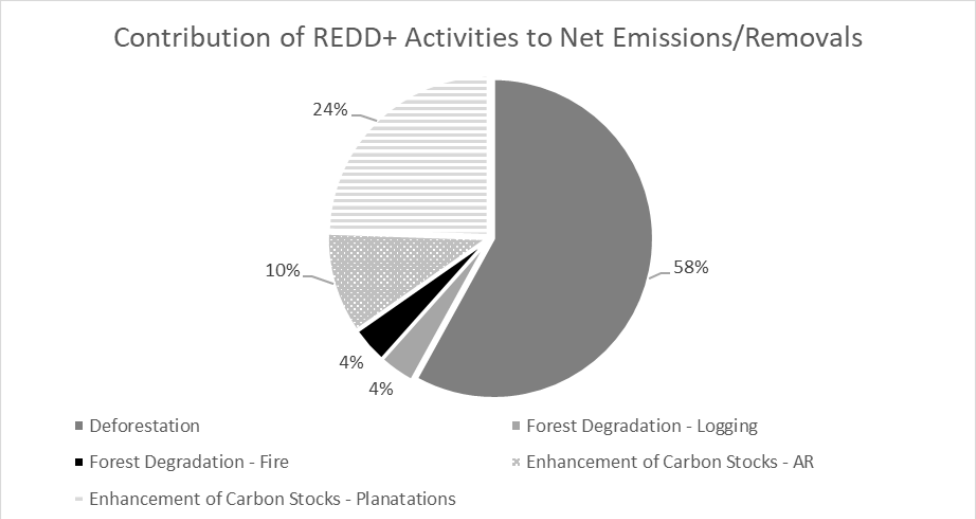


Table 4.1. Estimated ER Program Reference Level

Emissions						Removals			Net	
	A	B	C	D	E = A+B+C+D	F	G	H	I = F+G+H	J = E+I
	Deforestation	Forest Degradation	Carbon Stock Enhancement - Plantations	Total Gross Emissions	Forest Degradation	Carbon Stock Enhancement – A/R	Carbon Stock Enhancement - Plantations	Total Gross Removals		
year *t*	Average annual emissions from deforestation in natural forests (tCO_{2-e}/yr)	Average annual gross emissions from logging in natural forests (tCO_{2-e}/yr)	Average annual emissions from biomass burning in softwood plantations (tCO_{2-e}/yr)	Average annual gross emissions from harvesting in Hardwood and Softwood Plantations (tCO_{2-e}/yr)	Average annual emissions (tCO_{2-e}/yr)	Average annual removals from logging in natural forests (tCO_{2-e}/yr)	Average annual removals from afforestation/ reforestation (tCO_{2-e}/yr)	Average annual removals from Hardwood and Softwood Plantations (tCO_{2-e}/yr)	Total removals over the Reference Period (tCO_{2-e}/yr)	Net Reference Emissions Level (tCO_{2-e}/yr)
2006	2,474,743	195,316	157,488	596,195	**3,423,742**	–42,362	–437,331	–1,639,123	**–2,118,816**	**1,304,926**
2007	2,474,743	195,316	157,488	596,195	**3,423,742**	–42,362	–437,331	–1,639,123	**–2,118,816**	**1,304,926**
2008	2,474,743	195,316	157,488	596,195	**3,423,742**	–42,362	–437,331	–1,639,123	**–2,118,816**	**1,304,926**
2009	2,474,743	195,316	157,488	596,195	**3,423,742**	–42,362	–437,331	–1,639,123	**–2,118,816**	**1,304,926**
2010	2,474,743	195,316	157,488	596,195	**3,423,742**	–42,362	–437,331	–1,639,123	**–2,118,816**	**1,304,926**
2011	2,474,743	195,316	157,488	596,195	**3,423,742**	–42,362	–437,331	–1,639,123	**–2,118,816**	**1,304,926**
2012	2,474,743	195,316	157,488	596,195	**3,423,742**	–42,362	–437,331	–1,639,123	**–2,118,816**	**1,304,926**
2013	2,474,743	195,316	157,488	596,195	**3,423,742**	–42,362	–437,331	–1,639,123	**–2,118,816**	**1,304,926**
2014	2,474,743	195,316	157,488	596,195	**3,423,742**	–42,362	–437,331	–1,639,123	**–2,118,816**	**1,304,926**
2015	2,474,743	195,316	157,488	596,195	**3,423,742**	–42,362	–437,331	–1,639,123	**–2,118,816**	**1,304,926**
2016	2,474,743	195,316	157,488	596,195	**3,423,742**	–42,362	–437,331	–1,639,123	**–2,118,816**	**1,304,926**

Relation Between the Reference Level, the Development of a FREL/FRL for the UNFCCC and the Country's Existing or Emerging GHG Inventory

9. The FRL has been developed using a new data set for activity data as well as more refined National Specific emissions factors for above-ground biomass. The national reference level is proposed to be developed following the methods and procedures used for ER Program's FRL. Activity data covering the other major islands will be generated and used to develop a national FREL that will be submitted to the UNFCCC (refer to improvement plan item, section 9.4)

10. Consistencies include the design characteristics of the FRL such as forest definition, carbon pools, gases. Any variations relating to stratification and reporting of REDD+ activities in the Forest Remaining Forest category of the GHGI will be transparently explained.

11. Consistency in the methodology and data sources applied to generate the ER Program FRL will be prioritized for any reports provided to the UNFCCC, specifically the FRL, National GHG Inventory (GHGI) estimates and National Communications for the forestry sector.

ANNEX 5. Implementation Arrangements of the ER Program

Institutional and Implementation Arrangements

National Oversight

1. The ER Program implementation spans 4 four main divisions, that is, Central, Eastern, Western, and Northern which are divided into 11 provinces (*Yasana*), 155 districts (Tikina) and 982 registered villages (Koro) spread over the islands of Viti Levu and Vanua Levu and Taveuni. Figure 5.1 presents an overview of the institutional and implementation arrangements of the ER Program at national, divisional, districts and village levels.

2. The MoF is the lead agency and National REDD+ focal point responsible to coordinate and implement REDD+ activities. The Conservator of Forests approves all REDD+ ER Program activities after consulting with the RSC.

3. The RSC provides the administrative oversight for REDD+ activities in Fiji. Members of the REDD+ SC at national level include:

- **The MoE** is the national focal point for the UNFCCC and lead negotiator in international climate change meetings and coordinates with the MoF in representing Fiji's REDD+ agenda at international meetings.

- **The Ministry of iTaukei Affairs** is responsible for developing and promoting policies to ensure good governance and welfare of the *iTaukei*. This Ministry strives to ensure that the rights and interests of the iTaukei are safeguarded in the REDD+ process.

- **The TLTB** is the custodian of iTaukei land in the country. Almost 90 percent of land in Fiji is customary owned. The Board provides guidance on the use of iTaukei land and represents the interests of iTaukei landowners.

- **The Department of Environment** is the national focal point for the Convention on Biological Diversity. This is the lead agency in ensuring biodiversity is protected and monitored at the national level.

- **The Ministry of Lands and Mineral Resources** manages state land including mangroves. This Department hosts the Land Bank where landowners can "deposit" their land to be invested on their behalf. The Ministry provides guidance on the use of state land and on land deposited in the Land Bank. The Ministry is also responsible for regulating the exploration and development of Fiji's mineral, petroleum and other related non-living resources of the country.

- **The Department of Agriculture** is the lead agency for the agricultural sector and is the national focal point for UNCCD. The department guides the development and implementation of agriculture policies and incentives to support REDD+ strategies. Given that agriculture is the main cause for deforestation in Fiji, the department plays an important role in addressing this issue.

- **The Ministry of Rural and Maritime Development, Natural Disaster and Meteorological Services i**s responsible for administering government activities at the rural and provincial levels. The Provincial Administrators (PA) are close to the ground and support

coordination and monitoring of REDD+ pilot site activities. The office of the PA reports directly to the Commissioner in each subregion (North, West and Central/Eastern). The Commissioner in each subregion is the Chairperson of the REDD+ Divisional Working Group.

- **Representatives of NGOs** carry out REDD+ activities and contribute to the development of national-scale M&E, provide inputs to guidelines on safeguards, ensure compliance of national procedures, exchange of experience and lessons learned, facilitate community engagement, ensure good governance and transparency and represent the interests of various social groups. The NGOs in the committee are CI and Live and Learn Environmental Education.

- **Private forestry sector (timber industry)** plays an important role in reducing forest degradation and in the implementation of the Fiji Harvesting Code of Practice.

- **Fiji Pine Limited** is a public enterprise and one of the largest plantation industries in Fiji. The company will support and identify opportunities for REDD+ activities pertaining to plantations.

- **Fiji Hardwood Corporation Limited** owns majority of the mahogany plantations in Fiji. The company will support and identify opportunities for REDD+ activities pertaining to plantations.

- **REDD+ iTaukei resource owner representatives** ensure that landowner rights and interests are addressed as most of Fiji's forests are owned by indigenous communities.

- **The Department of Women** looks after interests of women and is the responsible agency for the National Gender Policy

- **The Ministry of Youth and Sports** ensures the representation of youth interests and coordinates the country's largest network of youth groups in rural and urban areas

Coordination at the Divisional Level Divisional Oversight

4. The program will be under the management of the MoF through direct oversight of the REDD+ Unit. The REDD+ Unit will oversee the ER Program implementation. The REDD+ Unit is a part of the MSD (see Section 9.2 of the ERPD).

5. The REDD+ Unit is supported at the subregional level by the REDD+ Divisional Working Groups. Members of the REDD+ Divisional Working Group consist of:

- **Chairperson**: Commissioner – designated officer responsible for oversight of public and private interventions across administrative boundary of North, Central/Eastern and Western Divisions.

- **Members:**

    - Senior Administrators of all Government Agencies, private entities and participating NGOs of the REDD+ SC through their offices at Divisional level.
    - Conservation Officers at Provincial Council Offices
    - FWs

- Representatives of land care groups such as relevant Commodity Clusters (Kava, Taro, Livestock and others)
- Representatives of Forest Care Groups

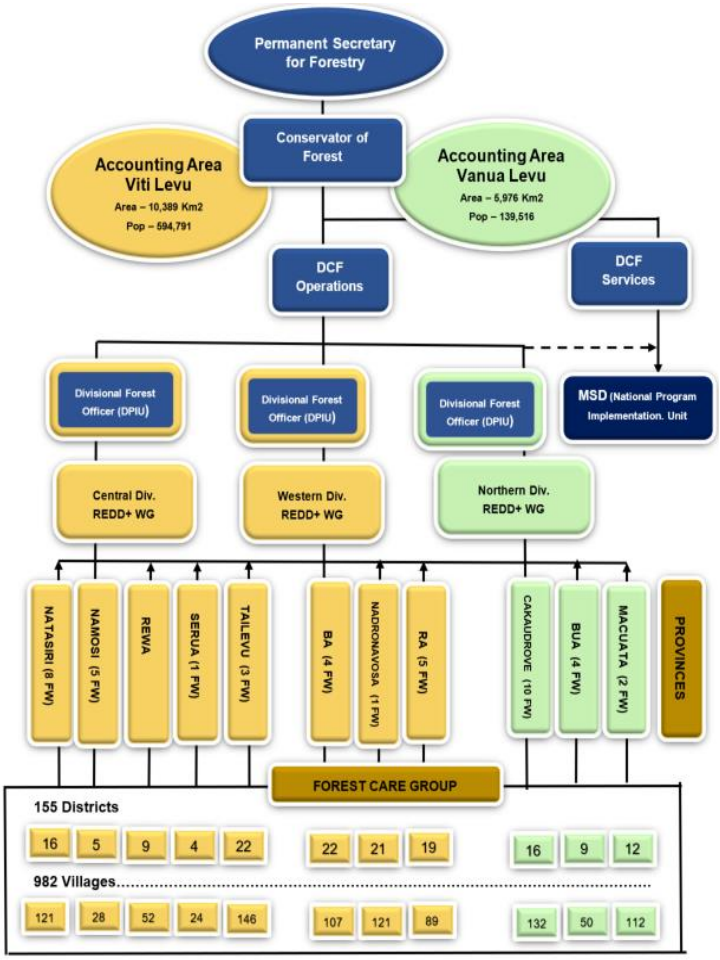
6. A schematic representation of the hierarchy of relationships between the national, divisional, district and village level administration are presented in figure 5.1.; governance and implementation arrangements of ER Program activities at different levels are presented in figure 5.2.

Coordination at the Site Level Implementation

7. At the site level, the forestry beat officer will be assisted by the FW to lead site-level implementation of activities and will be supported by the agriculture extension officers. Community monitoring will be led by the Provincial Council Office's chief executive officer or Roko Tui and/or conservation officer.

8. FW will be the point of contact at the village level. FW will work closely with the YMST as well as other voluntary community groups such as the Forest Care Group, land care groups, and commodity cluster groups.

Figure 5.1. Implementation Arrangement: FW and MoF



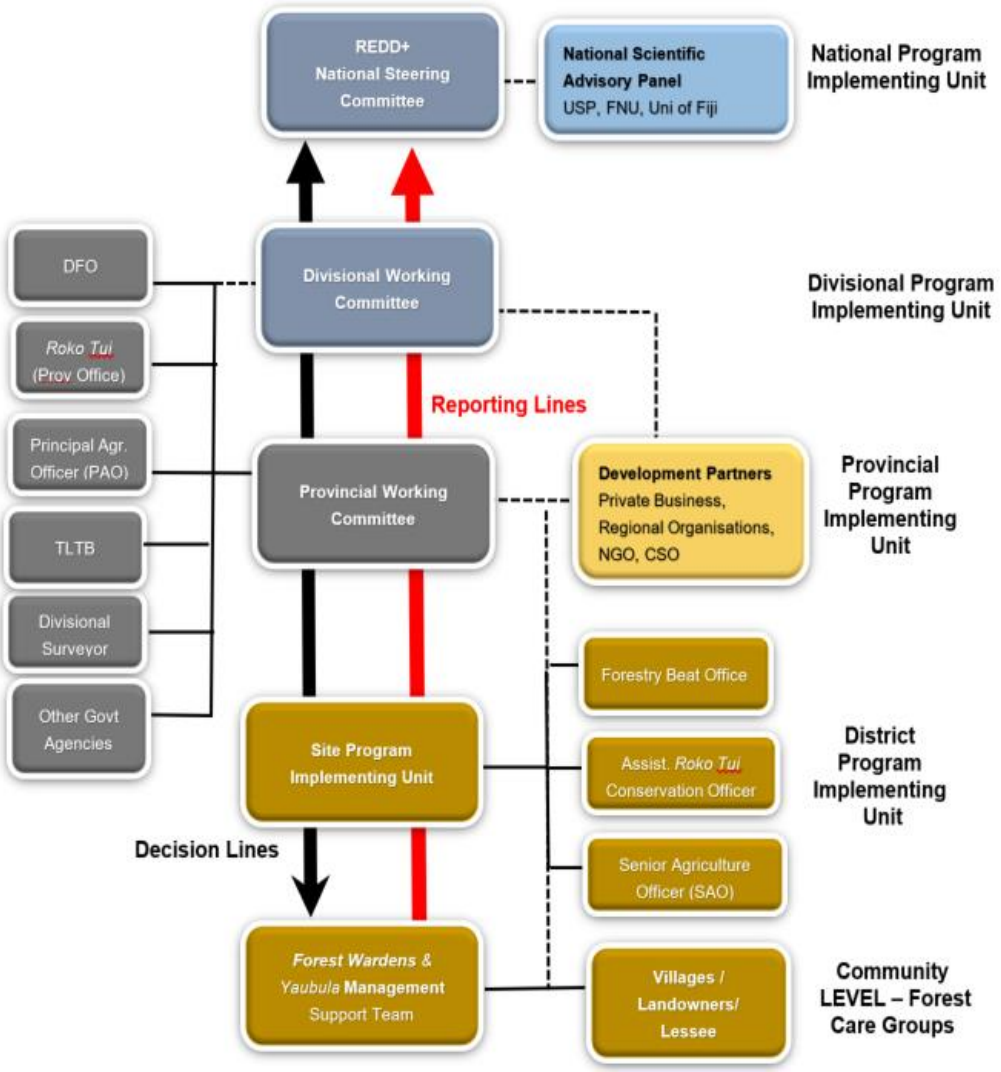
Note: DCF = Deputy Conservator of Forests; DPIU = District Program Implementation Unit; /REDD+ Unit; Div = Divisional; WG = Working Group; Note that the Divisional Working Group includes representatives from the private sector.

9. The FW will be required to report on (a) the progress of implementation of ER Program activities at site level, (b) landowner grievances and issues that require immediate intervention and redress; (c) on opportunities that may arise to strengthens ER- P national position, and (d) advice on options for efficient and effective implementation and delivery of ER products and services with the widest coverage and greatest impact. Reports are submitted monthly to the Divisional Forest Officer who will collate and present to the REDD+ Divisional Working Group.

Feedback and Grievance Redress Mechanism(s)

10. Recommendation from the study on FGRM will be adopted and mainstreamed into the REDD+ ER Program through the RSC through community consultation.

Figure 5.2. Governance and Implementation Arrangement of ER Program from National to Site Level



Note: Private Business includes all forest sector enterprise operating in the ER Program accounting area.

Stakeholder Consultations and Information Sharing

11. Stakeholder consultation of the ER Program activities will align with existing framework such as the Ministry of iTaukei Affairs, Provincial Council Office as well as the Commissioner's Office under the Ministry or Rural and Maritime Development and National Disaster Management. Information

dissemination will be coordinated by the MoF through the Divisional REDD+ Working Groups and through newsletters, radio programs, newspapers and social media. Decision and reporting channel are outlined in Figure 5.2.

Organizational Structure for MMR

12. Fiji's institutional hierarchy related to National Forest Monitoring shown in figure 5.3. The authority lies with the MoE CCICD is the UNFCCC National Focal Point and Designated National Authority for the National Communication (NC) and the biennial update reports (BUR). The MoF is responsible for overall management of Fiji's National Forest Management System which enables reporting on information relating to GHG emissions and removals from forests as well as safeguards and biodiversity. These two Ministries inform and consult a range of stakeholders, including the RSC, which represents a cross section of civil society and business interests, as well as other government Ministries.

13. The MoF is mandated to sustainably manage Fiji's forest resources and as such performs the following functions:

- Coordinate and facilitate the implementation of Forest strategies and policies in partnership with Government entities and the industry;
- Monitor and evaluate the current strategies, policies and deliverables;
- Maintain coordination with other ministries;
- Allocate responsibilities of all divisions ensuring that each division has clear leading role for different components of carbon emission and removal reports;
- Develop and monitor a time frame and schedule for the preparation of the reports and Deliverables;
- Identifying constraints and gaps and related financial and technical and capacity needs;
- Developing and overseeing the implementation of a quality assurance and quality control strategy for all reports related to emissions and removals;
- Developing and maintaining systems and archiving data to ensure institutional memory;
- Managing budget for entire activities of monitoring and measurement, reporting and reporting system;
- Documenting systematically all the assumptions, data and method used;
- Conducting evaluations to identify key lesson learned and areas for improvement.

14. The competencies and experiences within the MoF required to carry out regular tasks ensure the staff of the Ministry have the relevant requirements to meet the NFMS needs and responsibility for REDD+ implementation. To meet these obligations the Ministry also collaborates with a range of other stakeholders whose role and responsibilities are outlined in Figure 5.3.

Figure 5.3. Institutional Coordination Related to NFMS

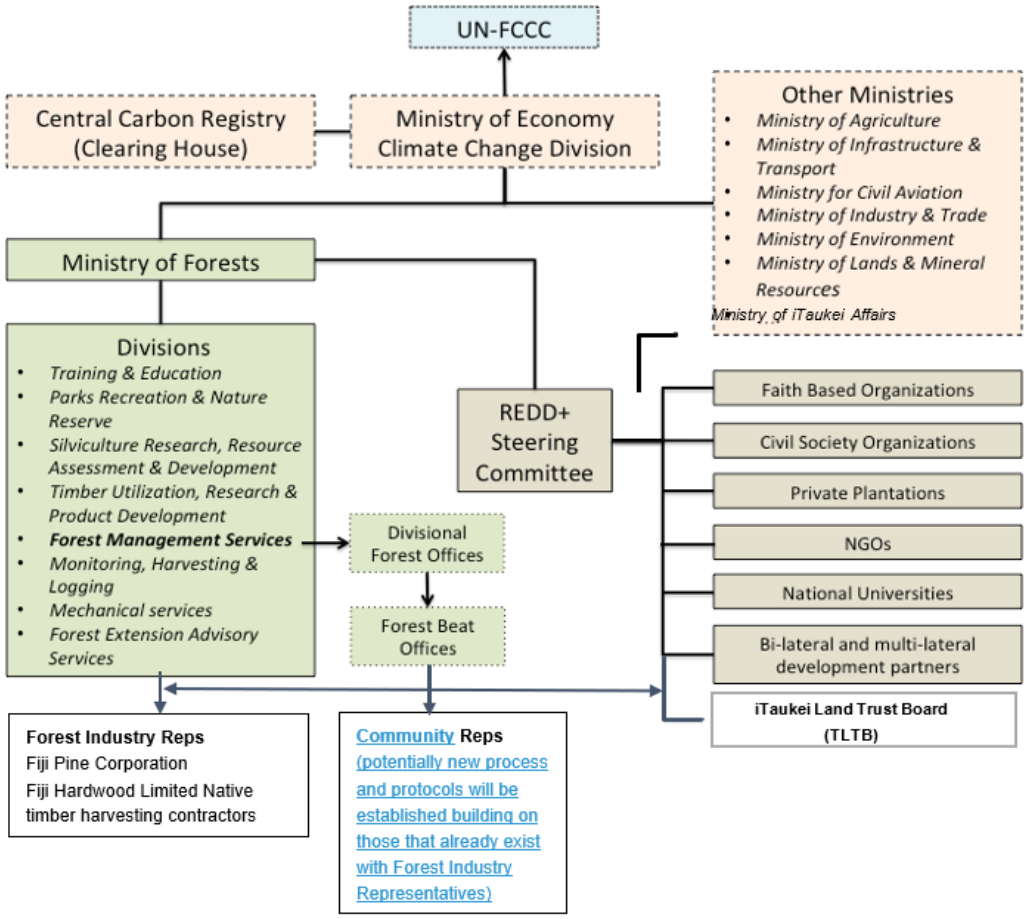


Table 5.1. Responsibilities of Institutions Involved with REDD+ Implementation

Institutions	New Responsibilities under REDD+	Reports to
MoF	• Monitor and Report of GHG emissions and removals by sinks to National Designated Authority (MoE)	MoE CCICD
Silviculture Research, Resource Assessment & Development Division	• Undertaking applied research to develop knowledge and skill to improve the ways in which forest owners manage and use forest resource to meet current and future demand of the expanding population. • Undertake research on silviculture to generate knowledge and technology for sustainable management of forests • Develop guidelines for sustainable forest management • Building capacity of government and community members on sustainable forest management • Develop allometric equations for the major tree species, including Mangrove • Develop yield and growth models for the major forest types and species	Permanent Secretary, MoF
Timber Utilization, Research and Product Development	• Carry out research on harvesting and utilization of timber, value added products from timber • Timber seasoning and preservation • Conduct research on utilization of lesser known species for timber and other uses	Permanent Secretary, MoF

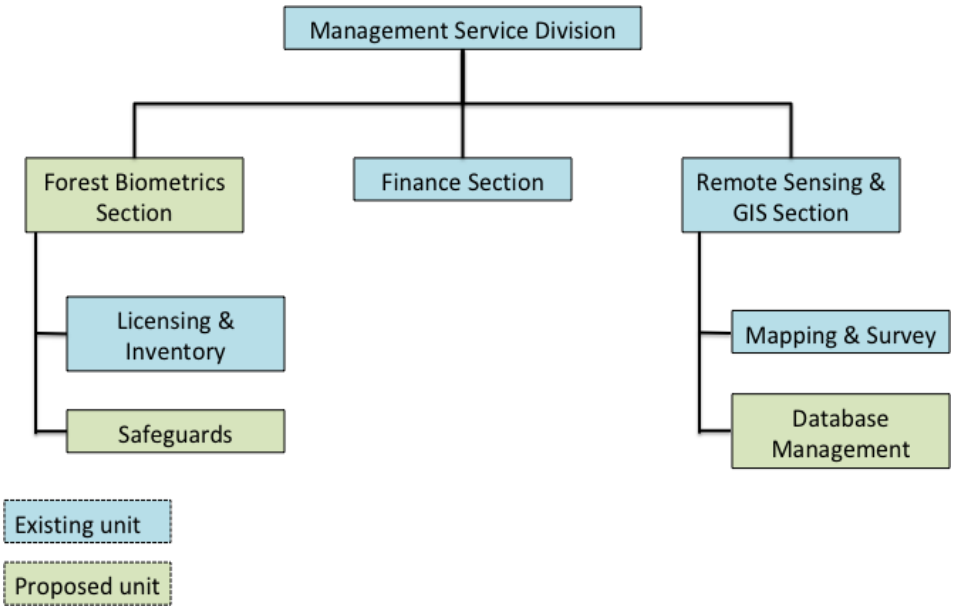
Institutions	New Responsibilities under REDD+	Reports to
Division		
MSD	• Provide Forest Management Information needs and services to the Ministry Forestry (forest areas, standing forest stocking, logged areas and volume) • Provide technical support and services to members of the public relating to natural forest management (volume estimate, logging plan maps, forest inventory) • Management of Forest Information System and Database (forest cover change analysis of satellite image & updating information into our database) • Measurement of PSPs • Mapping and surveying of forest boundaries, forest functions and services • Coordination and facilitation of International, regional conventions and agreements on forests • Regulate Quality control and quality assurance of forest monitoring and measurement • Carry out National Forestry Inventory	Permanent Secretary, MoF
Forestry Training Centre	• Carry out capacity building activities related to forest inventory, yield and growth, remote sensing and GIS, land use classification, accuracy and uncertainty assessment	Permanent Secretary, MoF
Divisional Forest Offices	• Carry out pre-harvesting inventory and assessment of logging operation • Monitoring and surveillance of harvesting activities • Participate in community awareness and outreach to NGO and communities in rural areas associated with NGOs • Reporting on forest management activities including logging operation to Forestry Department • Maintaining divisional level database system	Conservator of Forests
MoF		
Divisional Forest Offices	• Carry out pre-harvest inventory and assessment of logging operations • Monitoring and surveillance of harvesting activities • Participate in awareness and outreach to NGOs and communities in rural areas • Report on development activities including, logging operations to Forestry Department • Maintaining division level database system	Conservator of Forests
Communities and Landowner Groups/ Programs		
Communities	• Provide land for program activities • Adopt new land and forest resource management practices • Attend capacity building activities related to REDD+ socialization and forest monitoring • Collect and report ground data related to monitoring of forest resources and safeguard indicators	Communities (Village/District/Provincial Council Meeting)
International Development Partners		
SPC Geoscience, Energy and Maritime	• Provide technical support particularly on remote sensing and GIS to MoF and its subordinate organizations	GoF as a member of the Pacific Community

Institutions	New Responsibilities under REDD+	Reports to
Division	• Provide technical support to estimate activity data using remote sensing techniques • Provide technical support on forest inventory • Carry out capacity building activities related to forest assessment and RS and GIS application	
GIZ	• Provide technical support for forest assessment. • Carry out capacity building activities. • Provide financial support to carry out research and development activities.	GoF
CI	• Provide technical and financial support to community for afforestation and reforestation • Support to develop livelihood options	Permanent Secretary of Forest

15. The MSD under the MoF is responsible for MMR activities including data collection and management and verifying outputs from the NFMS. The structure of MSD is presented in figure 5.4., including proposed new units to facilitate the MMR including a new Forest Biometrics section which is responsible for ground data and safeguards and an expanded Remote Sensing and GIS section responsible for mapping and database management. The database unit will also be responsible to support implementation and analysis of data collected using the NFMS.

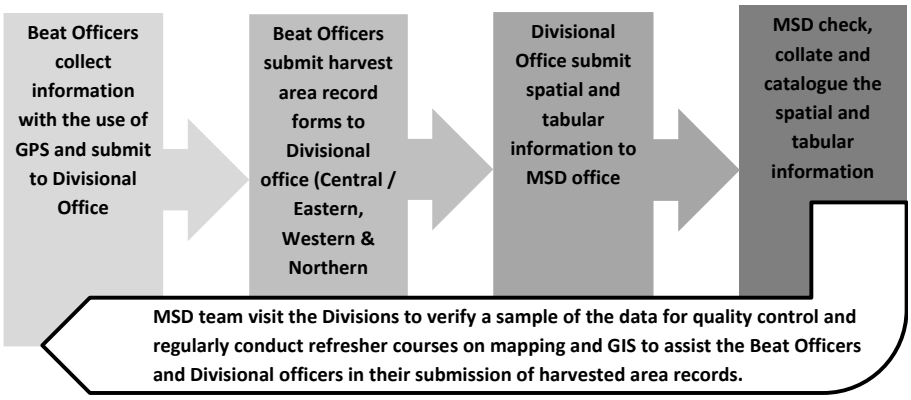
16. The MoF issue maps of areas to be harvested to native forest and plantation logging companies. The logging companies must log within these areas and are permitted only to extract the volume outlined in the MoF harvest plan. The plantation and native forest extracted volume data is collected from the field by Beat Officers who submit it to their Divisional offices located in the Central/Eastern/Western and Northern Districts. Staff at the Divisional officers are positioned to check the data for completeness before it is submitted to the MSD. There is a template for data collection and the data is stored in the Timber Revenue System database. The harvest areas are captured in maps using GPS from the Forest Beat Offices which have historically been submitted to the MSD office every 6 months to determine the total harvested areas. The process has been revised to require 3 monthly submissions of the information. More frequent data collection will enable QA/QC checks to be completed more regularly to improve data quality. The QA/QC process involves the MSD staff conducting both desk-based and field-based data checks and staff interviews. Responses to data quality issues, such as additional training requirements are noted and followed up under adaptive management.

Figure 5.4. Existing and Proposed Institutional Arrangements of MSD of the MoF



17. It has been identified that the data collection protocols and processes require review and augmentation to accommodate the expanded data needs for REDD+. This will include incorporation of new data suppliers (for example, communities involved in afforestation/reforestation activities and reporting of fire impact), data completeness, quality requirements and timely delivery of data to meet the reporting requirements. This need has been identified as a high priority in Fiji's REDD+ Improvement Plan which is detailed in Section 9.4 of the ERPD.

Figure 5.5. Harvest Area Record Data Collection Process



Relation and Consistency with the NFMS

18. Fiji aims to develop a multi-purpose NFMS through planning and design that ultimately achieves the following:

- Data generated by the NFMS meets information needs of policymakers and local communities and forest entrepreneurs;

- The NFMS integrates multiple thematic fields such as carbon, biodiversity, policy and measures and non-carbon benefits

- The NFMS supports both national and international reporting commitments

19. Additionally, Fiji is adopting an open data accessibility and transparency policy that will be achieved through following activities:

- National data generated is made freely made available to those complying with national laws and regulations;

- Data sharing between different institutions and user groups is encouraged and facilitated;

- The NFMS builds on existing (local, national, regional, global) systems and is embedded in (existing) national institutions;

- The NFMS provides data needed to support national policies, policy design and enforcement.

20. The REDD+ (MMR requirements have provided Fiji's MoF with the opportunity to build on existing data collection activities related to forest resource management in Fiji. The MMR requirements have encouraged the formalization of a NFMS with an integrated approach to data capture and use, by creating relationships, operational structures (that is, roles and responsibilities) and documentation to consolidate and formalize the regular collection of information to enable consistent monitoring and reporting of carbon stock changes over time.

21. While forestry-related data capture had historically incorporated both GIS and ground data elements, the NFMS adopts an integrated approach using remote sensing data and periodic ground measurements throughout all major forest types in Fiji. In addition to the improvements made in integrating remote sensing and ground data for emissions estimates, the REDD+ MMR requirements have prompted the inclusion of safeguards and biodiversity indicators to support such reporting, both to nationally and to relevant external stakeholders.

22. The MSD has a long history of collecting/generating data related to forest management in Fiji from remote sensing analysis and ground inventories. Some of this data is necessary to estimate emissions and removals from deforestation, forest degradation and enhancement of carbon stocks. Data collection is conducted in the field by staff as well as through established relationships with several agencies and corporations including SPC-GSD Geoscience Division of the Pacific Community, Fiji Pine Limited and Fiji Hardwood Corporation Limited.

23. In the past this data collection was undertaken for operational purposes related to the timber industry with some data collected on a regular basis (for example, reporting of volumes extracted from timber harvest operations) and others on an 'ad hoc' basis as funds allowed (for example, mapping of forest cover, measuring PSPs and NFI plots). It is acknowledged that the REDD+ MRV will build on the existing data collection structures but will lead to a maturing of the NFMS through a series of planned improvements in the short, medium and long term.

24. Planned improvements to this existing system will strengthen the capacity to consistently report forest related information to internal and external agencies such as the UNFCCC and the FAO Forest Resource Assessment, among many others. To achieve these expanded aims, the MSD plans to

expand its skills and organize its units as shown in figure 5.4. the MSD also plans to strengthen the quality of the data collected by improving the documentation relating to data collection and collation and associated QA/QC protocols. Comprehensive training in the application of the data collection protocols will be conducted to the staff associated with monitoring related responsibilities.

ANNEX 6. Fiji's REDD+ Readiness and Participation in the FCPF

REDD+ Readiness and FCPF

1. The majority of international climate finance to incentivize ERs in the land-based sector is expected to come through results-based finance linked to REDD+. The REDD+ mechanism forms an integral part of the 2015 Paris Climate Agreement and was initially introduced in the negotiations of the UNFCCC in 2005. First major decisions of the COP under the UNFCCC on REDD+ were adopted in Bali (COP-13, 2007) and Cancun (COP-16, 2010), and the 'Warsaw Framework' (COP-19, 2013) defines the basic international architecture for REDD+. The principal idea of the REDD+ mechanism is to channel international climate finance to forested developing countries in the form of payments for measured, reported and verified ERs as an incentive. The Paris Agreement also included scope for a market-based mechanism linked to REDD+, the detailed modalities for which are currently being developed under the UNFCCC.

2. International results-based finance for reduced emissions from forest and land sectors require an enabling framework ("REDD+ readiness"). This framework principally includes a carbon accounting system that allows emissions to be monitored in a transparent and rigorous manner. To have a reference for payments, countries need to have the capacity to develop a historical emissions baseline ("reference emissions level") based on agreed methodologies and a robust and transparent forest monitoring system that allows the periodic MRV of emissions going forward. In addition, countries need to develop a mechanism to distribute the proceeds from carbon payments (through a BSM), put in place a system that keeps track of ERs (that is, REDD+ registry) and report on safeguards (through a SIS), and create a platform to meaningfully engage stakeholders.

3. Several multi-lateral initiatives have informed the development of the international REDD+ architecture through piloting an operational framework. The FCPF was created in 2008 as a multi-lateral initiative managed by the World Bank to promote REDD+ readiness in partner countries and to pilot an incentive system that would leverage results-based finance for REDD+ at scale (having pioneered such carbon finance at the project level for more than 10 years).

4. The FCPF is a global partnership of countries, business and civil society with the objective to help build the capacity in IBRD and IDA member countries in the tropics to reduce emissions from deforestation and forest degradation, forest carbon stock conservation, the sustainable management of forests, and the enhancement of forest carbon stocks (commonly referred to as REDD+). The Facility was announced at the 13th Conference of the Parties (COP) to the UNFCCC in Bali in December 2007 and became operational in June 2008. The World Bank is the Facility's Trustee as well as one of its Delivery Partners. It also houses the FCPF FMT that is responsible for the operation of the Facility. The FCPF currently comprises 46 partner developing countries (17 in LAC, 18 in Africa, and 11 in the Asia-Pacific Region) and 17 financial contributors from both the public and private sectors.

5. The FCPF has two separate yet complementary funding mechanisms - the Readiness Fund and the Carbon Fund.

6. The **Readiness Fund** supports developing countries in preparing themselves to participate in a future, large-scale, system of positive incentives for REDD+. This includes adopting national REDD+ strategies; developing FRELs; designing MRV systems; and setting up REDD+ national management arrangements, including proper environmental and social safeguards.

(a) The **Carbon Fund** supports performance-based payments for REDD+ interventions at the jurisdictional level in countries that have made significant progress in their REDD+ readiness investments. Such payments are made based on the level of reduction of carbon emissions generated through REDD+ interventions. The FCPF Charter stipulates that a country needs to have its R-Package endorsed by the FCPF Participants Committee before the country can submit an ER PROGRAMD to the Carbon Fund for its consideration. The R-Package thus is a major milestone under the FCPF process and comes at the transition from REDD+ readiness to piloting performance-based activities.

7. Fiji's readiness phase commenced in 2009 through the GIZ REDD+ Project and in 2010 a National REDD+ Policy was endorsed by Cabinet. Following closely on the heels of the National REDD+ Policy was the drafting of the National REDD+ Strategic framework. This framework formed the basis for the components of the National REDD+ Strategy. The start of the readiness phase was marked with extensive stakeholder consultations and awareness on the National REDD+ Program, from policy level to local communities, and technical training on MRV components. In 2012 and 2013, after extensive consultations and following selection criteria, two National REDD+ pilot sites were established with the main objective of trialing out readiness approaches and methodologies in preparation for the national scale implementation.

Fiji´s Participation in the FCPF

Readiness Fund

8. Fiji became a participant country in the FCPF in 2013 and a year later in December 2014, the FCPF Participants Committee authorized a grant funding of US$ 3.8 million to support Fiji's preparations in engaging in a future REDD+ performance-based system. The grant agreement for the Fiji's R-PP readiness fund was signed in May 2015.

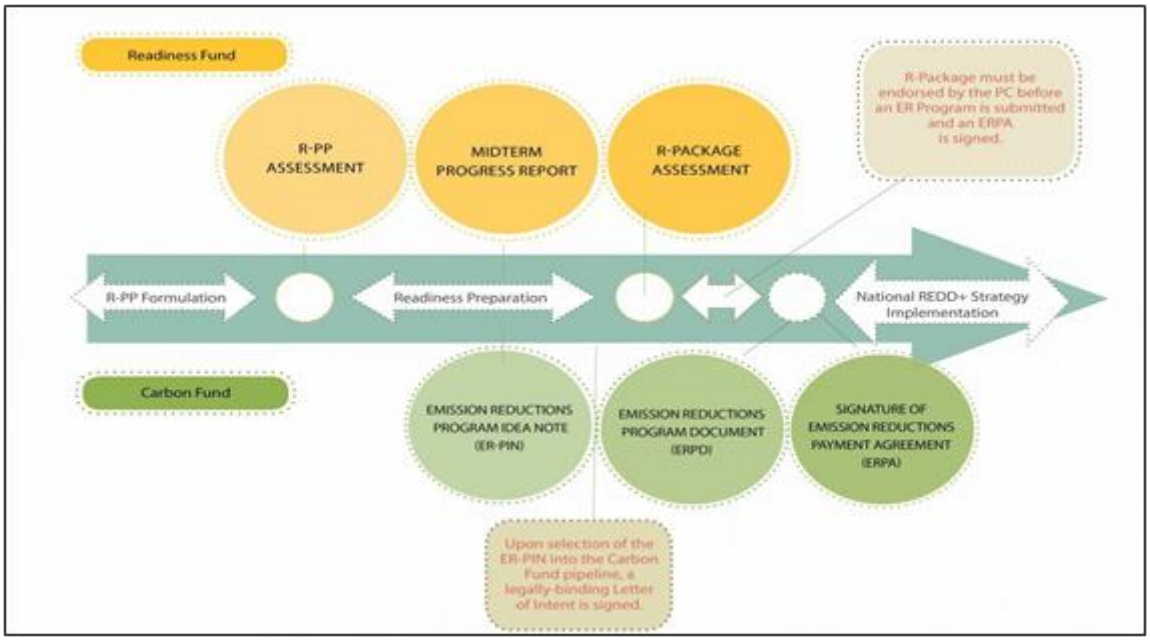
9. In December 2013, the FCPF Participants Committee authorized grant funding of US$ 3.8 million to support Fiji's REDD+ Readiness process. This Readiness Preparation Grant is funding key elements of the R-PP. In particular, the development of the REDD+ strategy through a highly consultative and participatory process, which will carefully assess the environmental, social and economic impacts associated with different land use options and will be informed by a range of technical and policy studies. The Readiness Preparation Activities are also strengthening the existing implementation arrangement for REDD+ in Fiji and are strengthening the existing FGRMs for REDD+. The Readiness Preparation Grant is also financing the set-up of an effective monitoring system for REDD+, including the development of reference emission level/reference, the design and set up of an MRV system as well as a safeguards information system. The GoF and GIZ resources are complementing these activities by funding broader capacity building and awareness raising activities.

10. An additional FCPF funding of US$2,000,000 was approved by the FCPF Participants Committee and the World Bank. The amended and restated Grant Agreement has been signed by the Bank and MoF. The additional funding is part of a broader engagement of the Bank to support the National REDD+ Readiness framework and a proposed ER Program. The additional Grant is being used to support further consultations and participation, the establishment of a national FREL and an MRV system, and the finalization of the National REDD+ Strategy.

Carbon Fund

11. Fiji's ER-PIN was accepted in the Carbon Fund pipeline in early 2016 and a Letter of Intent was signed in July 2016 between the World Bank and the GoF for the purchase of up to 3 million tons of ERs from the ER Program. In July 2019, the GoF presented its ER Program to the Carbon Fund Participants Committee. Acknowledging the extensive efforts made by Fiji, and the high quality of the ERPD the Carbon Fund Participants Committee approved Fiji's ERPD unconditionally, whereby Fiji was officially accepted into the portfolio of both Tranche A and Tranche B of the Carbon Fund, and the World Bank, as trustee of the Carbon Fund, is authorized to negotiate with Fiji the ER Program in accordance with the ERPA negotiations process and subject to completion of Bank due diligence and final Bank approval.

Figure 6.1. Milestones under the FCPF Readiness and Carbon Funds



12. Complete documentation related to the Fiji's MRV, R-Package and ER Program can be found at: https://www.forestcarbonpartnership.org/country/fiji.

ANNEX 7. Summary of Financing Plan of the ER Program

Financing Plan

1. The draft financing plan estimates a total ER Program budget of US$42.446 million for the 5-year implementation time frame. The budget is divided into three major components which are closely linked to the ER Program design components presented in section I.B. Distribution of the budget is as follows:

- **Component 1:** Strengthening Enabling Conditions for Emission Reductions (~US$1.647 million)

  This component involves IDULP to promote integrated landscape management and strengthening forest governance and law enforcement. It also aims to invest in an improved forest information system to support forest sector planning and decision-making.

- **Component 2:** Promoting integrated landscape management (~ US$36.681 million)

This is the core component of the ER Program and will have the largest contribution to the reduction of emissions and enhancement of removals by sinks. It will focus on:

  - Sustainable natural forest management contributing to reduction of forest degradation;
  - Afforestation and reforestation; and softwood and hardwood plantations contributing to the enhancement of forest carbon stocks;
  - Afforestation and reforestation to restore ecosystem services
  - Promotion of agroforestry and enhanced livelihoods contributing to the reduction of deforestation pressure and
  - Promotion of forest protection, to conserve and restore natural forests.

- **Component 3:** Program Management and Emissions Monitoring (US$4.117 million). This component includes the program administration and financial management of the ER Program. It also includes the M&E, safeguards compliance, MRV system, communication and awareness raising programs of the ER Program implementation.

2. **The ER budget will be financed by domestic and international sources, Carbon Fund contributions, and private sector contributions.** 80 percent of financing is from the Fiji Government, International sources and the Carbon Fund, while the remaining 20 percent will be funded by the private enterprise in Fiji. The government budget will contribute US$13,327,225 million over the ER Program timeframe. It is expected that government investments will be complemented by International Financing and Carbon Fund Financing to meet the total project costs. International financing amounts US$33,577,000. The secured International financing sources include Global Environment Finance (GEF) will provide US$2.1 million in financing to facilitate the implementation of the ER Program. While not secured, a restoration project initiated by the MoF and UNFCC in 2017 is in submission to the GCF. The prospect appears to be good for the project and once approved will span a total of 10 years at a total cost of US$31.477million. GoF has demonstrated commitment to

provide additional budgetary support to the ER Program in future should there be shortfall in international financing sources. Private sector financing is expected to contribute US$8.4 million to program implementation (20 percent of total budget). The investment is expected support revenue-generating reforestation and afforestation activities and sustainable natural forest management (reduced impact logging and agricultural interventions). The budget for the Fiji's ER Program components and activities per year is summarized in Table 7.1.

Table 7.1. Summary of the Total ER Program Costs (expected uses of funds)

	Activity	Year 1	Year 2	Year 3	Year 4	Year 5	Total
1	**Component 1: Strengthening enabling conditions for emissions reduction**	437,530	407,651	315,862	296,929	189,658	1,647,630
1.1	Integrated District Land Use Planning (IDLUP) to promote more sustainable long-term integrated landscape management	367,630	337,751	246,962	230,029	124,758	1,307,130
1.2	Strengthening forest governance and law enforcement	50,400	50,400	49,400	47,400	45,400	243,000
1.3	Forest information system	19,500	19,500	19,500	19,500	19,500	97,500
2	**Component 2: Integrated Landscape Management**	5,396,113	6,459,686	8,041,725	8,109,078	8,674,540	36,681,142
2.1	Sustainable natural forest management	194,828	194,828	194,828	194,828	194,828	974,140
2.2	Afforestation and reforestation plantation	1,721,226	1,721,226	1,721,226	1,340,900	1,340,900	7,845,478
2.3	Afforestation and reforestation restoration of ecosystem services	782,550	1,775,950	2,769,350	3,762,750	4,756,150	13,846,750
2.4	Agroforestry and enhanced livelihoods	2,150,000	2,150,000	2,150,000	2,150,000	2,150,000	10,750,000
2.5	Promotion of forest protection, to conserve existing natural forest carbon stocks.	547,509	617,682	1,206,321	660,600	232,662	3,264,774
3	**Component 3: Program Management and Emissions Monitoring**	873,525	773,526	823,525	773,525	873,525	4,117,626
3.1	Program coordination and management[26]	605,525	605,526	605,525	605,525	605,525	3,027,626
3.2	M&E, including monitoring of safeguards	15,000	15,000	15,000	15,000	15,000	75,000
3.3	MRV - Implementation and management	253,000	153,000	203,000	153,000	253,000	1,015,000
	Total	6,707,168	7,640,862	9,181,113	9,179,532	9,737,723	42,446,398

Source: Fiji's ERPD. June 3, 2019.

[26] This includes safeguards and ESMF implementation, including GAP.

Sources of Financing

3. The ER Program financing is categorized into domestic and international sources and Carbon Fund contributions. 80 percent of financing is from the Fiji Government, International sources and the Carbon Fund. The remaining 20 percent will be funded from private enterprise in Fiji. The details of the anticipated financing sources are presented in Error! Reference source not found. and A.7.3.

Domestic Financing: Public (government budget plus external sources)

4. The government budget will contribute US$13,327,225 million over the ER Program timeframe. It is expected that this will be complemented by International Financing and Carbon Fund Financing to meet the total project costs. A review of the existing governmental programs and supported projects was conducted to assess their potential to finance the ER Program interventions. The MoF is well positioned to provide budgetary support during ER Program subject to annual budgetary approval from the MoE. GoF has demonstrated commitment to provide additional budgetary support to the ER Program in future should there be shortfall in international financing sources. Projected budget to the MoF over the next five years is outlined in Table 7.2.

Table 7.2. Projected Budgetary Allocation for the MoF

Agency	Fiji Government US$	YR:2020	YR:2021	YR:2022	YR:2023	YR:2024	Total
MoF	Reforestation of Degraded Forest	500,000	2,088,002	2,130,614	2,309,736.	2,245,163	9,273,515
	Reforestation of indigenous species	125,000	250,000	255,102	276,548	268,817	1,175,467
	Reducing Emissions from Deforestation and Forest Degradation (REDD+)	245,350	514,700	525,229	569,358	553,440	2,408,077
	Sandalwood Development Program	50,000	100,000	102,040	110,619	107,526	470,185
	Total (US$)	920,350	2,952,702	3,012,960	3,266,261	3,174,946	13,327,244

Source: Fiji's ERPD. June 3, 2019.

International Financing Sources

5. The secured International financing sources include GEF will provide US$2.1 million in financing to facilitate the implementation of the ER Program. This funding will go exclusively toward investments in restoration of degraded forests and enhanced carbon stocks. The project is anticipated to kick off in January 2020.

6. While not secured, a restoration project initiated by the MoF and UNFCC in 2017 is in submission to the GCF. The prospect appears to be good for the project and once approved will span a total of 10 years at a total cost of US$31.477million. In addition, GoF is in discussions with several bilateral and multilateral agencies for securing additional sources of funding in support of the ER Program. The information on international financing sources is expected to be updated by the MoF on annual basis during the program implementation.

Table 7.3. Sources of International Financing to the ER Program

Project Title	Source of Funds	Focal Point (Government Agency)	Implementing Agency	Amount (US$)	Duration	Prospect (%)
Community based integrated natural resource management project	GEF	MoF	FAO	2,100,000	2020–2022	100
Restoration of Degraded Areas [1]	GCF	MoF	FAO/UNFCC	31,477,000	2020–2030	80
Total				**33,577,000**		

Source: Fiji's ERPD. June 3, 2019.

Note: A significant portion the GCF project is expected to be implemented in the ER Program area.

Private Sector

7. Private sector financing is expected to contribute US$8.4 million to program implementation (20 percent of total budget). The investment is expected support revenue-generating reforestation and afforestation activities and sustainable natural forest management (reduced impact logging and agricultural interventions).

8. Private sector investment has been committed by Fiji Pine and Fiji Hardwood (mahogany) and smaller companies and farms to fully fund the activities implemented under Subcomponent 2.2 – Afforestation and reforestation – softwood and hardwood timber plantations. To a large extend the financing of the private sector activities will be generated from cash flows of forestry and agricultural production activities under the Subcomponent 2.2.

ANNEX 8. Financial Management and Disbursement arrangements

1. An assessment of the financial management arrangements for the proposed Project was conducted based on the financial management Manual issued by the financial management Sector Board on March 1, 2010 and the financial management guidance for Carbon Fund operations. The assessment has concluded that the Project meets the minimum Bank financial management requirements, as stipulated in BP/OP 10.00.

2. For a carbon finance transaction, the assessment of financial management arrangements entails the review of financial flows from the FCPF Carbon Fund to the beneficiaries according to the BSP. The main principles for the financial management of the ERPA funds are to i) reduce complexity and organize financial flows through a limited number of "entry points"; ii) use existing reliable structures where possible; iii) minimize transaction costs; iv) ensure the proper recording of and reporting on all transactions related to the project; and v) facilitate external audits as required by the Bank.

3. Overall, the existing financial management arrangements of the MoF appear acceptable to meet the financial management requirements as stipulated in the IPF Policy. The financial management risk of the project is assessed "Substantial", after mitigation measures. The main actions required to be completed before ERPA effectiveness include: (a) A full time Project Accountant to be appointed at implementing agency and to be trained on the Bank financial management requirements and disbursement procedures; (b) Project financial management Manual to be developed as part of the POM, describing in detail the roles and responsibilities of the concerned parties, as well as the proper procedures, internal controls and oversight mechanism based on the BSP.

4. MoF will set up a PMU (including a dedicated project accountant) or use the existing PMU setup within the REDD+ Unit and provide all guarantees to be operated in a way that meets the requirements of the ERPA and the World Bank. A dedicated account for the ER Program will be opened by the MoE at the Reserve Bank of Fiji and will operate in accordance with the Public Financial Management Act 2004.

5. Semi-annual Interim Financial Reports will provide information for monitoring the use and management of funds. The Project Financial Statements, including the annual audit of BSP will be annually audited by an acceptable independent auditor in accordance with TORs acceptable to the Bank, the Office of the Auditor General of Fiji is assessed as acceptable for this. The audited financial statements are to be published according to the Bank's information disclosure policy.

Country Issues

6. Fiji's PFM system has had several improvements in recent years; however, there are still weaknesses and challenges that need addressing. The 2013 Public Expenditure and Financial Accountability (PEFA) Report found that the main areas of strengths were in aspects of budgeting and reporting: i) aggregate expenditure and revenue out-turns compared to budget; ii) composition of expenditure out-turn compared to budget, iii) comprehensiveness of information included in budget documentation iv) orderliness and participation in annual budget process; v) predictability in the availability of funds for commitments and expenditures; vi) transparency of taxpayer obligations and liabilities; and vii) recording and management of cash balances, debts and guarantees. The 2013 PEFA found the main areas of weakness were in aspects of controls, auditing and oversight, reporting and transparency. The 2018 IMF Article IV Report list the following main areas of improvement on PFM: i) extending the coverage of government operations to public corporations that pose a significant risk

to public finances; ii) publishing public financial assets and their evolution; (iii) producing mid-year budget reports; and iv) following the procurement processes. The government has conducted a PEFA Self-assessment in late September 2019 with support from IMF-PFTAC and awaiting the finalization of the report.

7. Fiji has put in place a comprehensive PFM improvement program and has been successful in implementing PFM reforms in the past. The initial 2014-2019 PFM improvement plan was informed by the findings of the 2013 PEFA.

8. Notable achievements under the four year reform plan include; (i) tax reform initiatives particularly on the review and amendment of the Income Tax Act 2015 supported by the previous operation in the series; (ii) formulation of the Citizen's Budget; (iii) implementation of e-Procurement; (iv) adopting International Public Sector Accounting Standard (IPSAS) Financial Reporting under the cash basis of accounting for the whole of government accounts; (v) progress on budget transparency; (vi) enhancement of quality of expenditure through strengthened monitoring of projects aligned to the NDP 2017; and (vii) improved oversight of fiscal risk from public sector entities, through the new framework to guide the strengthening of fiscal oversight of state-owned enterprises supported by the previous operation in the series. The next four-year 2019–2024 PFM improvement plan is currently being finalized and the broad areas of focus include; (i) strengthening institutions including review of the PFM legislative framework; (ii) improve service delivery; and (iii) raising the quality of expenditure.

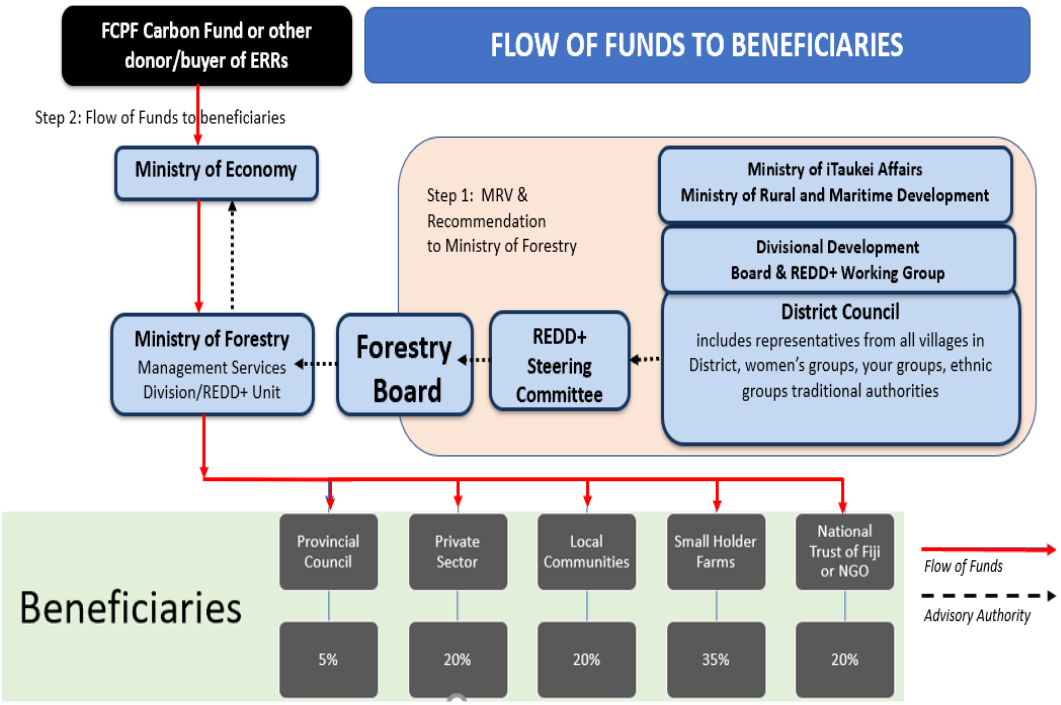
Disbursement Arrangements

9. **Designated Accounts.** One Designated Account in FJD for the FCPF Carbon Fund, ER Program for Fiji will be opened in the Reserve Bank of Fiji. The DA will be managed directly by MoE.

Funds Flow Arrangements

10. The Project will follow a fund flow and disbursement arrangement of the result-based ER payments. ER payments are eligible expenditures and represent Project "revenue". A disbursement and Financial Information Letter (DFIL) for all carbon fund operations, including the Project, has been prepared and will be agreed at Negotiations. Figure 8.1 shows the Flow of Funds Chart to Beneficiaries.

Figure 8.1. Flow of Funds Chart to Beneficiaries



Risk Assessment and Mitigation

11. The inherent risk to the Project from the financial environment is assessed as Substantial.

12. The Project specific control risk taking into account the risk mitigation measures that are to be implemented for the project is assessed as Substantial. Overall financial management risk is **Substantial**. A summary of the risk assessment is given in Table 8.1. The financial management team will closely monitor the project financial management risk during project implementation.

Table 8.1 Financial Management Risk Assessment Summary

Risk	Risk Rating	Risk Mitigation Measures Incorporated into Project Design	Risk After Mitigation
Inherent Risk			
Country level: Overall Fiduciary	**Moderate**	Intensive supervision and training to meet World Bank Group fiduciary and procurement standards will be undertaken, alongside policy engagement through the DPO series to improve PFM. Finally, training will be provided in Fiji as part of the Pacific integrated Capacity Building Program, with a view to improve the speed and quality of project implementation and management.	**Moderate**
Project level: Funds may not be used efficiently and economically and for purposes intended	Substantial	Annual financial audit by external auditor	Substantial
Project level: the PMUs may not have	Substantial	The MoF sets up an internal control mechanism and PMU which consists of	Substantial

Risk	Risk Rating	Risk Mitigation Measures Incorporated into Project Design	Risk After Mitigation
necessary capacity to implement the Project		members who have been successfully implementing other World Bank assisted REDD+ Projects.	
Overall Inherent Risk	**Substantial**		**Substantial**
Control Risk			
1. Budgeting	Substantial	Commitment from the MoE and MoF to allocate the ER payments to beneficiaries who participate in the Project on a timely basis, in strict compliance with the BSP. Variance analysis is done though quarterly financial monitoring reports.	Substantial
2. Funds Flow	Substantial	Funds will flow directly from the Bank to the Designated Account maintained by and opened at Reserve Bank of Fiji from central to provincial levels. MoF with oversight from the MoE establishes a formal process of approving payments from the time beneficiaries submit the request to the time the payment is made, including the verification procedures and documentation, which is clearly specified in the Project FMM. This formal process needs to comprise sufficient details of who is doing what in each step of the approval process.	Substantial
3. Staffing	Substantial	Qualified accounting staff need to be maintained throughout the project, especially with previous bank funded project experience and shall be appointed and trained on Bank financial management and disbursement procedures.	Substantial
4. Accounting	Moderate	The Project uses the Government approved accounting system (Global Masterpiece). Accounting records are maintained by MoF and MoE.	Moderate
5. Internal controls	Moderate	There is segregation of incompatible duties and responsibilities. Levels of review and approvals are considered adequate to provide reasonable assurance that the policies and procedures for recognizing and recording assets, revenues and expenses are complied with. The internal control mechanism will be detailed in the Project FMM.	Moderate
6. External Audit	Substantial	The Project financial statements, including the BSP, will be audited by an auditor acceptable to the Bank, in accordance with a TOR acceptable to the Bank. The REDD+ Project has had issues with timely submission of audits.	Substantial
8. Reporting and Monitoring	Moderate	The interim financial reports will be submitted semiannually to the Bank for review.	Moderate
Overall Control Risk			Substantial

Financial Management Actions

13. The main financial management actions required are detailed in Table 8.2.

Table 8.2. Financial Management Actions

Required Action	Timing
1. A full time Project Accountant to be appointed at implementing agency and to be trained on the World Bank financial management requirements and disbursement procedures.	**Before project effectiveness**
(b) Project financial management manual to be developed as part of the POM, describing in detail the roles and responsibilities of the concerned parties, as well as the proper procedures, internal controls and oversight mechanism in place of the Project BSP.	**Before project effectiveness**

ANNEX 9. Detailed Financial and Economic Analysis

1. The economic analysis or cost-benefit analysis is conducted to assess the contribution of the project to society's welfare and to inform the decision of whether to invest into a project. The analysis gives monetary value to the benefits (positive welfare) and to the costs (negative welfare) effects of the project by applying a discounted cash flow analysis. Discounting allows the comparison of future costs and revenues in present day terms. This analysis was conducted using both a standard US$5 carbon price as well as projected shadow prices of carbon[27] over time. Results were analyzed using both a 12 percent market discount rate and 6 percent social discount rate and conducted over 5, 10- and 20-year periods. The potential payments to be received by the country from the sale of ERs are considered as revenue in the analysis. The number of ERs expected to be generated under the program over the full 20 years is estimated at 12.01 MtCO2e. Carbon revenues were modelled to follow the disbursement of payments from the carbon fund with the first carbon payment occurring in Year 3 and the second in year 5 of the project.[28]

2. A sensitivity analysis to evaluate project performance in terms of revenue and cost was applied to analyze the ER Program's economic benefits. Alternative rates of 6 percent, and 12 percent are applied to both scenarios. All sensitivity analyses are run for all discount rates scenarios. Simulation results are summarized in Tables 9.1. and 9.2.

Table 9.1. Summary of Economic Simulation Results Using a Carbon Price of US$5 per Ton

Scenario	Economic Variable	5-year Period	10-year Period	20-year Period
Base scenario	NPV (12% discount rate) US$	-33,118,537	4,713,047	87,388,605
Cost increase 10%	NPV (12% discount rate) US$	-36,115,930	190,112	80,609,347
Cost increase 20%	NPV (12% discount rate) US$	-39,113,323	-4,332,823	73,830,089
Cost increase 30%	NPV (12% discount rate) US$	-42,110,716	-8,855,758	67,050,831
Revenue decrease 10%	NPV (12% discount rate) US$	-32,804,076	-281,193	71,870,486
Revenue decrease 20%	NPV (12% discount rate) US$	-32,489,615	-5,275,432	56,352,368
Revenue decrease 30%	NPV (12% discount rate) US$	-32,175,155	-10,269,672	40,834,249
Base scenario	NPV (6% discount rate) US$	-38,162,320	22,529,718	215,368,397
Cost increase 10%	NPV (6% discount rate) US$	-41,700,734	16,638,808	204,206,703
Cost increase 20%	NPV (6% discount rate) US$	-45,239,148	10,747,899	193,045,008
Cost increase 30%	NPV (6% discount rate) US$	-48,777,562	4,856,989	181,883,314
Revenue decrease 10%	NPV (6% discount rate) US$	-37,884,502	14,385,836	182,669,863
Revenue decrease 20%	NPV (6% discount rate) US$	-37,606,684	6,241,955	149,971,329
Revenue decrease	NPV (6% discount rate) US$	-37,328,866	-1,901,927	117,272,795

[27] http://pubdocs.worldbank.org/en/911381516303509498/2017-Shadow-Price-of-Carbon-Guidance-Note-FINAL-CLEARED.pdf

[28] Schedule of payments was only indicative for the analysis and may vary based on negotiations between the GoF and the FCPF. It is expected that a different payment schedule, that assumes the same price and volume of ERs, will not change financial and economic analysis results significantly.

Scenario	Economic Variable	5-year Period	10-year Period	20-year Period
30%				
Base scenario	IRR (%)	Not calculable	14.5	28.1
Cost increase 10%	IRR (%)	Not calculable	12.1	26.4
Cost increase 20%	IRR (%)	Not calculable	9.8	24.8
Cost increase 30%	IRR (%)	Not calculable	7.7	23.3
Revenue decrease 10%	IRR (%)	Not calculable	11.8	26.2
Revenue decrease 20%	IRR (%)	Not calculable	8.7	24.0
Revenue decrease 30%	IRR (%)	Not calculable	5.1	21.6

Table 9.2. Summary of Economic Simulation Results Using a Shadow Price of Carbon

Scenario	Economic Variable	5-year Period	10-year Period	20-year Period
Base scenario	NPV (12% discount rate) US$	24,712,367	99,044,060	231,885,348
Cost increase 10%	NPV (12% discount rate) US$	21,714,974	94,521,125	225,106,090
Cost increase 20%	NPV (12% discount rate) US$	18,717,581	89,998,190	218,326,831
Cost increase 30%	NPV (12% discount rate) US$	15,720,188	85,475,255	211,547,573
Revenue decrease 10%	NPV (12% discount rate) US$	19,243,737	84,616,719	201,917,555
Revenue decrease 20%	NPV (12% discount rate) US$	13,775,107	70,189,378	171,949,762
Revenue decrease 30%	NPV (12% discount rate) US$	8,306,478	55,762,037	141,981,969
Base scenario	NPV (6% discount rate) US$	33,312,535	150,512,778	454,926,557
Cost increase 10%	NPV (6% discount rate) US$	29,774,121	144,621,868	443,764,863
Cost increase 20%	NPV (6% discount rate) US$	26,235,707	138,730,958	432,603,168
Cost increase 30%	NPV (6% discount rate) US$	22,697,293	132,840,049	421,441,474
Revenue decrease 10%	NPV (6% discount rate) US$	26,442,868	129,570,590	398,272,207
Revenue decrease 20%	NPV (6% discount rate) US$	19,573,200	108,628,403	341,617,857
Revenue decrease 30%	NPV (6% discount rate) US$	12,703,533	87,686,215	284,963,507
Base scenario	IRR (%)	66.4	82.8	84.3
Cost increase 10%	IRR (%)	58.1	76.2	78.1
Cost increase 20%	IRR (%)	50.4	70.4	72.6
Cost increase 30%	IRR (%)	43.3	65.0	67.7
Revenue decrease 10%	IRR (%)	57.2	75.6	77.4
Revenue decrease 20%	IRR (%)	46.8	67.6	70.0
Revenue decrease 30%	IRR (%)	34.8	58.9	62.1

3. Results differ strongly depending on the price of carbon used. Incorporating the US$5 price of carbon and using a discount rate of 12 percent, the analysis results in an NPV of US$4.7 million over 10 years and US$87.4 million over 20 years. However, using the shadow prices of carbon and the same

discount rate of 12 percent results in significantly higher benefits of US$99.0 million over ten years and US$231.8 million over a 20-year period.[29]

4. Considering a US$5 price per ton of carbon, the project has negative NPV over the 5-year time period for both 6 and 12 discount rate scenarios. The project is also sensitive to cost increases and revenue decreases over the 10-year period for the US$5 price of carbon. Using a shadow price of carbon, the project generates a positive NPV under all scenarios tested.

5. If other benefits, aside from those included in Tables, such as benefits from incentives for local communities or in education and health resulting from the income increase and biodiversity benefits were included in the simulations, higher positive results could be expected.

[29] In all cases, benefits start to arise in year 3 when the first carbon payments are made. Calculations may vary slightly based on negotiations between the FCFP and the GoF regarding number and schedule of ER payments.