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Report No: 156033-NP

INTERNATIONAL DEVELOPMENT ASSOCIATION

PROJECT APPRAISAL DOCUMENT

ON A
PROPOSED EMISSIONS REDUCTIONS PAYMENT AGREEMENT
IN THE AMOUNT OF US\$45 MILLION
TO
NEPAL
FOR A
NEPAL EMISSION REDUCTIONS PROGRAM IN THE TERAJ ARC LANDSCAPE (P165375)
January 21, 2021

Environment Natural Resources and Blue Economy Global Practice
South Asia Region

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CURRENCY EQUIVALENTS

(Exchange Rate Effective October 31, 2020)

Currency Unit = Nepalese Rupees

NRS1 = US\$ 0.0084

US\$1 = NRS 119.27

FISCAL YEAR

July 16 – July 15

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ABBREVIATIONS AND ACRONYMS



ACOFUN	Association of Collaborative Forest Users Nepal
AEPC	Alternative Energy Promotion Centre
BSP	Benefit Sharing Plan
CBFM	Community-based Forest Management
CFUG	Community Forest User Group
CO ₂	Carbon Dioxide
CoF	Collaborative Forest
CPF	Country Partnership Framework
CSO	Civil Society Organization
DFOs	District/Division Forest Offices
FRTC	Forest Research and Training Center
DNPWC	Department of National Parks and Wildlife Conservation
DoF	Department of Forests
DRPMU	District/Division REDD+ Program Management Unit
EIA	Environmental Impact Assessment
ER	Emission Reductions
ERPA	Emission Reduction Payment Agreement
ERPD	Emission Reductions Program Document
ERPIN	Emission Reductions Program Idea Note
ESMF	Environmental and Social Management Framework
FAO	Food and Agriculture Organization
FCPF	Forest Carbon Partnership Facility
FECOFUN	Federation of Community Forestry Users Nepal
FIP	Forest Investment Program
FRA	Forest Resource Assessment
FSCMD	Forest Survey and Carbon Measurement Division
FY	Fiscal Year
GCF	Green Climate Fund
GDP	Gross Domestic Product
GEF	Global Environment Facility
GHG	Greenhouse Gas
GoN	Government of Nepal
IP	Indigenous People
IPLC	Indigenous People and Local Communities
MoFE	Ministry of Forests and Environment
MRV	Measurement, Reporting, Verification
MtCO ₂ e/yr	Million tons of CO ₂ equivalent per year
NGO	Non-governmental Organizations
NRC	National REDD+ Centre
NRCC	National REDD+ Coordination Committee
NRSC	National REDD+ Steering Committee
PCTMCDB	President's Chure Terai Madhesh Conservation Development Program
PDO	Project Development Objective

REDD+	Reducing emissions from deforestation and forest degradation and sustainable forest management, conservation of forests and enhancement of forest carbon stocks
SEA	Social and Environmental Assessment
SFM	Sustainable Forest Management
TAL	Terai Arc Landscape
UNDP	United Nations Development Program
UNEP	United Nations Environment Program
UNFCCC	United Nations Framework Convention on Climate Change
WWF	World Wildlife Fund



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DATASHEET

BASIC INFORMATION

Country(ies)	Project Name	
Nepal	Nepal Emission Reductions Program in the Terai Arc Landscape	
Project ID	Financing Instrument	Environmental and Social Risk Classification
P165375	Carbon Finance - Emission Reductions Payment Agreement (ERPA)	B – Partial assessment

Financing & Implementation Modalities

<input type="checkbox"/> Multiphase Programmatic Approach (MPA)	<input type="checkbox"/> Contingent Emergency Response Component (CERC)
<input type="checkbox"/> Series of Projects (SOP)	<input type="checkbox"/> Fragile State(s)
<input type="checkbox"/> Disbursement-linked Indicators (DLIs)	<input type="checkbox"/> Small State(s)
<input type="checkbox"/> Financial Intermediaries (FI)	<input type="checkbox"/> Fragile within a non-fragile Country
<input type="checkbox"/> Project-Based Guarantee	<input type="checkbox"/> Conflict
<input type="checkbox"/> Deferred Drawdown	<input type="checkbox"/> Responding to Natural or Man-made Disaster
<input type="checkbox"/> Alternate Procurement Arrangements (APA)	

Expected Project Approval Date	Expected Project Closing Date	Expected Program Closing Date
December 15, 2020	December 31, 2025	December 31, 2025

Bank/IFC Collaboration

No

Proposed Development Objective(s)

The Project Development Objective is to make payments to the Recipient for measured, reported and verified Emission Reductions related to reduced deforestation and forest degradation and to the enhancement of forest carbon stocks in the Terai Arc Landscape, and to distribute the payments in accordance with an agreed-upon Benefit Sharing Plan.

**Components****Component Name****Cost (US\$, millions)****Organizations**

Borrower: Nepal

Implementing Agency: Ministry of Forests and Environment; REDD+ Implementation Center (REDD IC)

MPA FINANCING DATA (US\$, Millions)

Total MPA Program Financing (Estimated):

of which Bank Financing (IBRD/IDA):

PROJECT FINANCING DATA (US\$, Millions)**SUMMARY**

Total Project Cost	
Total Financing	45.00
of which IBRD/IDA	0.00
Financing Gap	

DETAILS**Non-World Bank Group Financing**

Trust Funds	
Strategic Climate Fund Credit	45.00

Expected Disbursements (in US\$, Millions)

WB Fiscal Year	2020	2021	2022	2023	2024	2025
Annual	0.00	0.00	20.00	0.00	0.00	25.00
Cumulative	0.00	0.00	20.00	20.00	20.00	45.00



INSTITUTIONAL DATA

Practice Area (Lead)

Environment, Natural Resources and Blue Economy

Contributing Practice Areas

Climate Change

Climate Change and Disaster Screening

No

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	No
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b. Specific action(s) to address the gender gaps identified in (a) and/or to improve women or men's empowerment	No
---	----

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	● Substantial
2. Macroeconomic	● Substantial
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	● Substantial
8. Stakeholders	● Moderate
9. Other (Impact of COVID-19)	● Substantial
10. Overall	● Substantial



COMPLIANCE

Policy

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

☐ Yes ☐ No

Does the project require any waivers of Bank policies?

☐ Yes ☐ No

Safeguard Policies Triggered by the Project

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



Legal Covenants

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

Conditions of effectiveness

- (1) Submission of a Letter of Approval;
- (2) Submission of a final Benefit Sharing Plan which, based on the advance draft version of the Benefit Sharing Plan provided by the date of this Agreement, takes into account specific guidance to be provided by the Trustee, following consultations with Tranche A Participants, on the outstanding issues that need further clarification in the final version of the Benefit Sharing Plan;
- (3) Submission of the Forest Development Fund Operations Manual, which will be developed based on the Forestry Regulation to be issued by the Council of Ministers, and will have a section on the ER Program that shall be found in form and substance satisfactory to the Trustee and may be updated from time to time with agreement with the Trustee;
- (4) Submission of the executed Subsidiary Agreement between the Program Entity, through MoF, and FDF (as ERPA Payment Recipient Entity), subject to the Trustee's prior review of and consent to the draft of such Subsidiary Agreement; and
- (5) Submission of evidence, in form and substance satisfactory to the Trustee, demonstrating that the ER Program Measures that generated the ERs during the period from June 22, 2018 until the date of this Agreement were implemented in a manner consistent with the Safeguards Plans.



I. STRATEGIC CONTEXT

A. Country Context

1. **Nepal is under a caretaker government following the dissolution of the House of Representatives of Nepal's Federal Parliament on December 20, 2020 and parliamentary elections announced for April 30 and May 10, 2021.** When the Nepal Communist Party led government backed by a majority in Parliament took office on February 15, 2018, Nepal was looking at a period of political stability. The sudden House dissolution has, however, put the country on the path of political uncertainty and high risk. In response to the petition filed by opposition parties, the Supreme Court's awaited ruling on the government's decision would either push the country towards elections or see a reinstatement of the House as two immediate scenarios, while the longer-term implications are yet to be ascertained. The vertical split in the Nepal Communist Party is having a bearing at the provincial levels. While this may not immediately pose a threat to Nepal's federalism, early instability of provincial governments would discourage the otherwise nascent institutional setup. As per the new state architecture defined by the 2015 Constitution, state governments largely mirror the coalition at the center. At the sub-national level, funds, functions, and functionaries hitherto managed by the central, district, and village authorities have moved to the seven new provinces and 753 local governments for which new legislation, institutions, and administrative procedures have been formalized as constitutionally prescribed. Meanwhile, the central level authority has been streamlined with a focus on national policies and oversight.

2. **Over the past decade, Nepal's economy has performed reasonably well, though vulnerabilities have increased with COVID-19.** Real growth domestic product (GDP) growth averaged 4.9 percent (at market prices) over FY2010-19. Although declining as a share in the economy, agriculture continues to play a large role, contributing around 29 percent of GDP in FY2019. The service sector has grown in importance, accounting for 50.6 percent of GDP in FY2019. Industry and manufacturing have grown more slowly, and their relative share in the economy has averaged 13.7 percent of GDP over the past decade. Similarly, exports continue to struggle, while imports are fueled by remittances. Remittances remained stable between FY2010-19, with their share averaging 25 percent of GDP, supported by an increased transfer of funds through formal channels in recent years. Inflation has been in single digits for most of the past decade, with the peg of the Nepalese rupee to the Indian rupee providing a nominal anchor. Fiscal balances remained sustainable owing to strong revenue growth and modest spending. The federal government is now sharing revenue and transferring grants to provincial and local governments as part of the recent reforms linked to federalism. The poverty headcount ratio (at the international line of US\$1.90/day) is estimated at 8 percent in 2019, down from 15 percent in 2010. At a higher line (US\$3.20/day), 39 percent of the population was estimated to be poor in 2019. With the COVID-19 pandemic, the risk of falling into poverty has increased. About 31.2 percent of the population that are estimated to live between US\$1.90 and US\$3.20 a day face significant risks of falling into extreme poverty in 2020, primarily because of reduced remittances, foregone earnings of potential migrants, job losses in the informal sector, and rising prices for essential commodities as a result of COVID.

3. **The recent COVID-19 pandemic is expected to derail the strong growth trajectory established over the past three years.** GDP growth averaged 7.3 percent between FY2017 and FY2019. It is estimated to have slowed to 0.2 percent in FY2020, the lowest rate since FY2002, owing to COVID-19 pandemic. On the supply side, the services sector grew by only 0.7 percent year-on-year in FY2020 as tourism activities halted, and transport as well as wholesale and retail trade activities declined sharply with the four-months national lockdown that began on March 24, 2020. Activity in the manufacturing and construction sectors slowed significantly due to shortages in production inputs, constrained labor mobility, and market access. On the demand side, a contraction in private consumption and total investment was marginally offset by higher public expenditures (on wages and COVID-19 related expenditures on health and social assistance) and net exports (driven by lower imports). Growth is expected to recover slowly in FY2021 and FY2022. Assuming that the pandemic will be contained in FY2021 through periodic and localized lockdowns, real GDP is forecast to expand by 0.6 percent in FY2021 and 2.5 percent in FY2022. Although key hydropower projects are expected to



support growth, weak demand and trade are likely to dampen industrial sector growth in FY2021. Agricultural production is expected to pick up given favorable monsoon forecasts, subject to the availability of fertilizers and labor. On the demand side, low remittances, weak confidence, and higher unemployment will increase precautionary saving, keeping private consumption low. Firms are also likely to hold back investment for some time given the uncertainty. Over the medium-term, a gradual recovery is projected. The service sector is likely to slowly rebound amid a gradual recovery in the labor market and the tourism sector. While the construction sector will benefit from an increase in public investments, recovery in the manufacturing sector will remain slow because of weak domestic demand.

4. **Consumer price inflation was elevated in FY2020, driven by higher food prices.** Average inflation accelerated to 6.2 percent in FY2020 from 4.6 percent in the previous year. This was mostly due to the increase in food prices by 8.6 percent owing to India's export ban on onions from September 2019 to March 2020 and supply and trade disruptions in the agriculture sector since mid-March 2020 due to COVID-19. However, weaker demand for non-food items and services due to the national lockdown slowed average non-food inflation to 4.6 percent in FY2020. The Nepalese rupee (NPR) is pegged to the Indian rupee (INR) at the rate of 1.6 NPR to one INR. As a result, inflation follows the price movements in India with a lag.

5. In this country context, forestry and forest landscape management is relevant as it provides multiple opportunities for enhancing and creating new green jobs, supporting the livelihood base of forest-dependent communities, especially the most vulnerable of Nepal's society, conserving biodiversity and addressing climate change.

B. Sectoral and Institutional Context

6. **The last national-level Forest Resource Assessment (FRA) (MoFE, 2016)¹ concluded and the submission of the Nationally Determined Contribution (NDC) to the UNFCCC (GoN, 2020)² confirmed that forests and other wooded land cover about 6.61 million ha**, an equivalent of 44.74 percent of the total area of the country. Out of the total forest area, 37.80 percent is in the Middle Mountains region, 32.25 percent in the High Mountains and High Himalayas, 23.04 percent in the Churia, and 6.90 percent in the Terai. The total carbon stock in Nepal's forests has been estimated at approximately 1,055 million tons. This includes the carbon pools in tree components such as forest soils, litter, and debris.

7. **Results from the FRA demonstrate an increase in forest cover over the past decade.** Although an aggregate increase in forest cover is reported at national level due to community forestry³ interventions and agriculture abandonment due to overseas migration (MoFE, 2016), there are high levels of deforestation and forest degradation in certain parts of the country. The intensity of degradation is higher in government-managed forests⁴ than in community-managed forests. Evidence strongly suggests that once the forest management regime is transferred to local communities, forest degradation and deforestation can be substantially reduced. Deforestation accounts for approximately two-thirds of land-based emissions in the Terai, and is driven by immigration and unplanned settlement, encroachment of government-managed forests, illegal and unsustainable logging (mostly in government managed forests) and expanding infrastructure development (GoN, 2018). Currently, nearly 80,000 ha of forest in the Terai are encroached by agriculture and new settlements⁵.

8. **Forests contribute directly and indirectly to Nepal's economy by providing forest ecosystem services.** The

¹ Ministry of Forests and Environment (former Ministry of Forests and Soil Conservation), 2016. *Forest Resources Assessment Nepal (Main Results)*. Kathmandu, Nepal.

² Government of Nepal, 2020. Nationally Determined Contribution. Kathmandu, Nepal.

³ Community Forest is national forest that the government transfers to a Community Forest User Group (CFUG) for conservation, management, and utilization of the forest resources in the collective interest of the group.

⁴ Government Managed Forest is national forest land managed by the state. Ownership of all forest products of Government Managed Forest is vested in the government, although the government may grant a license for the use of such products.

⁵ Government of Nepal, 2018. *People and Forests - A Sustainable Forest Management-Based Emission Reduction Program in the Terai Arc Landscape*, Nepal. Kathmandu, Nepal.



forest sector's contribution to Nepal's GDP is not measured separately but together with agriculture, which was estimated at 29.5 percent in 2016/2017. Previous estimates of the forest sector's contribution to GDP were 4.4 percent for the period 1990 to 2000 and 3.5 percent in 2000 (Nepal, MFSC 2009), and 2.2 percent (primary wood products)⁶ (MSFP 2016), and over 9 percent of total national employment (2011) (MSFP, 2016)⁷. Forest rents have declined over the years from 1.2 percent of Nepal's GDP in 2000 to 0.4 percent in 2018 (World Bank, 2021)⁸. In addition, the value of ecosystem services, which are presently not included in GDP calculations, is estimated at 17.3 percent (MSFP, 2016). Forests currently supply roughly 86 percent of household energy needs. Forested watersheds also provide sediment retention and water regulation services that, in turn, improve the efficiency of hydropower facilities. In addition, more than 25,000 community forest user groups are directly engaged in managing forests, which provide important natural resources including food and fodder for their livelihoods. The total trade in non-timber-forest products from Nepal is estimated at US\$60–100 million⁹. While most goods (e.g. harvested timber or firewood from forests) can be valued because they are traded on the market, services, such as habitat provisioning, sediment retention, or water and climate regulation services are currently not valued and hence underestimated in terms of their contribution to the economy.

9. **Forests and agriculture remain inseparable due to the subsistence nature of farming systems in Nepal.** More than 70 percent of the population depends on agriculture for their livelihoods. Forests play a critical role in supporting agriculture: it is estimated that between 3.5 and 6 hectares of forest lands are required to support each hectare of crop land by providing nutrient-rich animal fodder (MoFSC, 2009)¹⁰. Rural productions systems are characterized by a strong dependency of agriculture and livestock on forest resources. Most rural people in Nepal depend on forests for their subsistence.

10. **Nepal's forests have a large untapped potential for contributing to Nepal's economy.** Nepal's Forest Sector Strategy 2012-2022 and Forest Policy (2019) underscore the need for sustainable forest management (SFM) to fully harness the production potential of forests, thereby creating employment, improving local livelihoods and contributing to alleviate rural poverty and foster socio-economic development. The 2016 Forest Sector Strategy has set some ambitious targets for the economic contribution of Nepal's forests: by 2025, the forest sector will (i) contribute at least 7.5 percent to the GDP, (ii) generate at least six times more jobs, (iii) reduce annual timber imports by 50 percent, and (iv) increase commercial timber supply to the domestic market annually by six times.

11. **In 2018, the Government of Nepal endorsed the National REDD+ Strategy.** The REDD+ Strategy¹¹ supports forest-based carbon and non-carbon benefits for Nepal's prosperity. It identifies 12 strategies and 79 strategic actions, covering a wide range of policy measures, management practices, governance and institutional strengthening, capacity enhancement, and policy and sectoral synergy development in order to achieve REDD+ outcomes.

12. **Nepal is committed to contributing to the implementation of the Paris Agreement under the United Nations Framework Convention on Climate Change (UNFCCC).** Nepal's 2016 Nationally Determined Contribution (NDC) (MoPE, 2016) declares that Nepal aims to enhance its forest carbon stock by at least 5 percent by 2025 as compared to the 2015 level; and substantially decrease the mean annual deforestation rate in the Terai and Siwalik Hills. Nepal has pledged to maintain at least 40 percent of the total area under forest cover, and to increase forest productivity through sustainable management. Equal emphasis will be given to increasing carbon sequestration and forest carbon storage and improving forest governance. Nepal also aims to put in place a forest carbon trade and payment mechanism and mainstream community/ecosystem-based adaptation by 2025.

⁶ The year of the estimate is not specified in the source document.

⁷ Multi Stakeholder Forestry Project (MSFP), 2016. Sustainable Forest Management in Nepal. Kathmandu, Nepal.

⁸ <https://data.worldbank.org/indicator/NY.GDP.FRST.RT.ZS?locations=NP> (accessed on January 21, 2021)

⁹ Heinen, J & Shrestha-Acharya, R., 2011. *The Non-Timber Forest Products Sector in Nepal: Emerging Policy Issues in Plant Conservation and Utilization for Sustainable Development*. Journal of Sustainable Forestry, 30:6, pp 543-563.

¹⁰ Ministry of Forests and Soil Conservation (MoFSC), 2009. *Nepal Forestry Outlook Study*. Kathmandu, Nepal.

¹¹ Ministry of Forests and Environment (2018). *Nepal REDD+ Strategy*



C. Relevance to Higher Level Objectives

13. **The WBG Country Partnership Framework (CPF)¹² continues to be relevant, albeit with three major shifts aiming at striking a balance between pivoting to address the short and medium-term needs from the COVID19 crisis and the focus on the long-term economic development path.** Annex 1 provides information on the shifts in WBG Country Partnership Framework in the context of the COVID-19 Response Program.

14. **The World Bank engagement in Nepal’s forests, including REDD+ is consistent with the CPF and the above described shifts in light of the COVID-19 crisis.** The CPF focus area “Inclusion and Resilience” also aims to improve the adoption of sustainable natural resources management, which states that “[t]he World Bank will support Nepal’s efforts towards sustainable use of natural resources to enhance resilience and underpin economic growth.” The CPF recognizes role of forests to contribute more to the national economy and people’s livelihood through tourism, investments in forest-based products and meeting the government’s commitment to reduce greenhouse gas (GHG) emissions from deforestation and forest degradation. Forests and forest-based livelihoods play critical role for economic recovery post-COVID-19. Reducing GHG emissions by reversing forest degradation is the core objective of this project, and indigenous peoples and local communities are its main beneficiaries. Therefore, targets for two CPF indicators will be informed by the project: (target 1) decrease 1.5 million tons of net greenhouse gas emissions from deforestation and forest degradation; and (target 2) rehabilitation of additional 10,000 ha of degraded forest by 2023. The World Bank Group continues supporting Nepal’s new federal system to deliver on higher sustained growth for poverty reduction, inclusive development, and shared prosperity in a sustainable manner.

15. **The Bank has committed to sustainable forest landscape management in Nepal and has developed a programmatic engagement to which the project is central.** Building on the Bank’s Nepal forest note on *Forests for Prosperity at a Time of Transformation* (2018), the programmatic platform aims to deepen knowledge and build multi-sector engagement to enhance the quality and efficiency of Nepal’s forest sector for better development outcomes. The programmatic engagement promotes several instruments, including carbon finance. The related operational investment framework is provided through the Forests for Prosperity Project, which aims to improve sustainable forest management, increase benefits from forests and contribute to net GHG reductions in Province 2 and Province 5. The project is consistent with this forest engagement and builds on the outcomes of the REDD+ Readiness Project.

II. PROJECT DESCRIPTION

A. Project Development Objective

PDO Statement

16. The Project Development Objective (PDO) is to make payments to the Recipient for measured, reported and verified Emission Reductions (ER) related to reduced deforestation, and forest degradation and to the enhancement of forest carbon stocks in the Terai Arc Landscape, and to distribute the payments in accordance with an agreed-upon Benefit Sharing Plan (BSP).

PDO Level Indicators

17. The achievement of the PDO will be measured through the following indicators:
- (i) Volume of CO₂ emissions reductions that have been measured and reported by the Program Entity, verified by a third party, and transferred to the FCPF Carbon Fund (tCO_{2e});
 - (ii) Payment by the FCPF Carbon Fund for CO_{2e} Emission Reductions generated by the Terai Arc Landscape Program (US\$);
 - (iii) Emission Reductions payments distributed in accordance with agreed-upon Benefit Sharing Plan (Yes/No).

¹² Report No. 83148-NP; July 10, 2018 discussed at the Board on August 7, 2018



B. Project Components

Scope of the instrument

18. **The instrument for this operation is Carbon Finance through an Emission Reduction Payment Agreement (ERPA).** Specifically, the World Bank as the trustee and implementing agency of the Forest Carbon Partnership Facility's (FCPF) Carbon Fund (CF) pays for ERs that meet a set of standard requirements defined in the Carbon Fund Methodological Framework (MF) and are independently verified during implementation. This operation will become effective after signing of the ERPA between the Ministry of Finance on behalf of Nepal's National REDD Centre (NRC)¹³ in the Ministry of Forests and Environment (MoFE) (the Program Entity) and the World Bank as Trustee of the FCPF CF.

19. **Because REDD+ is a performance-based payment mechanism for verified reduced emissions from deforestation and forest degradation, the operation does not involve the direct and upfront financing of any of the activities generating such ERs.** The commercial terms, including unit price and volume of the emission reductions is defined in the agreed ERPAs. The amounts listed in these documents are indicative. It is estimated that this program will generate 9.00 million tons of CO_{2e} ERs, which would qualify for the payment of up to US\$45.00 million. Payments under the ERPAs will be made upon the independent verification of the results (a combination of reduced emissions and increased carbon sequestration in the accounting area), and confirmation that safeguard instruments were properly implemented as per the ER Program monitoring report.

20. **This operation builds on Nepal's REDD+ readiness process and will lead to the REDD+ implementation phase with visible impacts, including ERs.** The REDD+ Readiness project has supported an enabling policy framework for REDD+ at the national level and a broad-based implementation plan at the sub-national level. The ER Program has the potential to mobilize significant finance to complement and leverage other World Bank operations, as well as engage other development partners (see Annex 3). The ER Program is the leading sub-national effort for REDD+ in Nepal and will serve as a model to advance REDD+ actions in other parts of the country. Carbon payments will provide incentives for additional investments to reduce deforestation and forest degradation and promote SFM as well as actions that will strengthen the institutional and policy framework for forest and other land uses.

21. **The ER Program Area covers a contiguous land area of the Terai¹⁴ Arc Landscape (TAL), encompassing 2,172,800 ha in five Provinces and thirteen districts.** These districts include - from East to West - Province No. 2 (Rautahat, Bara, and Parsa); Bagmati Province (Chitwan); Gandaki Province (Nawalpur); Province No. 5 (Parasi, Rupandehi, Kapilbastu, Dang, Banke, and Bardiya); and Province No. 7 (Kailali and Kanchanpur). The ER Program Area has the highest historical rates of deforestation. It represents approximately 15 percent of Nepal's total land area, 20 percent of Nepal's national forest area, and 25 percent of Nepal's population. In 2013 about a half of the TAL was under forest cover (1.17 million ha). Of this, 29 percent (330,000 ha) is within protected areas, and 24 percent (280,000 ha) is under community forest. An additional 5 percent (60,000 ha) is collaborative forest¹⁵; and the remaining 54 percent (500,000 ha) is predominantly government forest.

22. **The Program will address the drivers of deforestation and forest degradation, and barriers to effective forest governance in the TAL.** Through extensive consultation and prior assessments conducted during the REDD+ Readiness phase and confirmed while preparing the ERPD, the government has identified six drivers of deforestation and forest degradation: a) unsustainable and illegal harvesting of timber and fuelwood, b) overgrazing, c) forest fires, d) encroachment, e) resettlement, and f) infrastructure development. Through the same approach, five major barriers to

¹³ Currently called REDD Implementation Center (REDD IC), but eventually REDD IC will be renamed as NRC, as specified in the ER Program Document and the National REDD Strategy.

¹⁴ Nepal is divided into three geographic regions: the Terai (below 300m elevation), the hills (300-3000m elevation) and the mountains (above 3000m elevation). The Terai, a flat lowland straddling the border to India, stretches from west to east and makes up approximately 18 percent of Nepal's total land area, whereas the TAL reaches from the west to the Bagmati river in central part of the country.

¹⁵ Collaborative forest is national forest jointly managed by government and Collaborative Forest User Group (CoFUG) to achieve multipurpose objectives, balancing economic, social and ecological benefits.



effectively address the key drivers of deforestation and forest degradation were recognized: 1) limited financial resources and technologies to successfully implement programs; 2) limited information and awareness on best management practices; 3) governance and challenges associated with the transition to federalism; 4) insufficient alternative livelihood and poverty alleviation opportunities; and 5) conflicting views on the management of forests.

23. The drivers and barriers will be addressed by implementing seven ER Program interventions. The interventions were identified through district, regional and national consultations. A brief description of these interventions is presented below.

- a. *Improve the management practices on existing community forests building on traditional and customary practices:* The District Forest Management Plans (DFMPs) for all existing community forests (approximately 280,000 ha) and collaborative forests (approximately 60,000 ha) in the ER Program Area will be reviewed and updated to include SFM practices that improve carbon stocks, sustain ecosystem services and increase the supply of forest products to community and collaborative forest user groups.
- b. *Localize forest governance through transfer of national forests to community and collaborative forest user groups:* gradually transition approximately 200,000 ha of government managed forests (equivalent to 40 percent of the remaining government forests in the Terai) to community or collaborative forest management user groups.
- c. *Expand private sector forestry through improved access to extension services and finance:* 10 percent of forests in the Terai will be developed as private forests including agro-forestry that might not be registered as private forest areas. Under this intervention, long-term, low-cost capital will be provided to small-scale landholders to incentivize plantation and maintenance of forests on their private lands. These landholders will be provided with appropriate seedlings and training to develop culturally, and ecologically appropriate timber products.
- d. *Expand access to alternative energy with biogas and improved cookstoves:* Install additional 12,000 biogas plants per year in the ER Program Area. To complement the biogas plants and reach more households, the Government of Nepal will build on its Clean Cook Stove Initiative and install on average 2,000 Clean Cook Stove per district per year in each of the ER Program districts, or a total of 24,000 Clean Cook Stove/year program wide. Both initiatives will be implemented through the existing AEPC program, which will receive additional finance from the ER Program to support further rollout in the TAL.
- e. *Scale up pro-poor leasehold forestry:* This intervention will expand the Leasehold Forestry Program (LFP), which has been successful in providing employment opportunities to economically disadvantaged communities. To date the LFP has only been implemented in one district of the TAL (Chitwan) and this intervention proposes to scale up this program to all 13 districts of the TAL.
- f. *Improve integrated land use planning to reduce forest conversion associated with advancing infrastructure development:* Under this component the Apex Body, which includes the key ministries responsible for land use planning, will coordinate land-use and land-use change plans and proper regulation and monitoring of EIAs in tandem with the relevant stakeholders.
- g. *Strengthen management of protected areas:* Protected areas are well maintained in Nepal through various conservation measures and are not subject to historical deforestation and forest degradation. These areas are therefore only included in the ER Program for the significant non-carbon benefits they provide and to safeguard against any social and environmental impacts (e.g. human wildlife conflict) that could arise due to the implementation of the ER Program.

24. Annex 2 provides the approximate timeline for implementation of the proposed interventions. Annex 3 lists the agencies involved in the ER Program implementation, and Annex 5 explains the relationship between the drivers of deforestation/forest degradation and proposed interventions.

Carbon Finance Aspects

25. The ER Program accounts for GHG emissions from deforestation, forest degradation, and enhancement of



forest carbon stocks. Any emissions or removals that occur in forest protected areas or as a result of SFM, especially in community forests, are accounted for under “enhancement of carbon stocks”. Selected carbon pools include above-ground biomass and below-ground biomass. The other three carbon pools (dead wood, litter and soil carbon) were excluded as these were assessed as an insignificant pool of carbon emissions or removals. Similarly, GHG accounted for include only CO₂ as the other gases (nitrous oxide, methane and other non-CO₂ gases) were found to be insignificant. Emissions from forest fire has been excluded as well because the percentage of emissions resulting from fires has been estimated well below the 10% threshold for their inclusion as significant source.

26. **Net emissions from the Program Area is estimated to be 0.895 million tons of CO_{2e} per year (MtCO_{2e}/yr).** This includes average emissions of 1.56 MtCO_{2e}/yr and average removals of 0.67 MtCO_{2e}/yr. The reference period is 2004 – 2014, consistent with the available data used to inform the stratification used for unbiased estimation of activity data and elements of permanence in Nepal’s definition of deforestation and forest degradation. The estimated reference level for the ER Program Area for the 2004-2014 period is of 895,710 tCO_{2e}/yr.

27. **Nepal proposes to sell to the FCPF CF 9.00 MtCO_{2e} after deducting the uncertainty and reversal buffer over the project period.** The ERs sold to the CF and those set aside in the buffer will be registered in a centralized transaction registry¹⁶ managed by the FCPF. In total, the ER Program aims to generate 34.2 MtCO_{2e} carbon benefits (reduced emissions and increased removals combined) over the 10-year life of the program or 23.78 MtCO_{2e} after considering the uncertainty (12 percent) and reversal buffer (21 percent). The remaining 14.62 MtCO_{2e} is yet to be planned. Approximately 55 percent of these will be generated through the improved management of existing Community-based forest management (CBFM) areas. A quarter of ERs (27 percent) will be generated from the transfer of government forests to CBFM and the remaining benefits will come from a combination of the other interventions.

28. **Nepal proposes as the start date of the ER accounting period the date when Nepal was selected into the portfolio by CF Participants (June 22, 2018).** This will depend on the findings of a gap and consistency analysis undertaken by NRC to confirm that ER Program measures have been implemented consistent with the principles of the ESMF and applicable World Bank safeguard policies. Not until the results of the assessment are available and the Bank has confirmed consistency, will the World Bank be able to pay for the ERs generated since June 22, 2018. Nepal will undertake measurement, reporting and verification (MRV) twice during the project period – mid-way through the project (at 2.5 years after ERPA signature) and at the end (5 years after ERPA signature). This would occur in December 2021 and December 2024. Payments would follow the same schedule. ER payments will be distributed by the GoN in accordance with the agreed Benefit Sharing Plan (BSP).

29. **As assessed by FCPF Technical Advisory Panel (TAP), the ER Program Entity identified as the Ministry of Finance has demonstrated its authority to enter an ERPA with the CF prior to the start of ERPA negotiations¹⁷.** The ER Program Entity demonstrates its authority through an existing legal and regulatory framework stipulating such authority. This legal provision is stated in the GoN (Business Allocation) Regulation 2015. The Constitution of Nepal includes in Schedule 5 (27) the legal concept of “carbon” as a service-- “carbon service”. The inclusion is directly related to clause (1) of Article 57, and Article 109 of the Constitution that stipulates and defines the list of powers specifically attributed to the Federal Government. In accordance with these articles, the ERPD acknowledges the Federal Government as the exclusive legal entity in Nepal to have rights in relation to carbon services. In 2017, the GoN approved a report detailing the list of exclusive and concurrent powers of the Federation, the State and the Local Level provisioned in Schedules 5-9 of the Constitution. This report elaborated on the carbon service-related authority of the federation and states that the enhancement of carbon stocks, as well as fiscal management of the carbon service authority will be under the jurisdiction of the federation.

¹⁶ The ER transaction registry is a system that creates (i.e., issues) emission reduction titles with unique serial numbers; Supports the transfer of these units between account holders within the registry and to other linked trading registries; Allows account holders to manage positions and transaction; Generates reports on ownership of emission reduction units and transactions; and Supports accounting for non-permanence risk management (buffer reserves).

¹⁷ See full TAP report at https://www.forestcarbonpartnership.org/system/files/documents/TAP%20review%20MAY%2030_ToPost_0_0.pdf



Program components

30. **The World Bank will provide implementation support to the two components of the TAL Emission Reductions Program:** a) measurement, reporting and verification (MRV) and payment of ERs generated by the project; and b) distribution of the ER payments as per the agreed BSP. Further detail on the institutional arrangements is provided in Annex 6.

31. **Component 1. Measurement, reporting and verification (MRV) and payment of ERs generated by the program.** NRC and FRTC will measure emission reductions generated from implementation of ER Program activities twice during the program period. NRC will then report monitoring results to the FCPF CF. The verification will take place every two years by a third party contracted by the FCPF Facility Management Team (FMT) following the submission of a monitoring report¹⁸ by the government.

32. **Component 2. Distribution of ER payments as per the BSP.** Once the payment is received from FCPF CF, the NRC will be responsible for distributing the payments according to the BSP. An advanced draft BSP has been prepared by the government and reviewed and approved by the FCPF Carbon Fund Participants. The advanced draft BSP is available at <http://redd.gov.np/post/advance-draft-bsp-er-program-nepal>

Program Cost and Financing

33. **The implementation cost of the ER Program over the five year period is estimated at US\$101 million.** This includes costs related to administrative oversight, the implementation of the seven ER Program interventions, measurement and monitoring of ERs, and environment and social risk mitigation measures.

34. **Available financing for the implementation of the ER Program activities is currently estimated at US\$41.5 million.** Sources include the Department of Forest (DoF), the President's Chure Terai Madhesh Conservation Development Program (PCTMCDP), the Forest Investment Program (FIP), WWF, and local communities. The contribution from the government and other partners only reflects the budget related to the implementation of activities identified in the ER Program and does not include expenses related to other activities such as personnel and management costs. Hence, for the FCPF CF period, there is a financing gap of US\$60 million. The World Bank is currently exploring various options for leveraging additional upfront resources to finance the activities generating the ERs.

35. **The program is expected to generate up to 9.00 MtCO_{2e} (after considering an uncertainty and reversal buffer) over five years.** If independently verified, Nepal would receive US\$5 per ton of CO_{2e} reduced, hence a total of up to US\$45.00 million at the end of program implementation. See Annex 4 for a summary of the financing plan.

C. Project Beneficiaries

36. The beneficiaries of the project are those who contribute directly to the implementation of ER program activities in the ER Program Area, thereby contributing to reducing deforestation. The beneficiaries will also be eligible to receive payments from the sale of ERs, as per BSP. The advanced draft BSP identifies five higher-level beneficiary categories (i) government (ii) community-managed forest groups (community, collaborative, leasehold, and religious forest groups); (iii) communities managing forests based on customary practices; (iv) private forest owners; and (v) households not belonging to community managed forest groups.

D. Rationale for Bank Involvement and Role of Partners

37. **Nepal's ER Program would be among the first of its kind worldwide – and the first and only country in South**

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: (i) the number of ERs generated by the ER Program; (ii) the occurrence of any Reversal Event(s); (iii) any inability, in full or in part, to transfer Title to ERs to the Trustee or any Title Contest by any Contesting Party; and (iv) all other data as may be required to be collected and recorded by the ER Monitoring Plan.



Asia – to receive results-based payments for REDD+ under the FCPF CF. The World Bank is supporting similar initiatives in other jurisdictions in Africa, Asia and Latin America through the FCPF, Global Environment Facility (GEF), and BioCarbon Fund and has gained unique expertise in providing technical assistance to support the design and implementation of large-scale ER Programs.

38. **The ER Program forms an important part of the Bank’s programmatic forest landscape engagement.** The program builds on REDD+ Readiness project supported since 2010 and complements the Forestry for Prosperity Project. Nepal ER Program interventions are consistent with government priorities. Moreover, the ER Program includes a set of strategic actions and mitigation measures aimed at overcoming drivers of deforestation and forest degradation and the barriers of the current forest sector governance framework related to a more sustainable and inclusive model. The ER Program will involve the public sector and strengthen multi-sector coordination among various public entities and institutions. Public sector provisions in the ER-Program are also justified given the global public good nature of many of its expected benefits, for example climate change mitigation and biodiversity conservation.

39. **Regarding role of partners, Nepal is an active member of the UNFCCC process on REDD+ and is part of the UN-REDD+ Program** jointly implemented by the United Nations Development Program (UNDP), the United Nations Environment Program (UNEP), and the Food and Agriculture Organization of the United Nations (FAO). FAO, with resources from the GCF, has been supporting some part of the ER Program Area, specifically in Churia Region, to adopt integrated approach in restoring ecosystems, including forests.

E. Lessons Learned and Reflected in the Project Design

40. **The ER Program will use the institutional and management capacities built during the REDD+ readiness phase.** For REDD+ to work, there must be high-level support and engagement from relevant sector ministries, local governments and technical teams. Regular coordination and harmonization of land-use activities is critical for the successful implementation of REDD+. Using the already existing structures of the government such as NRC and the REDD Desks in the provincial ministries will also facilitate REDD+ implementation.

41. **The evolving new federal structure presents both opportunities and challenges.** Different roles, powers and mandates among the three-tiered governance structure: federal, state, and local have yet to be fully clarified. The project will have to remain flexible to adapt to any changes occurring in the institutional structures and implement activities in coordination and consultation with various levels of government and non-government agencies.

42. **The ER Program has a strong focus on community-based forest management as proven concept for reducing deforestation and forest degradation.** By transferring the user rights of forest resources from the government to CFUG communities become stewards of the forests. Each CFUG is required to prepare a forest management plan, which is approved by the DFO. This approach has been highly successful, particularly in the Mid-Hills, because users had greater access to forest resources and responsibility for their management. CFUGs demonstrated that they were able to move beyond simply delivering forest products by becoming institutions that can play a transformative role in redistributing the benefits from SFM and improve the livelihoods of the poor and socially marginalized. Another form of forest management is collaborative forestry (CoF), a joint forest management approach between the DFO, local government and forest user groups based on an approved operational plan.

III. IMPLEMENTATION ARRANGEMENTS

A. Institutional and Implementation Arrangements

43. **The Ministry of Finance signs the ERPA with the World Bank and receives payments from the FCPF CF.** MoFE is responsible for the overall management and coordination of the ER Program implementation and distribution of the ER payments. As the REDD+ program management entity, NRC is the REDD+ program management entity and will coordinate the ER Program management on behalf of MoFE. However, ER program activities will be executed by



various government institutions including the DoF, the Department of National Parks and Wildlife Conservation (DNPWC) and CBFM groups. MRV and the emission reductions database will be managed by the Forest Research and Training Centre (FRTC).

44. **There are institutional arrangement in place at national, provincial and district level.** At the national level, the REDD+ process is operationalized through the National REDD+ Steering Committee (NRSC), National REDD+ Coordination Committee (for coordination and decision-making), and the NRC as the REDD+ program management entity. This formal structure is supplemented by two informal mechanisms, the REDD+ Multi-Stakeholder Forum and REDD+ CSO and IPO Alliance. The roles of these committees and bodies and their inter-relationships are described further in Annex 6.

45. At the provincial level, a REDD Desk has been established in the Ministry of Industry, Tourism, Forests and Environment (MoITFE) to coordinate the ER Program implementation in each province. A REDD+ Focal Officer (RFO) will lead the REDD Desk. The RFO will:

- ensure coordination among districts/divisions on ER Program implementation;
- provide advice and guidance to districts/divisions and to REDD+ Program Management Units;
- liaise with NRC and REDD+ Focal Officer at the federal level as needed for technical guidance and advice;
- monitor ER Program implementation at district/division level; and
- report to the NRC and DoF/DNPWC on ER Program implementation in the province.

46. At the district level, a District/Division REDD+ Program Management Unit (DRPMU) will be established in each District/Division forest office. The DRPMU will coordinate and provide secretariat services related to ER Program activities in each district/division. To support DRPMU, parallel committees as at national level will be formed. These include District/Division REDD+ Coordination Committee (DRCC), District/Division REDD+ Multi-Stakeholder Forum, and District/Division REDD+ CSOs and IPO Alliance (Annex 6).

B. Results Monitoring and Evaluation Arrangements

47. **The FRTC will be responsible for the Measurement, Monitoring and Verification (MRV) system of the ERs.** FRTC is the lead organization for Nepal's Forest Resource Assessment (FRA). FRTC has three divisions, one of which is the Forest Survey and Carbon Measurement Division (FSCMD). With regard to the ER Program, main responsibilities of FRTC, as per departmental mandate, will include: (i) designing and operating the National Forest Monitoring System (NFMIS); (ii) periodic undertaking of forest assessments for deforestation and forest degradation monitoring; (iii) providing technical guidance and institutional/capacity support to the parallel institutional setups at subnational/district/local community levels; and (iv) coordinating the collection of subnational-level information.

48. **FSCMD is the division in FRTC responsible for MRV.** As part of the National Forest Resource Assessment, the division periodically carries out sample plot measurements. At the community level, FSCMD coordinates with CBFM user groups to measure sample plots. At the sub-state level, FSCMD coordinates with District/Division Forest Offices and PA offices for sample plot measurements. At the state level, FSCMD coordinates with the State Forest Directorate the data compilation across each state. FSCMD compiles all data at the jurisdictional and national levels and analyses data for forest resource assessment, carbon accounting, and emission reductions by using sample plot data, satellite images, emission factors. FSCMD also implements the National Forest Monitoring and Information System (NFMIS). FSCMD reports to NRC through FRTC. The NRC has a Carbon Accounting, Monitoring and Reporting Coordination Section (CAMRCS) which compiles MRV data and information reported from FRTC and prepares periodic reports required of the NRC. Upon approval from NRCC, NRC then reports to the FCPF CF, UNFCCC and/or other relevant international agencies.

49. **Local communities will also be involved in measuring and monitoring activities, in collecting forest-level information, and socio-environmental baseline data for the Safeguard Information System (SIS).** Forest-level data



collection is already a central component of DFO and CFUG activities, and indigenous peoples and local communities (IPLC) will be closely involved in monitoring of forests through community-based forest monitoring. This will strengthen and enhance the engagement of IPLC in the monitoring of forest carbon stocks on the ground. In addition, the ER Program incorporates non-carbon indicators developed during the national stakeholder process.

50. **The process of ER verification will be managed by the FCPF Facility Management Team (FMT).** FRTC coordinates ER measurement and monitoring and reports to NRC. NRC in coordination with FRTC prepares a monitoring report for the period as specified in the ERPA to be submitted to the FCPF FMT. The report will contain, among other things, the quantity of ERs generated, occurrence of any reversal events, and any issues related to the transfer of title. The FCPF FMT will review the report for completeness and, upon compliance, the report will be published on the website. Independent experts or firms hired by the FCPF FMT will verify the ERs claimed in the monitoring report and issue a verification report. On behalf of CF Participants, the World Bank will purchase the verified ERs, and Nepal will distribute related payments to stakeholders consistent with the BSP.

51. **The MRV methodology will be consistent with the methodology used to develop the reference level.** The FRL used spatially explicit activity data (IPCC Approach 3) and forest strata level emission factors (Tier 3) within the TAL. The main parameters to be measured for activity data is tree cover loss/gain. Forest land will be further subdivided as per the RL methodology based on the MSPA analysis into Core/Intact and Edge. The classes to be mapped will be the same as in the reference level, and randomized samples will be generated for unbiased area estimates produced with accompanying confidence intervals.

52. **The measurement, monitoring and reporting system for the TAL ER Program will be the same as for the FRL Biennial Update Report.** Reported numbers for the ER Program will constitute a subset of the national reporting in the National Forest Database (NFD) and National Forest Information System (NFIS) and will be shared with relevant stakeholders. The design of the carbon monitoring system is built on the activities conducted under the FRA and work already carried out for the TAL and Nepal's NFD and NFIS.

C. Sustainability

53. **The World Bank, on behalf of the CF Participants, commits to purchasing verified ERs generated during the first five years of the program.** The GoN intends to continue the program beyond the World Bank's engagement, for at least five additional years. For the additional years, the GoN will identify other buyers for the ERs. Based on the lessons and experience gained from this pilot program, the GoN plans to scale it up the program to the national level.

54. **Proposed program activities are fully owned by the government and integrated into national policies and strategies.** Although the nature of the program is new and innovative, activities that will generate ERs are part of regular government programs. Proposed activities build on government policies, strategies, plans and ambitions to ensure that the proposed SFM activities will be sustained beyond the program implementation period. These are designed to improve livelihoods, promote resilience to climate change, promote growth and strengthen the voice and participation of IPLC in decisions on SFM.

55. **Results and outcomes from the program will be sustained even after program closure.** One of the key activities is handing over of government-managed forests to communities for SFM. Similarly, the ER Program will also enhance access to renewable energy technologies such as biogas and improved cook stoves to minimize the dependency on fuelwood. The silvicultural interventions in the ER Program Area will result in increases in both carbon stocks and timber supply while reducing pressures on natural forests. A central component of the ER Program focuses on training of participating communities in SFM, including training on forest fire fighting techniques, awareness-raising programs, and planting of more climate-resilient tree species.

56. **It is expected that the ER payments will be used for activities that will contribute to generating additional ERs.** Part of these payments will be reinvested in activities to continue successful practices to protect forests and



improve the living conditions of the local population.

IV. PROJECT APPRAISAL SUMMARY

A. Technical

57. **The ER project has been developed in accordance with the Methodological Framework of the FCPF CF.** The Methodological Framework (“Framework”) provides a standard that is designed to achieve a consistent approach to carbon accounting and interventions that result in cumulative impacts that go beyond individual efforts. It gives guidance for the development of ER Programs and to the CF Participants for the selection of the programs into the portfolio. The framework contains 78 indicators for measuring the general approach, level of ambition, carbon accounting, safeguards, sustainable program design and implementation and ER Program transactions.

58. **The design of the ER Program has considered relevant technical elements.** The drivers of deforestation and forest degradation have been identified based on several analytical studies conducted in recent years and through extensive consultations with relevant stakeholders. The ER Program interventions directly and indirectly address all identified drivers (see Annex 5). The interventions build on the proven concept of CBFM in Nepal. The ER Program strongly emphasizes the participation of local communities in the implementation of the ER Program. The reference level accounts for all activities included in the ER Program, including deforestation, forest degradation, and natural and advanced regeneration. The ER Program’s MRV system is robust, and consistent with Nepal’s national reference level. FRTC is responsible for MRV and has the capacity to fulfill the mandate as it has capable forest professionals to manage the national forest monitoring system. Recently, FRTC successfully completed the national forest resource assessment (2011-2015), including the associated campaign that captured LiDAR data for the TAL.

59. **Expected ERs from the program may have been over estimated, based on the historical reference level¹⁹.** The World Bank advised the government to lower the total ER volume in the ER Term Sheet, but the Government of Nepal (GoN) insisted on 9 million tons for two reasons: a) the estimated volume is based on a detail analysis presented in the ER-Program Document, which was rigorously reviewed by an independent Technical Advisory Panel and ultimately approved by the CF Participants, and b) since the payment depends on actual performance and verified emissions, the government understands that it could result in less payments if anticipated emissions are not generated. Potential underperformance has also been highlighted in the benefit sharing plan as part of an analysis of four performance scenarios – 100% performance, 50% performance, 10% performance, and no performance. The BSP prepared by the government explicitly notes that in case of no performance, the FCPF Carbon Fund would not authorize any payments and consequently, there would be no monetary benefits distributed to beneficiaries. Therefore, the government is fully aware of the risks, including that expected payments are indicative. In the extreme case, if there are no verified ERs generated, there will be no payments.

60. **The ER Program has gone through rigorous review process²⁰, and demonstrated conformity with the criteria and indicators listed in the CF’s Methodological Framework.** An independent Technical Advisory Panel (TAP) assessed

¹⁹ Given the relatively low level of historical emissions (1.56Mt/yr) and baseline removals/sequestration (0.67Mt/yr), generating estimated ERs would require a major shift in how forests in the TAL release or absorb carbon compared to the recent past (e.g., cutting rate of emissions by 50 percent and doubling the rate removals through forest planting or improved management).

²⁰ The ERPD was reviewed by the TAP in several iterations and revised by Nepal Team to address the comments. Nepal first submitted draft ER-PD to the FCPF in May 2017. FCPF reviewed for completeness and provided comprehensive comments. Nepal submitted revised draft ERPD in July 31, 2017. TAP reviewed draft ERPD in August to mid-September, then undertook the TAP mission to Kathmandu from September 17-22 to discuss the draft ERPD with the National REDD+ Center, World Bank and FCPF staff, and many government agencies, NGOs, IP representatives, and private sector leaders. Based on the comments from TAP, Nepal revised the ERPD again, and submitted Advanced Draft ERPD in September 2017. TAP assessed the Advanced Draft ERPD and issued TAP Assessment Report in October 2017. The Advanced Draft was also reviewed by Carbon Fund Participants (CFPs) and provided comprehensive comments to improve the ERPD. Nepal team addressed all the substantive comments from TAP and CFPs and submitted the final ERPD in May 2018. TAP again reviewed this version and issued its revised Assessment Report in June 2018. CFPs also reviewed the final ERPD and were discussed at the Carbon Fund meeting in Paris in June 2018. Between these formal steps, there have been several back and forth of comments and revisions, conference calls, and interactions.



compliance of Nepal's ERPD with the 78 indicators in the Framework. The TAP noted that Nepal's 2015 Constitution is one of the first constitutions to specifically address "carbon services", under Schedule 5, List of Federal Powers—thus providing clarity on the legal ownership of the ERs in the country.

61. At the time of approval, CF Participants commended Nepal for developing an ambitious ER Program, and making substantial progress on the ERPD, including improvements to carbon accounting and advancement on the Environmental and Social Management Framework (ESMF). CF Participants acknowledged the strong focus of the ER Program on inclusion of gender and marginalized communities; and on respecting and recognizing IP rights. The CF Participants found the carbon accounting approach transparent and innovative.

B. Economic and Financial

62. An economic benefit-cost analysis was carried out considering the quantifiable incremental benefits associated with activities 1 and 2 and the carbon emission reductions (ERs) associated with the entire program. The results indicate that the program is economically efficient. Specifically, EIRR of the program is estimated at 11.7%. The NPV and B/C ratio are estimated at US\$ 226 million and 4.0, respectively, using a social discount rate of 6.4%. The efficiency metrics are robust to decreases/increases in key model parameter values, including the stumpage value of timber, mean annual increments, program investment costs, incremental forest management costs, and the ER performance of the program. Using global shadow prices, \$40/tCO₂e and \$80/tCO₂e, rather than ER payment to Nepal of \$5/tCO₂e substantially increases the returns on the program investments. For additional details, see Annex 7.

C. Fiduciary

Financial Management

63. As the eligible expenditure of a carbon finance program is the ER payment made by the Bank to the recipient country and the 'intended purpose' of Bank financing is to make the ER payment (component 1) and require the Recipient to use part of the ER payment (benefit) to set up a Dedicated Payment System acceptable to the Bank (component 2), the FM assessment is limited to determine whether the Recipient's Dedicated Payment System (DPS), i.e. the BSP is acceptable to the Bank as per the legal agreement specifications. This can include setting up a system or strengthening an existing system for the distribution of the Recipients revenue (e.g. ER payments) to beneficiaries. The BSP has been shared with CF participants for their review and no objection, and they have approved the BSP as an advanced draft. Accordingly, the DPS will be defined subsequently in the Forest Development Fund (FDF) Operations Manual based on the Forest Regulations currently under preparation, with required procedures, internal controls and oversight mechanism (e.g. audit)²¹.

64. The budgeting for receiving ER funds will be based on the Government policies and procedures. A separate budget will be provided in the Federal Government's Red Book for the same and expenditures recorded accordingly. The Government's policies and procedures as well as the FDF Operations Manual will form the basis of overall financial management (see Annex 8).

Disbursement

65. The disbursement details will be provided in the World Bank's Disbursement and Information Letter (DFIL). The eligible expenditure is the payment, or 'ER payment', made by the Bank to the recipient country based on verified ERs as regulated in the ERPA. MoFE will be the signatory to draw funds from the Bank for the ER payments or advances as applicable to Nepal. The funds will be disbursed to the Government treasury and the MoFE will promptly transfer the funds (ER payments or advances) into the FDF bank account after receipt of the funds. If a Designated Account is required to be opened for receiving advances, such account will be operated by MoFE. From the FDF, the funds will be

²¹ The FCPF Management Team requires that financial management assessments be completed prior to the first ER transfer, which is expected to take place in 2022 (see Annex 8).



distributed to the eligible beneficiaries and for other expenditures as required. The disbursement arrangements will be detailed in the FDF Operations Manual.

Procurement

66. The FDF will be the entity and responsible for making payments according to BSP. The FDF was legally established under the 2019 Forest Act. MoFE is in the process of developing the FDF Directive and Operations Manual. The FCPF Management Team advises to undertake prior to the first ER transfer a procurement capacity assessment of the FDF. The fiduciary assessment will be undertaken once the details of the FDF are clarified by MoFE. The FDF must be satisfactorily assessed by the World Bank before any payments can be made.

D. Environmental and Social

67. The ER Program is classified as Category “B” as the proposed seven interventions will focus mainly on small- and medium-size operations. Most of the impacts from the subprojects/activities are site specific and can be mitigated, if not avoided. An ESMF has been developed according to the Environmental Assessment policy (OP/BP 4.01) to guide the implementing agency to undertake appropriate environmental and social management actions for the Program. This ESMF complies with the social and environmental requirements of the World Bank and the Government of Nepal and is furthermore consistent with the UNFCCC Cancun Safeguards for REDD+. This ESMF has been specifically prepared following an impacts-oriented social and environmental assessment (SEA) of the proposed ER Program. The planned interventions and activities of the ER Program were designed in full alignment of the National REDD+ Strategy, considering the safeguard policies triggered during Readiness preparation and the relevant social and environmental sustainability issues identified in the SEA and the ESMF. According to the findings of the SEA, given the nature, scale and scope of the proposed investments, the potential adverse environmental and social impacts are expected to be moderate, reversible and temporary. The operation triggers the following World Bank safeguard policies:

Table 1: Safeguard policies application to the ER Program

Environmental Assessment(OP/BP 4.01)	[X]	[]
Natural Habitats (OP/BP 4.04)	[X]	[]
Pest Management (OP/BP 4.09)	[X]	[]
Physical Cultural Resources (OP/BP 4.11)	[X]	[]
Involuntary Resettlement (OP/BP 4.12)	[X]	[]
Indigenous Peoples (OP/BP 4.10)	[X]	[]
Forests (OP/BP 4.36)	[X]	[]
Safety of Dams (OP/BP 4.37)	[]	[X]
Projects in Disputed Areas (OP/BP 7.60)*	[]	[X]
Projects on International Waterways (OP/BP 7.50)	[]	[X]

68. Just the same, some unintended negative outcomes are also likely to emerge while implementing the proposed interventions. Some of the potential adverse environmental impacts of the seven interventions include changes in species composition; loss of biodiversity in harvesting sites; water pollution; risk of monoculture; loss of species of cultural value (but not necessarily economic value); loss of resilience to pest and pathogens; risk of encroachment in harvesting sites; flooding; loss of underground water levels; forest fire; and risks to unique habitats.

69. SFM provides major positive environmental impacts, and all the interventions are expected to contribute to SFM. Some of the positive environmental impacts include enhanced carbon sequestration; maintained ecosystem services; reduced deforestation and forest degradation; biodiversity conservation; promotion of natural regeneration; landscape restoration; protection of vulnerable species (flora and fauna); and maintained ecological integrity of the Program Area.



70. Potential positive social impacts identified include capacity building for local stakeholders' income generation; greater local control over forest resources (with concomitant improvements in natural resources governance); greater equity in benefit sharing; more inclusive decision making; and improved local economies due to the institution of forest-based enterprises, increased ecotourism, and more integrated planning. Positive health impacts will also be experienced because of smoke-free kitchens in the households using biogas and improved cookstoves. Women may not need to spend hours collecting firewood once they start using biogas for cooking. Most importantly, money generated from reduced emissions from sources and enhanced removals by sinks will provide a significant boost to community development, especially for forest-dependent peoples.

71. Potential social risks include deterioration of valuable cultural and traditional practices related to access to and use of resources; frustration among stakeholders in case the Program's performance expectations are not met; safety hazards associated with harvesting operations; conflicts between communities and ER Program authorities over rights of indigenous peoples, women, and marginalized communities; property loss; loss of burial grounds and historic sites; rise in elite capture; exclusion and/or marginalization; corruption; and human-wildlife conflicts.

72. The ESMF provides guidance on defining investment activities together with a set of steps, processes, procedures and mechanisms for ensuring an adequate level of attention to environmental and social risks and impacts in each activity in the project cycle. It also describes the approach to be followed to avoid, minimize, mitigate or manage adverse impacts. The ESMF ensures that relevant World Bank safeguard policies and applicable GoN environmental and social regulations are adhered to in the implementation of the proposed ER Program interventions. The ESMF incorporates a Gender Mainstreaming Plan, Environmental Management Framework (EMF), Indigenous and Vulnerable Communities Development Framework (IVCDF), Resettlement Policy Framework (RPF), Resettlement Process Framework (PF), "Decent Work Planning Framework", stakeholder engagement activities and a Feedback and Grievance Redress Mechanism (FGRM). It also comprises guidance for preparing environmental and social management plans (ESMPs), Indigenous and Vulnerable Communities Development Plans (IPVCDPs), and so on. Finally, it outlines capacity building and monitoring provisions. Every proposed site/activity for any ER Program intervention will be subjected to a social and environmental screening before it is selected for implementation.

73. The ESMF outlines institutional arrangements for managing, implementing, monitoring and reporting on safeguards application to the ER Program interventions in the context of the new federal structure. The three-tier institutional arrangement includes the community level/local government at the bottom, state governments in the middle, and the federal level at the top. The process is coordinated by the NRC at the federal level, REDD Desks at both state and local government levels, and Executive Committees at the CFUG level. The final ESMF was disclosed in the FCPF website and MoFE website on October 31, 2019 and in the Bank's Intranet website on June 23, 2020.

74. As discussed earlier, Nepal has proposed that the ER accounting period should start from June 2018, the date the ER Program was selected into the portfolio by the CF Participants. For the FCPF and the World Bank to accept this proposal, the GoN must demonstrate that the ER Program measures that have been implemented since June 2018 have been implemented consistent with the principles of the applicable World Bank safeguard policies. Consequently, the GoN and the Bank have agreed that a consistency and gap assessment focusing on those same measures shall be conducted to this end. Furthermore, it was determined that the negotiations of the ERPAs can proceed in parallel with the safeguard consistency and gap assessment. However, not until the results of the assessment are available and the FCPF and the World Bank have agreed on an action plan to close any remaining gaps (if any), would the World Bank be able to pay for these ERs. The assessment must be acceptable to the World Bank, both in terms of its quality and its findings. The World Bank team will continue engaging with NRC and MoFE officials, as appropriate, in order to ensure that what would be considered "sufficiently positive" assessment findings is clear and fully agreed in advance.

75. **Citizen engagement.** Nepal has a long history of engaging forest-dependent people through the promotion of community-based forest management (CBFM), both to achieve conservation outcomes and meet household subsistence



needs. The program was developed in a highly participatory manner (for details, see [ER Program document](#) approved by the FCPF Carbon Fund Participants in June 2018). The program's active support of forest-people and communities will promote demand-side of social accountability. Feedback mechanisms will be developed to ensure transparency, accountability, and learning as well as a continuous dialogue with target beneficiaries and other stakeholders. The framework for citizen engagement includes (a) engagement of local communities in CBFM; (b) community engagement in site-specific planning for smallholder forest plantations on public lands; (c) support to a feedback mechanism for the targeted beneficiaries through social audits and satisfaction surveys; (d) support for building the government's capacity for meaningful engagement with the targeted beneficiaries; and (e) third-party monitoring of program activities.

76. **Gender.** The program's design has benefited from gender analysis conducted as part of the ESA carried out for the program as well as under the Nepal REDD+ Readiness project. In Nepal, almost 89% of women compared to 70% men are involved in agriculture and forestry value chain management. Despite their substantive input and role in the forestry sector it is limited at subsistence level hence likely undervalued as unpaid work. Women's representation is also negligible in forestry policy making decision bodies, institutions and in forest related skilled jobs. The data shows that less than 1.2% women fully/partially own 183,000 operational MSMEs (Micro Small and Medium Enterprises) in Nepal²² including forestry related MSMEs. Lack of financial literacy, entrepreneurial skills, financial services and unequal property rights are key barriers identified for women's engagement in skilled jobs and enterprises. The program aims to close the above gender gaps. There is a Gender Action Plan and a gender mainstreaming plan is currently under development.

Implementing Agency's Institutional Capacity for Implementing Safeguard Policies

77. The NRC is the executing entity for carrying out day-to-day activities and implementing programs in connection with the national REDD+ agenda. It also implements decisions made by the NRSC and NRCC. The NRC is a permanent government organization with a regular budget and 18 permanent staff dedicated to REDD+. Under the ER Program there will be staff of the NRC who are dedicated to national-level support and program coordination. At present there is no dedicated unit for the management of safeguard risks, although there is a Climate Change section which has addressed some of the environmental and social risks. An Environmental and Social Safeguards Section in the NRC has been proposed which will be responsible for the effective implementation of the ESMF. Similarly, an institutional setup at the federal, provincial and local government levels for implementing the ER Program and ESMF has been proposed. provincial governments have a REDD Desk in MoITFE for coordinating and monitoring ESMF implementation. Support will be provided by Executive Committees active at CFUG level. Many of these bodies (or, at least, the functions assigned to them) will be new, and are therefore untested. Therefore, the ongoing federalization process will create challenges for the safeguard management of the ER Program and will hence require close supervision during implementation.

V. GRIEVANCE REDRESS SERVICE

78. 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

²² www.uncdf.org/article/4358/is-lack-of-access-to-finance-impeding-the-growth-of-female-led-small-businesses-in-nepal. February 26, 2019



developed to disseminate the project feedback and grievance redress mechanism will also contain information on how to access the Bank's Grievance Redress Service.

VI. KEY RISKS

79. **The overall risk of the operation is assessed as “Substantial”.** Overall, Nepal is well prepared to move from REDD+ Readiness (Phase 1 of REDD+) to implementation (Phase 2 of REDD+) and to payments for emission reductions (Phase 3 of REDD+). However, certain key elements of REDD+ Readiness still need to be delivered. The REDD+ Readiness project supports activities such as capacity building, analytical studies and stakeholder engagement which will support the implementation of the ER Program. There are substantial risks to the successful implementation of the ER Program, as elaborated below.

80. **Political and Governance - High. Political and Governance risks are rated as High.** Nepal is again back to a period of political uncertainty following an unexpected decision on the dissolution of the House of Representatives and a vertically split Nepal Communist Party which, up until December 20, had enjoyed a majority in Parliament with a five-year mandate. New alliances are in the offing as Nepal is most likely headed for a coalition government. The provincial levels could be affected by ramifications in the center while not posing an immediate threat to the overall federalism implementation process. The federal system, in principle, provides opportunities to decentralize development benefits and make service delivery more effective and accountable. However, the risks of political uncertainty, jurisdictional overlap between the three tiers of government, and lack of clarity and coherence between policies and devolved powers will remain during the interim and the coming few years. The overall political and governance risk has, thus, increased from Substantial to High.

81. **Macro-economic risk - Substantial.** Key risks include a widespread sustained domestic outbreak of COVID-19 requiring an extended period of movement restrictions, a significant decline in remittance inflows, and persistent revenue shortfalls. Key mitigating factors include the steps already taken by the Government to reduce the economic risk from COVID-19 and its efforts to mobilize concessional financing for a comprehensive economic support package, together with its continued commitment to macroeconomic stability, sufficient fiscal and external buffers, and close coordination with the IFIs (including technical assistance support). Despite the increase in spending to deal with the pandemic, the country continues to be at low risk of debt distress, given Nepal's low debt to GDP ratio. However, considerable uncertainty persists around the duration and depth of the crisis, which could lead to substantial residual risks to the operation, beyond the control of Government. A continuing crisis could further dampen growth and divert the Government's resources to deal with the evolving situation and this could potentially impede the activities supported by this project.

82. **Sector Strategies and Policies - Substantial.** Substantial risk arises due to newly created local government bodies and provincial governments may have priorities that are different from the current national forest policy and strategy. To mitigate this risk, the World Bank team will continue engaging with all level of government, communicate the innovative nature of the ER Program that needs to follow international standards and best practices. The Forestry for Prosperity Project supported will help the newly decentralized structure with capacity development and technical assistance, including on land use planning and SFM.

83. **Technical Design of the Project - Substantial.** There are three technical risk areas. First, small gains in ERs may not be detected through the measurement and monitoring system, especially when they are generated from avoided forest degradation. It is not specific to this operation, but common to ER programs in other countries due to the inherently complex nature of REDD+. The generation of ERs varies depending on the overall performance of program implementation. Second, as explained earlier, projected ERs are likely to have been overestimated and not all planned ERs may be generated resulting in less than the expected payment. Third, upfront finance needed for the implementation of the ER Program interventions is not fully secured. The cost of the ER Program over the five year period is estimated to be US\$101 million, of which only US\$41.5 million is currently available. Costs and sources of



financing are presented in Annex 4. Mitigation measures include improving the measurement and monitoring system and strengthening the capacity of FRTC to implement the NFMS. For the financing gap, the GoN will develop and implement a fundraising strategy for securing national resources and leverage additional funding from development partners, including the Bank.

84. Institutional Capacity for Implementation and Sustainability - Substantial. The assessed risk is substantial given the uncertainties around the institutional arrangements associated with the federalization process. The NRC, has a limited number of staff, which could significantly impact the coordination of the interventions. The NRC will need to strengthen its capacity with more seasoned technical staff and introduce measures for retaining staff over a longer period of time. To mitigate this risk, the REDD+ Readiness project continues supporting the NRC, including professional training. The institutional arrangements for REDD+ at the provincial level are not fully in place yet, hence this poses a risk to ER Program implementation. Risk mitigation measures include support to the national institutional arrangements for implementing REDD+. It will also support analytical work and capacity building regarding the establishment of a fair benefit sharing mechanism, an improved legal framework, and more transparent processes. As discussed earlier, the FDF is still to be established and assessed as “satisfactory” to the Bank. The recently approved 2019 Forest Act provides the legal basis for setting up the FDF, and outlines the FDF’s financing, governance system and decision-making process, bank account operation, auditing and other provisions for its operation. Draft Operational Guidelines of the FDF are being developed and are expected to be ratified by the government in Spring 2021. Its proper establishment and functioning through a transparent and participatory process remains a high priority for the Bank. Once the FDF has been established, the Bank will conduct a FM capacity assessment and provide necessary capacity development.

85. Fiduciary – Substantial. The main risks relate to receiving payments by the government and their distribution. These include: (a) lack of required government policies and procedures to enable FDF operationalization, (b) lack of operational set-up and capacity to operationalize FDF, (c) coordination and fiduciary risks due to many entities involved, and (d) timely receipt of appropriate benefits by the eligible beneficiaries. To mitigate the identified risks, following actions have been discussed and agreed with the government: (a) Forest Regulations approved by September 2020 with updating of BSP and development of FDF Operations Manual by December 2020 based on the Regulations (b) Establishment of FDF Operations Committee with an Account Officer and Accountant by December 2020 based on the Regulations (c) Streamlining of procedures in BSP and FDF to minimize layers in funds flow and reporting (d) Payment to all beneficiaries in their bank accounts directly from FDF facilitated by REDD IC (e) Trimester monitoring by REDD IC of purchase and distribution of non-monetary benefits by DFOs.

86. Environment and Social - Substantial. The planned ER Program interventions present significant social risks and opportunities. Communities living in and around forests could be adversely affected as access to forests will be more tightly regulated. On the environment side, some of the adverse impacts that could emerge include soil erosion due to more intensive harvesting; loss of biodiversity; air, water and noise pollution; reduced groundwater availability and increased incidence of forest fires. Mitigation measures include effective implementation of social and environmental instruments that have been prepared to minimize such risks. In response to Bank-specific requirements alone (not to mention those deriving from the UNFCCC safeguards for REDD+), the Government has prepared safeguards instruments such as an ESMF for the ER Program, a Feedback and Grievance Redress Mechanism and a Gender Mainstreaming Plan.

87. Other (Impact of COVID-19) - Substantial. The current global pandemic due to COVID-19 brings risk to the ER program. Nepal has been under lockdown for several months, and serious signs of its impacts are emerging also for forest-dependent people. Government’s priorities are likely to be shifted to economic recovery and public health issues. To mitigate this risk, the Bank will take the pandemic as an opportunity to build back better, with emphasis on green, resilient economy. At the ER Program level, the Bank will ensure that the beneficiaries affected by COVID-19 are prioritized to receive non-monetary benefits (when implementing the ER Program) and monetary benefits (when distributing ER payments of verified emission reductions).



The World Bank

Nepal Emission Reductions Program in the Terai Arc Landscape (P165375)



VII. RESULTS FRAMEWORK AND MONITORING

**Results Framework****COUNTRY: Nepal****Project Development Objective(s)**

To make payments to the Recipient for measured, reported and verified Emission Reductions related to reduced deforestation, forest degradation and the enhancement of forest carbon stocks (ER payments) in Terai Arc Landscape, and to distribute ER payments in accordance with an agreed-upon benefit sharing plan.

Project Development Objective Indicators

Indicator Name	DLI	Baseline	End Target
Name: 1. Volume of CO ₂ e Emissions Reductions that have been measured and reported by the Program Entity, verified by a Third Party, and transferred to the FCPF Carbon Fund (tCO ₂ e)	NA	0	9,000,000
Name: 2. Payment by the FCPF Carbon Fund for CO ₂ Emission Reductions generated by the Program (US\$)	NA	0	US\$45,000,000
Name: 3. Emission Reductions payments distributed in accordance with agreed Benefit Sharing Plan and arrangements (Yes/No)	NA	No	Yes

Intermediate Results Indicators by Components

Indicator Name	DLI	Baseline	End Target
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Monitoring & Evaluation Plan: PDO Indicators

Indicator Name	Definition/Description	Frequency	Datasource	Methodology for Data Collection	Responsibility for Data Collection
Name: 1. Volume of CO ₂ e Emissions Reductions that have been measured and reported by the Program Entity, verified by a Third Party, and transferred to the FCPF Carbon Fund (tCO ₂ e)	This includes all ERs generated by the program during each reporting period and verified by independent reviewer contracted by the Bank	Twice during the Program Period	MRV System	ER Monitoring Report & Third Party Verification	FRTC/NRC
Name: 2. Payment by the FCPF Carbon Fund for CO ₂ Emission Reductions generated by the Program (US\$)	This is the financial value of verified ERs as indicated in the previous indicator	Twice during the Program Period	Client Connection	Review of Designated Accounts	NRC and World Bank
Name: 3. Emission Reductions payments distributed in accordance with agreed Benefit Sharing Plan and arrangements (Yes/No)	This requires full compliance of the Benefit Sharing Plan by the Program Entity	Twice during the Program Period	Progress reports	ERPD/BSP	NRC and World Bank

Monitoring & Evaluation Plan: Intermediate Results Indicators

Indicator Name	Definition/Description	Frequency	Datasource	Methodology for Data Collection	Responsibility for Data Collection
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ANNEX 1: COVID-19 RESPONSE PROGRAM - SHIFTS IN WBG COUNTRY PARTNERSHIP FRAMEWORK

1. Nepal is facing a major public health and economic crisis as a result of COVID-19. As of January 7, 2021, the Ministry of Health and Population (MoHP) reported 263,605 confirmed COVID-19 cases, of which 256,644 (97.36 percent) have recovered and 1,903 deaths registered. The COVID-19 new cases peaked in the last week of September 2020, with 25,929 cases and thereafter have been steadily declining with only 2,167 cases tested positive in the week ending January 7, 2021. As of date, the districts of Kathmandu Valley contribute almost 61 percent to the case load of the entire nation, a situation that has not improved in the last two months. While the cumulative positivity rate is 13.4 percent, the positivity rate for the week ending January 7, 2021 is 8 percent. The continuing decline in positivity rate masks wide variation between provinces (25 percent in Karnali to 13.33 percent in Gandaki to 0 percent in Gandaki province). Over 80.4 percent of the infected are in the 20-59 age group, with 65.1 percent of the affected being males. Case fatality ratios are highest in the age group 70-85+. Only 16.1 percent of designated COVID-19 ICU beds and 6.9 percent of ventilators are occupied confirming unused capacities. The number of confirmed cases and deaths is relatively low compared to neighboring countries. The recently concluded sero-prevalence study indicates over 85 percent of positive cases were asymptomatic as were 66 percent of cases in home isolation. Therefore, the decline in average positivity rate, low uptake of ICU beds and ventilators may point more to decreased test/care seeking behavior amongst populations or access related issues and not necessarily a pandemic managed well. Government of Nepal is at present executing its second rolling four-monthly costed, rapid action plans, approved by the Cabinet, to adapt and respond to the pandemic. The lockdown measures introduced early in the pandemic were completely lifted as of September 17, 2020 with options for districts to re-impose them based on local contexts. The pandemic has had significant consequences in terms of lost income and difficulties in meeting basic subsistence needs, particularly for daily wage laborers; lost education due to protracted closure of schools; lost life and health from non-COVID related illnesses as the population was unable to access or did not trust public health services, as well as in the stress on mental health; and increasing reports of gender-based violence.

2. The global COVID-19 pandemic imposed both a supply and a demand shock on Nepal's economy, which is adversely affecting growth. GDP growth is expected to go down to 0.2 percent in FY20 from 7 percent the year before. The tourism sector has been severely impacted. The four-months nationwide lockdown enforced on March 24, 2020 affected industrial and agricultural output as well as services, leading to a 57.5 percent (y/y) drop in credit provision to the private sector between mid-March and mid-July 2020. The poor are expected to be disproportionately affected by the crisis. Government revenues grew by 0.2 percent in FY20, the lowest rate in more than two decades, due to widespread trade restrictions, supply chain disruptions and weaker demand. COVID-19 social distancing and lockdown measures also reduced budget execution to a four-year low of 71.4 percent in FY20 despite an increase in spending on wages and COVID-19 related expenditures on health and social assistance. At the end of FY20, only 47 percent of the capital budget had been executed, much less than the average of 74.9 percent in the last three years as the last quarter of the fiscal year, which normally absorbs most capital spending, coincided with the national lockdown. The lower budget execution helped the fiscal deficit in check, increasing marginally by 0.4 percentage points to 3.2 percent of GDP in FY20. Total public debt is estimated to have increased to 38.3 percent of GDP from 30.1 percent of GDP in FY19.

3. The Government of Nepal has responded to the crisis through fiscal and monetary measures. Fiscal measures fall into three broad categories. *First*, there are immediate health measures aimed at increasing access to testing for COVID-19 infections, establishment of quarantine facilities, and availability of medical items such as masks, sanitizer, and surgical gloves. *Second*, to reduce the crisis' impact on



livelihoods, the government has ensured continued delivery of its core safety net programs, implemented food distribution programs, extended eligibility for the Prime Minister's Employment Program, and provided discounts on utility bills. *Third*, to provide economic support to firms, the government has deferred the payment of taxes and provided concessional loan facilities to severely affected sectors. The cumulative cost of these programs is estimated at 5 percent of GDP. Measures taken by the Nepal Rastra Bank – the central bank – included a relaxation of regulatory requirements for banks and financial institutions and a reduction of targeted interest rates as part of the country's interest rate corridor and were aimed at providing liquidity support to banks and facilitating the provision of credit to the private sector.

4. The economic framework to chart Nepal's emergence from the crisis is structured by the Government in three stages: relief, restructuring, and a resilient recovery. During the *relief stage*, the priority is on addressing the immediate health impacts of the pandemic and providing support to livelihoods and firms to reduce vulnerability. During the *restructuring stage*, the focus is on strengthening health systems and adjusting to a new normal that prioritizes domestic employment generation in a greener and more digital economy. The *resilient recovery stage* focuses on new opportunities to invest and reforms to promote more sustainable, inclusive and resilient growth in a post-COVID world. There is also understanding that economic recovery for a small, landlocked country like Nepal also requires cooperative engagement with the immediate neighborhood, recognizing the importance of connectivity and trade for growth and development.

5. The WBG Country Partnership Framework (CPF)²³ continues to be relevant, albeit with some shifts aiming at striking a balance between pivoting to address the short and medium-term needs from the COVID19 crisis and the focus on the long-term economic development path. World Bank, IFC and MIGA will continue to collaborate closely in implementing these shifts which also align with the four thematic pillars of the World Bank Group Approach Paper²⁴. The World Bank Group will continue to work closely with the Government to ensure that the allocation of IDA 19 resources is in conformity with the COVID-19 related priorities and the four pillars of the World Bank Group Approach Paper, as detailed below.

(1) **Pillar 1: Support to health for saving lives threatened by the virus.** The Bank responded immediately to the crisis caused by COVID-19, via **US\$29 million** IDA credit for the Nepal COVID-19 Emergency Response and Health System Preparedness Project approved in April 2020, to strengthen national systems for public health preparedness in the country. In addition, the proposed US\$75 million Additional Financing to the Nepal COVID-19 Emergency Response and Health System Preparedness Project planned for FY21 delivery will support the procurement of COVID-19 vaccines and related activities. The medium-term response will be framed through the envisaged continued support in the sector-wide program in the health sector.

(2) **Pillar 2: Social response for protecting poor and vulnerable people from the impact of the economic and social crisis triggered by the pandemic.** As a measure for immediate response to the COVID-19 crisis, **US\$10.85 million** Global Partnership for Education (GPE) COVID 19 Accelerated Funds to respond to COVID-19 impact on the school sector, was approved in August 2020. Further, in FY21, with a view toward supporting the response to the COVID-19 pandemic, the following World Bank-

²³ Report No. 83148-NP; July 10, 2018 discussed at the Board on August 7, 2018

²⁴ The thematic pillars of the World Bank Group Approach Paper are: (i) support to health for saving lives threatened by the virus, (ii) social response for protecting poor and vulnerable people from the impact of the economic and social crisis triggered by the pandemic, (iii) economic response for saving livelihoods, preserving jobs, and ensuring more sustainable business growth and job creation by helping firms and financial institutions survive the initial crisis shock, restructure and recapitalize to build resilience in recovery (rebuilding better), and (iv) support for strengthening policies, institutions and investments for resilient and sustainable recovery.



financed projects have been approved: Rural Economic Development Project (US\$80 million) and Urban Governance and Development Project (US\$150 million). In FY22, Provincial and Local Roads Project and Upper Arun Hydroelectric Project are potential areas of support. The proposed Sustainable Tourism Project will be redefined to focus on reinvigorating the sector (the most impacted sector in Nepal) with a focus on grant and job-creation schemes. Across existing investments, including Youth Employment Transformation Initiative (YETI), Emergency Housing Reconstruction Project (EHRP), Strategic Road Connectivity and Trade Improvement Project (SRCTIP), and the recently approved Nepal Urban Governance and Development Project (NUGIP), World Bank investments are expected to create over 19 million person days of employment. This includes COVID responses to increase creation of temporary employment opportunities for the most vulnerable, including those COVID affected particularly under YETI and NUGIP. YETI supports the government's key employment program. The proposed US\$80 million Unlocking Human Capital for a Prosperous Nepal aims to promote greater access to a set of inter-related and mutually complementary human capital services, particularly for over 100,000 poor and vulnerable households in selected disadvantaged areas, and the Nurturing Excellence in Higher Education Project (US\$60 million) aims to modernize higher education sector through digitization, a key aspect of the response to the issues caused by the COVID-19 pandemic. The medium-term response will be framed through the envisaged continued support in the sector-wide program in the education sector.

(3) **Pillar 3: Economic response for saving livelihoods, preserving jobs, and ensuring more sustainable business growth and job creation by helping firms and financial institutions survive the initial crisis shock, restructure and recapitalize to build resilience in recovery (rebuilding better).** As a measure for immediate response, the Bank also initiated **repurposing and restructuring of the ongoing World Bank portfolio** through reallocations, cancellations, and creating CERC in six projects, and thereby making about US\$300 million available for COVID-19 relief and recovery efforts. Initiatives were also undertaken to expedite release of about US\$140 million in advances or accelerating achievement of results across the Program for Results (PforRs) operations. These represent approximately 18 percent of total committed amounts. The Government of Nepal and Development Partners²⁵ have recently started a joint green recovery initiative to help Nepal get back on track to achieve Middle Income Status and the Sustainable Development Goals by 2030. The initiative follows the shared principles for green recovery support that will: (i) support the Government's plans and sector strategies, (ii) ensure the green recovery is inclusive, promotes stakeholder engagement and the active role of women and civil society in Nepal's development, and (iii) support the constitutional mandates of Nepal's local, provincial and federal governments. Further, given the impact on the tourism industry, IFC has approved a standstill agreement for a hospitality client. Further, IFC conducted the Business Pulse Survey of 500 MSMEs to assess the impact and challenges faced by MSMEs and support mechanisms that they would require for recovery and resilience post COVID-19. Moreover, IFC is in discussions with a commercial bank to possibly support its SME clients through a working capital solution loan of around \$30m under the IFC COVID Response Facility approved by the Board. IFC utilized IDA PSW for the Upper Trishuli 1 hydropower generation project in FY20, committing US\$460 million to support Nepal's energy sector, instrumental for Nepal's development both in terms of improved supply of electricity in the domestic market and job creation during the construction phase of the project. IFC has continued to strengthen the financial sector through three projects, committing over US\$60 million last year. In FY21, IFC plans to support two microfinance institutions with financing in Nepali currency through a blend of IDA PSW Local Currency

²⁵ Development partners associating themselves with this statement Include: ADB, EU, Finland, France, Germany, INGOs, JICA, KOICA, Norway SDC, UK, UN, USAID, and the World Bank.



Facility and Nepali currency denominated offshore bonds. Additional private sector led projects can be supported through collaboration with IFC and MIGA.

(4) **Pillar 4: Support for strengthening policies, institutions and investments for resilient and sustainable recovery.** The FY21 program includes a Finance for Growth DPC (US\$200 million) series which responds to the challenges brought about by the COVID-19 pandemic through addressing financial stability, disaster risk finance, capital and insurance market reforms, and constraints to SME financing. This DPC reiterates WBG's focus on private sector-focused market solutions and similar approach would be expected in the upcoming operations including the Programmatic Fiscal Policy for Growth Recovery and Resilience DPC Series. The new Programmatic Fiscal Policy for Growth Recovery and Resilience DPC Series (US\$100 million) will build on the previous series, with a focus on aspects of the COVID-19 response related to fiscal resilience and economic recovery aimed at sustainable and inclusive growth, as well as social protection to support the poor and vulnerable. These DPC initiatives draw on IFC advice as to key enabling environment reforms that can foster the increased private sector initiatives and investments required for a resilient recovery. Policy reform actions would be centered around the Government's 3R (Recovery, Restructuring, and Resilience) Plan. In parallel, IFC is also working with relevant government agencies to implement a tourism advisory project designed to adapt to the changing needs of the industry in the context of COVID-19 and to prepare the post-COVID19 recovery. The FY22 pipeline may include the next series of Finance for Growth DPC and/or Fiscal Policy for Growth, Recovery, and Resilience DPC.

6. The financing gap is expected to be bridged through the Crisis Response Window (CRW), Regional IDA, and Scale Up Window (SUW). Estimated resources available under IDA-19 concessional financing include US\$956 million²⁶ with a tentative allocation of US\$423 million in FY21 and US\$266 million each for FY22 and FY23, respectively. Total demand for FY21 is about US\$755 million. To meet this financing gap, 30 percent frontloading from FY22 allocation and US\$45 million cancellation from three ongoing projects is envisaged. To close further the financing gap of US\$207 million, Nepal would seek additional resources from CRW and Regional IDA. To close the financing gap in FY22, in addition to 30 percent frontloading from FY23 allocation, Nepal would seek additional resources from CRW and SUW for Provincial and Local Roads Project, as well as Regional IDA and SUW for Upper Arun Hydroelectric Project in addition to collaborating with IFC.

²⁶ US\$ amount may change due to exchange rate fluctuation against SDR. IDA 19 allocation is SDR 661.8 million.



ANNEX 2: APPROXIMATE TIMELINE OF PLANNED ER PROGRAM MEASURES

Activity	FCPF Carbon Fund Performance Period						Post-Carbon Fund Performance Period			
	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
1. Improve management practices in existing community forests building on traditional and customary practices	Revise CBFM operational plans to include and implement SFM principles respecting traditional practices									
	Train and develop 100 Local Resource Persons (inclusive) to implement SFM principles, forest fire control (indigenous methods and new tools). Train and develop 100 LRPs (inclusive) to implement SFM principles, forest fire control (indigenous methods and new tools).									
	Improve governance in CBFM regimes to ensure inclusiveness, participation, accountability and transparency targeting around 60 CBFMGs.									
	Revise DFO sectoral and operational plans.	Build capacities of 100 executive committee members of CBFM including IP/NEFIN, Dalits, HIMMAWANTI/ Women on SFM.				Revise DFO sectoral and operational plans.	Build capacities of 100 executive committee members of CBFM including IP/NEFIN, DALITS, HIMMAWANTI/ WOMEN on SFM.			
	Simplification of government procedures including registration to sustainably harvest and timber in all forest management models through discussions.		Enhance coordination with the DADO/District Livestock Office to improve livestock management.							
Activity	FCPF Carbon Fund Performance Period						Post-Carbon Fund Performance Period			
	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028



2. Localize forest governance through transfer of National Forests to CFUGs	Educate communities and awareness raising.									
	Enhance the capacities of Federation of User Groups/IP/Dalits/ Women in SFM.									
	Increase programs for CBFM handover in the Annual Programme of Work across all districts.									
		Implement improved forest management techniques in newly handed-over forests.								
Activity	FCPF Carbon Fund Performance Period						Post-Carbon Fund Performance Period			
	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
3. Expand private-sector forestry through improved access to extension services and finance	Provide insurance mechanism.									
	Training and capacity building through federations and private associations.									
	Access to soft loans (deprived-sector loans).									
	Product valuation to improve negotiation capacity with buyers through cooperatives of landholders.									
	Provide subsidies for seedlings and quality seedlings.									
Activity	FCPF Carbon Fund Performance Period						Post-Carbon Fund Performance Period			
	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
4. Expand access to alternative energy with biogas and improved cookstoves	Building local capacities and skills to construct biogas plants and install RETs.	Develop bioenergy feedstock supply chain using invasive species and available biomass.								
	Access to micro credits through cooperatives enhance access to RETs.									
	Scale up installations of biogas.									
	Scale up installations of improved cookstoves.									
			Window of opportunity to promote new feasible technologies as they develop or are innovated.					Window of opportunity to promote new feasible technologies as they develop or are innovated.		
Activity	FCPF Carbon Fund Performance Period						Post-Carbon Fund Performance Period			
	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028



5. Scale up pro-poor Leasehold Forestry	Execute existing practice and criteria to identify poor households.									
	Provide skill-based trainings and inputs to LHFUG (e.g., access to and marketing of NTFP) for 100 pax.									
	Facilitation by NGO/CSO to connect poor to DFO.									
Activity	FCPF Carbon Fund Performance Period						Post-Carbon Fund Performance Period			
	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
6. Improve integrated land-use planning associated with infrastructure development	Enhance sectoral and cross-sectoral coordination to implement district land-use plans.									
	Zone CBFM area; map potential hazard zone areas and possible settlement areas.									
	Map potential sites for afforestation and reforestation in the districts and conduct planting.									
	Develop district land-use plans to enhance understanding on integrated development and traditional land use.									
	Enhance land information management system.									
Activity	FCPF Carbon Fund Performance Period						Post-Carbon Fund Performance Period			
	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
7. Improve the management of protected areas	Antipoaching operations.									
	Smart patrolling.									
	Grassland management.									
	Human and Wildlife Conflict relief fund support.									
	Ecotourism development.									



ANNEX 3: AGENCIES INVOLVED IN ER PROGRAM IMPLEMENTATION

Activity	Sub Activity	DoF	AEPC	DNPWC	Local Government	DFO (Div)	State Dept (Forest)	CBFM UGs	CSOs	BFI	Private Sector	PA Authority
1. Improve management practices in existing community forests, building on traditional and customary practices	Revise CBFM operational plans to include and implement SFM principles respecting traditional practices.					x	x	x				
	Train and develop 100 LRPs (including IPs and at least 50 percent women) to implement SFM principles, forest fire control (indigenous methods and new tools).					x		x	x			
	Improve governance in CBFM regimes to ensure inclusiveness of women, IPs and marginalized communities; participation; accountability and transparency targeting around 60 CBFMGs.					x	x	x				
	Prepare municipal-level integrated land use plan.	-			x	x	x				x	
	Build capacities of 100 executive committee members of CBFM including women, IPs, Madhesi, Dalits, on SFM.			x		x		x	x			
	Simplification of government procedures including registration to sustainably harvest timber in all forest management models through discussions.	x					x					
	Promote alternative livelihoods options and traditional practices for IPs and forest-dependent communities to sustainably use forests.				x	x		x				
	Promote knowledge, skills, and art/craft of Indigenous Peoples related to forest and market outreach while carrying out SFM.					x		x	x			
	Enhance coordination with the concerned authorities to improve livestock management.				x	x	x	x				
	Effectively implement CF guideline in terms of including women in user groups and executive committee. Apply W+ standards to measure women's empowerment with focus on measuring leadership, income and assets.	x					x	x	x	x		
	Pilot national standards of forest certification in 60 CBFs.	x					x	x				



2. Localize forest governance through transfer of national forests to CBFMUGs	Sensitize and prepare communities.					x		x				
	Enhance the capacities of CBFM Groups, IPs, Dalits and women in SFM.					x		x	-			x
	Increase programs for CBFM handover in the Annual Programme of Work across all districts. Respect customary rights of IPs while handing over CBFMs.					x	x					
	Gradually improving forest management in handed-over forests.				x	x	x	x	x		x	x
	Effectively implement CF guideline in terms of including women in user groups and executive committee. Apply W+ standards to measure women's empowerment with focus on measuring leadership.						x	x	x			
3. Expand private-sector forestry through improved access to extension services and finance	Provide insurance to private forests and forest products.				x	x				x	x	x
	Training and capacity building.				x	x			x		x	x
	Access to soft loans (deprived sector loans).				x					x	x	
	Product valuation to improve negotiation capacity with buyers through cooperatives of landholders.				x	x	x		x		x	x
	Provide subsidies for seedlings and forest establishment promoting indigenous species.				x	x	x		x			
	Promote private forest nurseries through subsidies, buy-back guarantee and leverage to insurance premium with preference to nurseries operated by women.				x	x					x	
	Ensure at least one-third of the private forests registered in the names of women. Apply W+ standards to measure women's empowerment with focus on measuring income and assets and leadership.						x	x		x		
4. Expand access to alternative energy with biogas and improved cookstoves	Building local capacities and skills to construct biogas plants and install RETs.		x									
	Develop bioenergy supply chain using invasive species and available biomass.		x								x	
	Access to micro credits through cooperatives; enhance access to RETs.		x						x	x		
	Scale up installations of biogas with preference to women and marginalized indigenous groups and Dalits.		x						x		x	x
	Scale up installations of improved cookstoves with preference to women and marginalized indigenous groups and Dalits.		x						x		x	x
	Window of opportunity to promote new technologies.		x						x	x	x	x
	Apply W+ standards to measure women's empowerment with focus on measuring time and health.		x									



5. Scale up pro-poor Leasehold Forestry	Provide skill-based trainings and inputs to LHFUG (e.g., access to and marketing of NTFP).					x			x			
	Facilitate to increase access to resources. Respect customary rights of IPs while handing over LF.					x			x			
	Execute existing practices and criteria to identify poor households.					x			x			
	Ensure representation of women in the vital positions (either chairperson or secretary) of executive committee. Apply W+ standards to measure women's empowerment with focus on measuring leadership and food security.											
6. Improve integrated land-use planning associated with infrastructure development	Enhance sectoral and cross-sectoral coordination to implement municipal land-use plans.				x		x	x	x			
	Zone CBFM area, map potential hazard zone areas and possible settlement areas.	x			x	x	x					
	Map potential sites for afforestation and reforestation in the districts and establish plantations where appropriate.				x	x			x			
	Develop municipal land-use plans to enhance understanding of integrated development and traditional land use. Ensure mandatory and effective participation of women, IPs and other marginalized communities in land-use planning process.				x		x	x	x			
	Set standards for converting forest to other land use for nationally prioritized projects considering the REDD+ safeguards.	x		x	x	x	x					
7. Improve the management of protected areas	Support to control poaching and other wildlife crimes.			x		x	x	x	x			x
	Strengthen smart patrolling.			x		x	x	x	x			x
	Habitat management. Respect customary practices of IPs in conserving biodiversity.			x		x	x	x	x			x
	Manage human and wildlife conflict through relief fund.			x		x	x	x	x			x
	Promote ecotourism development.			x		x	x	x	x			x
	Increase people's participation in PA management with mandatory inclusion of women, IPs and other marginalized communities. Apply W+ standards to measure women's empowerment with focus on measuring leadership and knowledge.			x								x



ANNEX 4: SUMMARY OF FINANCING PLAN (COSTS & SOURCES)

Expected uses of funds	Description	Breakdown per year (USD)				
		Year 1	Year 2	Year 3	Year 4	Year 5
<i>Costs related to administrative oversight</i>		300,000	316,000	330,000	348,000	364,000
<i>Program Implementation</i>	<i>4.3.1 Improve existing CBFM</i>	8,121,620	11,504,340	11,455,840	11,292,840	11,292,840
	<i>4.3.2 Transfer to CBFM</i>	50,900	3,186,710	4,878,070	4,853,820	4,772,320
	<i>4.3.3 Private-sector forestry</i>	870,300	870,300	870,300	870,300	870,300
	<i>4.3.4 Biogas and improved cook stoves</i>	3,386,764	3,593,464	3,593,464	3,363,364	3,363,364
	<i>4.3.5 Pro-poor leasehold forestry</i>	63,600	39,600	39,600	39,600	39,600
	<i>4.3.6 Integrated land-use planning</i>	75,500	75,500	27,500	27,500	27,500
	<i>4.3.7 Protected areas management</i>	50,000	50,000	50,000	50,000	50,000
<i>Safeguard costs</i>		645,934	981,796	1,062,239	1,042,271	1,038,996
<i>Costs related to MRV and forest monitoring</i>		150,000	158,000	165,000	324,000	183,000
Total uses		13,714,618	20,775,710	22,472,013	22,211,695	22,001,920
Cumulative uses		13,714,618	34,490,328	56,962,341	79,174,036	101,175,956

Expected sources of funds	Description	Year 1	Year 2	Year 3	Year 4	Year 5
<i>Government budget</i>	<i>DoF</i>	1,668,735	1,752,170	1,839,780	1,931,770	2,028,360
<i>Cofinancing</i>	<i>FIP</i>	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000
<i>Cofinancing</i>	<i>President Chure Dev Board</i>	1,500,000	1,650,000	1,815,000	1,996,500	2,196,150
<i>Cofinancing</i>	<i>TAL Program (WWF)</i>	800,000	880,000	968,000	1,064,800	1,171,280



<i>Cofinancing</i>	<i>CFUG and CoFUG cofinancing</i>	1,013,000	1,063,650	1,116,830	1,172,670	1,231,300
<i>Cofinancing</i>	<i>HH rural energy cofinancing</i>	1,034,881	1,034,880	1,034,880	1,034,880	1,034,880
<i>Revenue from sale of Emission Reductions (contracted)</i>	<i>Revenue from sale of Emission Reductions (Assumes deduction of buffer)</i>				22,003,685	
Total sources (before taxes)		7,516,616	7,880,700	8,274,490	30,704,305	9,161,970
Cumulative sources (before taxes)		7,516,616	15,397,316	23,671,806	54,376,111	63,538,081
Net revenue before taxes (=total sources – total uses)		(6,198,002)	(12,895,010)	(14,197,523)	8,492,610	(12,839,950)
Cumulative revenues		(6,198,002)	(19,093,012)	(33,290,535)	(24,797,925)	(37,637,874)

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ANNEX 5: RELATION BETWEEN DRIVERS AND PROPOSED INTERVENTIONS

The following table shows which ER Program interventions address which drivers of deforestation and forest degradation.

Driver	ER Intervention	Rationale
Unsustainable and illegal harvest of fuelwood and timber	1, 2, 3, 4, 6	<ul style="list-style-type: none"> Improved supply of timber and fuelwood reduces unsustainable and illegal harvesting. Alternative energy programs decrease demand driving unsustainable fuelwood harvesting. Localized governance and increased monitoring/patrolling of forests transferred to communities reduces illegal and unsustainable harvest.
Overgrazing	1, 2, 4, 5	<ul style="list-style-type: none"> Integrated grazing including stall feeding in CBFM areas. Increased enforcement and management in CBFM areas will regulate and control grazing. Incentive is created to maintain cattle for biogas plants. Improved livestock management occurs under leasehold forestry programs.
Forest fires	1, 2	<ul style="list-style-type: none"> Fire management training and community-based fire management occurs in CBFM. Improved silvicultural practices will reduce uncontrolled fire risks. Fire monitoring and early warning system will reduce spread of uncontrolled fires. Construction of fire lines delineates management blocks for forest management in community and collaborative forests.
Encroachment/conversion of forest to other land uses	1, 2, 6	<ul style="list-style-type: none"> Establishing community forests provides clear management rights, boundary delineation and increased patrolling, all of which reduce encroachment and conversion. Improved management under CBFM reduces unsustainable logging practices. CBFM provides avenue for communities to align with federal encroachment policies.
Resettlement	1, 2, 6	<ul style="list-style-type: none"> Improved enforcement and management in CBFM areas will decrease unplanned resettlement that is more common in government-managed forests. Land use planning intervention will improve federal, state and local planning for appropriate resettlement management.
Infrastructure development	6	<ul style="list-style-type: none"> Improved land-use planning will reduce deforestation impacts of infrastructure development. Improved coordination among agencies and consultation with stakeholders will reduce unnecessary conversion and support wildlife corridors. Land-use planning intervention includes activities for better implementation and enforcement of EIA requirements.

ANNEX 6: DETAILS OF THE INSTITUTIONAL ARRANGEMENTS

National Level²⁷

1. At the national level, the REDD+ process is operationalized through a three-tier structure comprising National REDD+ Steering Committee (NRSC), National REDD+ Coordination Committee at the coordination and decision-making level, and the National REDD+ Center (NRC) as the REDD+ program management entity. These three governing structures are supplemented by two informal structures, the REDD+ Multi-Stakeholder Forum and REDD+ CSO and IPO Alliance. The roles of these committees and their relationship are described further below.

2. **National REDD+ Steering Committee (NRSC):** The NRSC is an inter-ministerial high-level policy, steering and coordination body to harmonize REDD+ and related policies and program with national plans and policies. The NRSC will be chaired by the Minister of Forests and Environment and represented by Ministry of Finance; Ministry of Forests and Environment; Ministry of Energy, Water Resources and Irrigation; Ministry of Agriculture, Land Management and Cooperatives; Ministry of Industry, Commerce and Supplies; National Planning Commission, National Natural Resources and Fiscal Commission; State Ministry of Industry, Tourism, Forests and Environment; and representatives from the local governments, private sector, civil society and government organizations. The chief of the NRSC will act as member secretary of the NRCC. The NRSC will be linked with the Climate Change Council chaired by the Right Honorable Prime Minister to bring synergy and integration of climate change related aspects in the policies, plans, and programs.

3. **National REDD+ Coordination Committee (NRCC):** The NRCC is a board that meets three times per year and provides strategic leadership in designing, planning and implementation of REDD+ program in the country. The NRCC is chaired by the Secretary of the Ministry of Forests and Environment and represented by government agencies including Climate Change Management Division; Environment and Biodiversity Division; Planning, Policy and Monitoring Division, Participatory Forest Management Division; Forests and Watershed Division; Administrative Division; Department of Forests, Department of National Parks and Wildlife Conservation, Department of Forest Research and Survey; Department of Plant Resources; Department of Environment; Forest and Environment Training Center; non-governmental organizations having expertise in the REDD+; and development partners. The Chief of the NRC will act as member secretary of the NRCC and the National REDD+ Center (NRC) serves as its secretariat (the NRCC does not have separate staffing). The NRCC is a key decision-making entity on the overall REDD+ process and management. The NRCC is also expected to provide innovative ideas, monitor programs and help to integrate program priorities under the National REDD+ Strategy.

4. **National REDD+ Center (NRC):** The NRC is the executing entity for carrying out day-to-day activities and implementing regular programs under REDD+ as well as implementing decisions made by NRSC and NRCC. It is a permanent government organization with regular budget and 18 permanent staff members dedicated to REDD+. It serves the secretariat function for both NRSC and NRCC. The chief of NRC works as the member secretary to both NRSC and NRCC. It functions as the primary operational body to provide national program leadership, coordinate ER Program planning, and bridge state and district-level planning and priorities under the National REDD+ Strategy. The NRC works closely with the NRCC on overall strategic planning and priorities; with the Planning, Monitoring and Coordination Division of MoFE to ensure close coordination of the program across the departments and districts; and to ensure harmonization of the ER Program with other finance streams. Under the

²⁷ The terms “national” and “federal” and “state” and “province” have been used interchangeably.

ER Program there will be staff members of the NRC who are dedicated to national-level support and coordination of the program. Nepal's National REDD+ Strategy proposes to elevate the existing REDD Implementation Centre to National REDD+ Centre as a semi-autonomous entity. The Terms of Reference for the proposed National REDD+ Centre will include the following:

- Explore and access national and international funds including result-based payments.
- Coordination among sectors and actors for REDD+ related policy decisions.
- Coordinate regulation of greenhouse gas emissions from forests.
- Coordinate REDD+-related benefit-sharing.
- Coordinate safeguards implementation and monitoring.
- Establish and operate national Safeguards Information System.
- Coordinate implementation of ER Program and National REDD+ Strategy.
- Carry out and publish research and studies.
- Coordinate with FRTC for implementation of measurement and MRV, the National Forest Information System and Carbon Registry.
- Establish contractual arrangements for private forestry owners interested to opt-in in ER Program private forestry incentives.

5. **REDD+ Multi-Stakeholder Forum:** The REDD+ Multi-Stakeholder Forum functions as the principal consultation, outreach and communication platform. The forum includes representatives from the private sector, civil society, media, government organizations, community-based organizations, Indigenous Peoples Organizations (IPOs), national and international NGOs, donors, academic and research institutions, Gender and Social Inclusion related organizations and other stakeholders interested in REDD+. The forum will meet at least twice a year.

6. **REDD+ CSO and IPO Alliance:** The Alliance functions as a platform to discuss and develop a common understanding of REDD+ on behalf of wide spectrum of women, Dalits, Civil Society Organizations (CSO) and IP Organizations. The Alliance will meet at least once a year. It also advocates to ensure social and environmental safeguards while implementing REDD+ programs.

7. **Department REDD+ Focal Point:** A REDD+ Focal Point will be established at the federal level both at the Department of Forests and the Department of National Parks and Wildlife Conservation. The Focal Point will be a staff member nominated by the respective Department and will liaise with the NRC and the state-level REDD+ Focal Points. While the Directors General will participate in the NRCC meeting for strategic decisions, the REDD+



Focal Point will work as the permanent, day-to-day contact point between the NRC and the respective Department for program implementation.

Province Level

8. **REDD Desk:** A REDD Desk will be established at the state Ministry of Industry, Tourism, Forests and Environment/ state forest department to coordinate ER Program implementation. A position of REDD+ Focal Officer (RFO) will be created for each REDD Desk. The main function of the desk and the RFO will be:

- Ensure coordination among districts/divisions on ER Program implementation.
- Provide advice and guidance to districts/divisions and to REDD+ Program Management Units.
- Liaise with NRC and REDD+ Focal Officer at federal level as needed for technical guidance and advice.
- Monitor ER Program implementation at district/division level.
- Report to NRC and DoF/DNPWC on ER Program implementation in the state.

District/Division Level

9. **District/Division REDD+ Coordination Committee (DRCC):** The DRCC provides leadership in developing and implementation of REDD+ program in the districts/divisions. The DRCC will be chaired by the District/Division Forest Officer and represented by relevant government agencies, local level non-governmental organizations having expertise in the REDD+; forestry related community-based organizations, women, IPOs, Dalits; and private sector. The DRCC will assist in the implementation of the REDD+ program in the district, monitor program activities, and advocate and lobby to support for the emission reduction programs.

10. **District/Division REDD+ Multi-Stakeholder Forum:** A REDD+ Multi-Stakeholder Forum complements the DRCC by providing a less formal venue for consultation, outreach and communication in the district/division. The forum includes representatives from district chapters of the national REDD+ Multi-Stakeholder Forum involving the private sector, civil society, media, government organizations, community-based organizations, Indigenous Peoples, NGOs, research organizations, and all stakeholders interested in climate change and REDD+. The forum will increase access to information among stakeholders and enhance their role in the decision-making process. The involvement of different stakeholders ensures transparency and accountability during ER Program implementation. The forum will also provide input and feedback to the ER Program Management Unit.

11. **District/Division REDD+ CSOs and IPO Alliance:** There will be REDD+ CSOs and IPO Alliance in each district/division. This will serve as a platform for CSO and IPOs interested in REDD+ to pursue the following:

- a. Discuss and develop a common understanding of REDD+ on behalf of CSOs and IPOs in the districts/divisions.
- b. Empower and build capacity of CSOs and IPOs on contemporary issues of REDD+.
- c. Provide support and advice to District/Division REDD+ Management Unit (DRPMU) on ER Program management.
- d. Provide suggestions and feedback on REDD+ policy processes through DRPMU and REDD+ CSO and IPO Alliance.

12. **District/Division REDD+ Program Management Unit:** A District/Division REDD+ Program Management Unit (DRPMU) will be established at District/Division forest office. The DRPMU will coordinate and provide secretariat services related to ER Program activities in each district/division. This unit is responsible for the

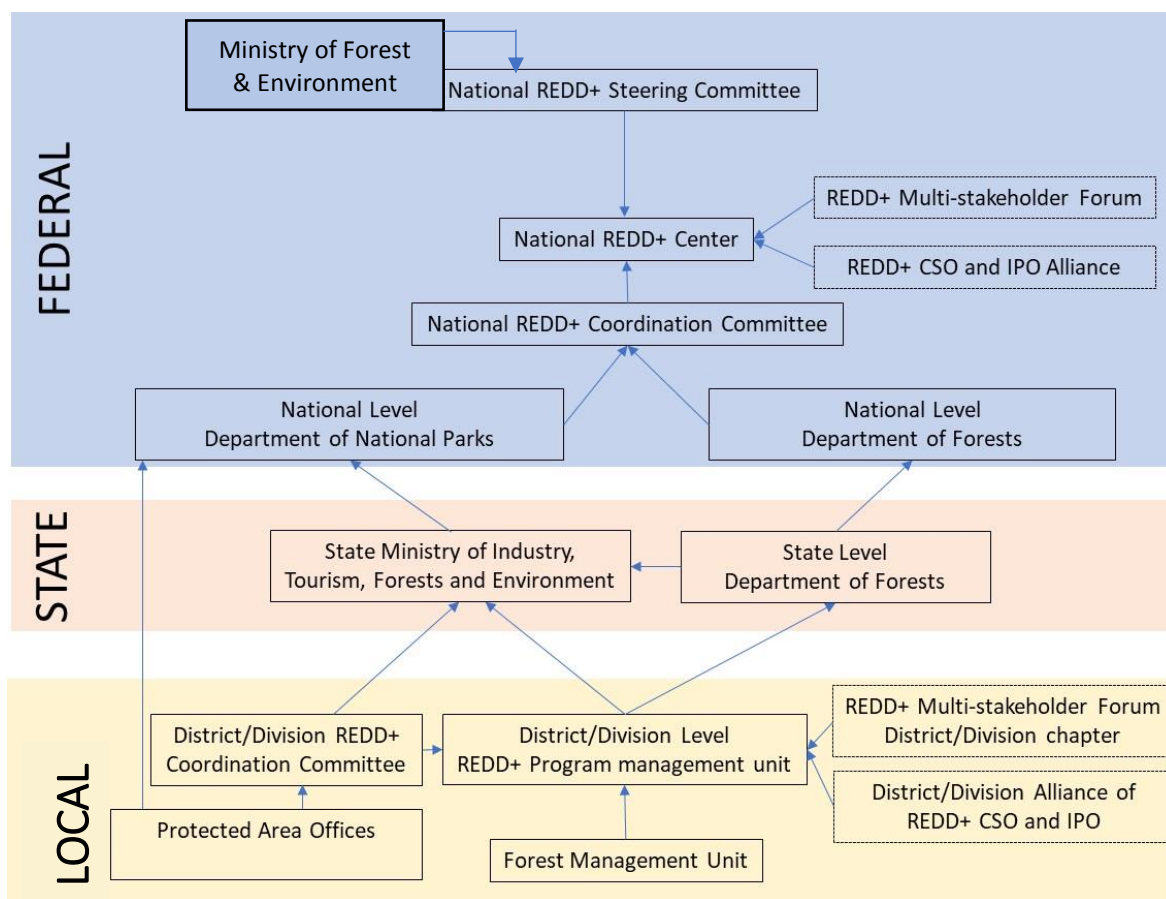
implementation and monitoring of REDD+ programs in the district/division and supports implementation of REDD+ activities at various Forest Management Units such as community forests, collaborative forests, leasehold forests, private forests, etc. The DRPMU is composed of permanent staff members of the DFO dedicated to carrying out REDD+/ERPD related activities, comparable to the role that NRC plays at national level.

13. The overarching functions of the agencies and institutions engaged in the ER Program are also summarized in the table below.

Table 1: Overarching functions of lead agencies and institutions in ER Program

Function in ER Program	Lead institutional arrangements for implementation
Administrative arrangement of the ER Program	NRC in close coordination with MoFE, Ministry of Finance, DoF, FRTC and other relevant agencies, institutions and stakeholders.
Development and operation of the Reference Level and Forest Monitoring System	FRTC, NRC, DNPWC and Environment and Biodiversity Division of MoFE.
Financial management	MoF, MoFE, NRC (through annual budget and other windows).
Implementation of Benefit Sharing Plan and relevant safeguard plans	NRC, AEPC, District/local agencies, local government, FUGs.
Feedback and Grievance Redress Mechanism(s)	NRC, DFO and State Forest Department, Municipalities.
Stakeholder consultations and information sharing	NRC, District/local agencies and representative organizations of IPs, local communities, women, Dalit, Madhesi and forest workers' unions.
Implementation of ER Program measures	NRC, DoF, State Forest Department, DFO and FUGs, identified sectoral agencies at center and local level.

Figure 1: Tiered institutional and implementation arrangements





ANNEX 7: ECONOMIC AND FINANCIAL ANALYSIS

Introduction

1. An economic cost-benefit analysis was carried out to evaluate the economic efficiency of the proposed program activities. The program's costs and benefits were assessed in terms of incremental costs and benefits of the with-program scenario over a counterfactual or business-as-usual (BAU) scenario. The with-program scenario is characterized by the outputs presented in Table 1. For the counterfactual/BAU scenario, it was assumed that forest management arrangements will remain unchanged, and forest degradation and deforestation will continue at the same rate as in the baseline (see Table 3). The other assumptions made in the analysis are detailed in Table 4.

Table 1: Program output targets, total and by year

ER Program Activity	Activity Target*	Unit	Outputs by Program Year				
			Year 1	Year 2	Year 3	Year 4	Year 5
1. Improve existing CBFM	336,069	ha	50,858	72,041	71,737	70,716	70,716
2. Transfer to CBFM	200,937	ha	576	36,091	55,247	54,972	54,049
3. Private-sector forestry	30,141	ha	6,028	6,028	6,028	6,028	6,028
4. Biogas and improved cook stoves							
4.1. Biogas digestors	88,629	units	17,350	18,409	18,409	17,230	17,230
4.2. Improved cookstoves	16,962	units	3,321	3,523	3,523	3,298	3,298
5. Pro-poor leasehold forestry	12,056	ha	3,454	2,151	2,151	2,151	2,151
6. Integrated land-use planning	11,736	ha	3,795	3,795	1,382	1,382	1,382
7. Protected areas management	339,200	ha	67,840	67,840	67,840	67,840	67,840

Source: *: ER Program Document (2019).

Overview of Program Costs and Benefits

2. **Program Costs.** The total investment cost of the program activities was estimated at US\$101.2 million (in undiscounted, financial terms) and will be incurred over a period of 5 years, as detailed in Table 2. More than 90 percent of the costs are related to the ER Program activities, the rest being divided among safeguards, administrative oversight, and MRV and forest monitoring (Table 2). A constant adjustment factor of 0.9 was used to convert financial cost and benefit estimates to economic figures, accounting for taxes and other transfers, and the opportunity cost of labor being less than the financial wages in some cases. The total undiscounted economic cost associated with program investments was thus estimated at US\$91 million (Table 2).

Table 2: Program investment costs by activity and year (US\$ '000)

Activity	Breakdown by year					Total
	Year 1	Year 2	Year 3	Year 4	Year 5	
ER Program activity	12,619	19,320	20,915	20,497	20,416	93,767
1. Improve existing CBFM	8,122	11,504	11,456	11,293	11,293	53,667
2. Transfer to CBFM	51	3,187	4,878	4,854	4,772	17,742
3. Private-sector forestry	870	870	870	870	870	4,352
4. Biogas and improved cook stoves	3,387	3,593	3,593	3,363	3,363	17,300
5. Pro-poor leasehold forestry	64	40	40	40	40	222

Activity	Breakdown by year					Total
	Year 1	Year 2	Year 3	Year 4	Year 5	
6. Integrated land-use planning	76	76	28	28	28	234
7. Protected areas management	50	50	50	50	50	250
MRV and forest monitoring	150	158	165	324	183	980
Safeguards	646	982	1,062	1,042	1,039	4,771
Administrative oversight	300	316	330	348	364	1,658
Total	13,715	20,776	22,472	22,212	22,002	101,176
Total in economic terms*	12,343	18,698	20,225	19,991	19,802	91,058

* Estimated using a conversion factor of 0.9.

Source: ER Program Document (2019)

3. In addition, where applicable, annually recurrent operations and maintenance costs related to the implementation of the ER Program activities during and after the 5-year program period were incorporated in the analysis. Notably, the annual recurrent forest management costs (excluding any forest product harvest costs) increase from nearly zero to \$27/ha going from government management to CBFM (activity 2), and by \$30/ha going from regular CBFM to CBFM with SFM (activity 1). (Cost figures are weighted averages for forest areas covered by the program under CF vs. CFM and located in the Terai vs Chure - see Table 4). Furthermore, program activities have opportunity costs. Notably, under activities 1 and 2, reduction in deforestation that would have occurred in the counterfactual (BAU) scenario means foregone benefits from the one-time clearcutting and sale of timber, and the recurrent economic benefits from use for agricultural production or infrastructure. In this analysis, we used net revenues from clearcutting estimated by Rai et al (2017) in community forests in Chure and the Terai and collaborative forests in the Terai. We calculated the weighted average as US\$23,600/ha under activity 1 and US\$ 34,225/ha under activity 2. Regarding annual recurrent opportunity cost, we assumed that all deforestation is undertaken to start agricultural production on the clear-cut land and used net annual benefits from agricultural production ascertained by Rai et al 2017 in Chure and Terai, with a weighted average of US\$222/ha under activity 1 and US\$137/ha under activity 2.

4. **Program Benefits.** The program is expected to result in a number of incremental economic benefits including but not limited to carbon emission reductions which contribute to global climate change mitigation. Table 4 lists these benefits along with notes on whether data were available to quantify them, and where data were available, the specific assumptions made in the estimation process.

Table 3. Assumed annual rates of forest degradation and deforestation, by region and by scenario (%)

	Business as Usual				Activity 1		Activity 2	
	Deforestation		Degradation		Deforestation	Degradation	Deforestation	Degradation
	CBFM	Gov-managed	CBFM	Gov-managed	CBFM with SFM		Regular CBFM	
Chure	0.18	0.18	0.02	0.10	0	0	0.05	0
Terai	0.20	0.60	0.05	0.20	0	0	0.05	0

5. Key assumptions defining the incremental benefits are as follows:

- For both activities 1 and 2, the increases in timber production were valued at current stumpage values, which equal market prices of roundwood minus harvest and transportation costs. The assumption that

the market price will remain constants in the face of increasing production may or may not hold depending on the growth of demand for timber in Nepal and abroad. To address this uncertainty, the sensitivity of the efficiency metrics to this assumption is examined.

- It was assumed that in the counterfactual/BAU scenario, baseline conditions will persist or deteriorate due to continuing forest degradation or deforestation. The rates of deforestation and forest degradation were assumed to decrease going from government management to regular CBFM (activity 2) and become zero going from regular CBFM to CBFM with SFM (activity 1) (Table 3).
- The mean annual increment (MAI) increases by 25% going from government management to CBFM (activity 2), and doubles going from CBFM to CBFM with SFM (activity 1). These values were conservatively assumed to stay constant after 2030.
- The yield factor for timber, i.e. the ratio of timber harvested as a percentage of MAI, was assumed to increase under both activities. Given the legal limit of 0.6 on overall yield factor for wood (i.e. timber plus fuelwood), the increase in timber harvest will mean a decrease in fuelwood production, even where MAI increases.

Table 4: Incremental economic benefits of the ER Program by activity, data availability for quantification of benefits, and assumptions made in estimating the quantifiable benefits.

Program Activity	Definition	Assumptions / Data Availability																
1. Improve existing CBFM (Switch from conservation-focused management to SFM)	- Incremental market value of timber and fuelwood production on existing CBFM areas converted (ha) to SFM (table below).	Stumpage value of timber: US\$207/m ³ and US\$15/m ³ (weighted averages across species) MAI in BAU in 2030: 1- 1.5m ³ /year MAI under SFM in 2030: 2-3m ³ /year Yield factor for timber in BAU: 0.15 Yield factor under SFM: 0.54 Annual incremental cost of SFM=30 \$/ha (weighted average CF/CFM and Chure/Terai)																
	<table><tr><td></td><td>Total</td><td>Chure</td><td>Terai</td></tr><tr><td>CF</td><td>276,069</td><td>138,035</td><td>138,035</td></tr><tr><td>CFM</td><td>60,000</td><td>0</td><td>60,000</td></tr><tr><td>Total</td><td>336,069</td><td>138,035</td><td>198,035</td></tr></table>		Total	Chure	Terai	CF	276,069	138,035	138,035	CFM	60,000	0	60,000	Total	336,069	138,035	198,035	
		Total	Chure	Terai														
	CF	276,069	138,035	138,035														
CFM	60,000	0	60,000															
Total	336,069	138,035	198,035															
- Incremental market value of non-wood forest products	Data not available.																	
- Value of increases in other forest ecosystem services, including carbon sequestration, cultural services incl. recreation, erosion control, reduction of sedimentation, biodiversity conservation.	Emission reductions valued in three ways: 1) Payments to Nepal: US\$5/tCO ₂ e 2) Global shadow price: US\$40-80 /tCO ₂ e, linearly rising to US\$50-100 / tCO ₂ e by 2030 ²⁸ . Data on other ecosystem services is not available.																	
2. Transfer to CBFM (Switch from open access to conservation-focused management)	- Market value of increased timber and fuelwood production on national forest areas (ha) transferred to CBFM (table).	Stumpage value of timber and fuelwood: US\$207/m ³ and US\$15/m ³ (weighted averages across species) MAI in BAU in 2030: 1- 1.5m ³ /year MAI under CBFM in 2030: 1.25-2.25 m ³ /year Yield factor in BAU: 0.10 – 0.15 Yield factor under CBFM: 0.13-0.23 Annual incremental cost of CBFM=27\$/ha (weighted average CF/CFM and Chure/Terai)																
	<table><tr><td></td><td>Total</td><td>Chure</td><td>Terai</td></tr><tr><td>CF</td><td>190,890</td><td>170,796</td><td>20,094</td></tr><tr><td>CFM</td><td>10,047</td><td>0</td><td>10,047</td></tr><tr><td>Total</td><td>200,937</td><td>170,796</td><td>30,141</td></tr></table>		Total	Chure	Terai	CF	190,890	170,796	20,094	CFM	10,047	0	10,047	Total	200,937	170,796	30,141	
		Total	Chure	Terai														
	CF	190,890	170,796	20,094														
CFM	10,047	0	10,047															
Total	200,937	170,796	30,141															
- Incremental market value of non-wood forest products	Data not available																	

²⁸ As per World Bank 2017. "Guidance note on shadow price of carbon in economic analysis" Nov 12, 2017 OPCS.



Program Activity	Definition	Assumptions / Data Availability
	- Value of increases in non-provisioning forest eco-system services, including carbon sequestration, cultural services, incl. recreation, erosion control, reduction of sedimentation, biodiversity conservation.	Same values for carbon emissions reductions as above. Quantitative information on other ecosystem services is not available.
3. Private-sector forestry (Support to creation and enhancement of private forests)	- Incremental market value of timber and fuelwood production	Data not available to assess this benefit.
	- CO ₂ emission reduction	Same values for carbon ERs as above.
	- Enhanced recreational opportunities	Data not available to assess this benefit.
4. Biogas and improved cook stoves	- CO ₂ ER due to reduced fuelwood use	Same values for carbon ERs as above.
	- Improvement in indoor air quality and resulting health outcomes	Data not available to assess this benefit.
	- Reduced time spent collecting fuelwood	Data not available to assess this benefit.
5. Pro-poor leasehold forestry	- CO ₂ emission reduction	Same values for carbon ERs as above.
6. Integrated land-use planning	- CO ₂ emission reduction	Same values for carbon ERs as above.
7. Protected areas management	- Enhanced recreational opportunities and biodiversity protection	Data not available to assess this benefit.
	- CO ₂ emission reduction	Same values for carbon ERs as above.

CBFM: Community-based forest management; SFM: Sustainable forest management; MAI: Mean annual increment; CF: Community forestry; CFM: Collaborative forest management; LHF: Leasehold forestry;

Additional Notes on Methodology

6. The analysis period was taken as 30 years, including 5 years of program implementation, which is a reasonable perspective for investments in improved forest management and plantations which have long rotation periods. The program's efficiency was measured in terms of three metrics, namely economic rate of return (EIRR), net present value (NPV) and benefit-cost (B/C) ratio. The discount rate used for the calculation of EIRR and B/C ratios was taken as 6.4%, which is the double the historical long-term annual GDP growth (World Bank 2016). The impact of discounting on the efficiency of the program was gauged as part of the sensitivity analysis.

Results

7. The analysis considered the main quantifiable incremental benefits of activities 1 and 2 and the carbon emission reductions associated with the entire program. Table 5 presents the annual streams of estimated benefits of the program using the basic model parameter values as discussed above.

Table 5. Annual streams of cost and benefits

Year	1	2	3	4	5	6	7	10	15	20	30
Benefits	(\$23.6)	(\$56.6)	(\$45.1)	(\$64.6)	(\$59.5)	\$38.3	\$23.9	\$49.3	\$67.4	\$67.4	\$67.4
1. Improve existing CBFM	(\$23.2)	(\$32.1)	(\$29.6)	(\$25.0)	(\$19.1)	\$20.4	\$28.6	\$53.1	\$70.4	\$70.4	\$70.4
2. Transfer to CBFM	(\$0.4)	(\$24.4)	(\$38.4)	(\$39.6)	(\$40.4)	(\$5.0)	(\$4.7)	(\$3.8)	(\$3.0)	(\$3.0)	(\$3.0)
ER payments	\$0.0	\$0.0	\$22.9	\$0.0	\$0.0	\$22.9	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Program Costs	\$12.3	\$18.7	\$20.2	\$20.0	\$19.8	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Net Benefits	(\$36.0)	(\$75.3)	(\$65.3)	(\$84.6)	(\$79.3)	\$38.3	\$23.9	\$49.3	\$67.4	\$67.4	\$67.4



8. The EIRR of the program was estimated at 11.7%. The NPV and B/C ratio are estimated at US\$ 226 million and 4.0, respectively, using a discount rate of 6.4%. The results indicate that the program is expected to be efficient. The EIRR increases to 30% and 98% when the lower and higher end of the global shadow prices, namely US\$40/tCO₂e and US\$80 /tCO₂e, respectively rather than the ER payment of US\$5/ tCO₂e are used. The EIRR would likely be higher if the value of benefits due to increased ecosystem services recreation, erosion control, reduction of sedimentation, biodiversity conservation that we were not able to quantify were incorporated in the analysis.

9. **Sensitivity analysis.** The impact on the EIRR, NPV and B/C ratio of the variation in the values of key model parameter values was examined. As Table 6 indicates, the efficiency metrics are reasonably robust. Specifically, the stumpage value of timber would have to fall to below 69% of the assumed constant value over the analysis period and the MAI to less than 43.5 % of the assumed value for the efficiency metrics to fall below the threshold values of 6.4%, US\$0, and 1, respectively. Similarly, switch values of the program investment costs and the annual incremental management costs of CBFM are 400%, 300% and 480%. Importantly, the program is economically efficient even without ER payments.

Table 6. Sensitivity of program efficiency matrices to changes in key parameter values

Variation from basic model value indicated in Table 4	EIRR	NPV (MUS\$) (d=6.4%)	B/C ratio (d=6.4%)
100%	11.7%	\$226	4.01
Average stumpage value for timber			
90 %	10.2%	\$154	3.06
69 % (switch value)	6.4%	\$0	1
MAI in activity 1			
90 %	10.9%	\$186	3.48
43.5 % (switch value)	6.4%	\$0	1
MAI in activity 2			
90 %	11.7%	\$225	3.99
10 %	11.4%	\$209	3.78
Program investment costs			
110%	11.5%	\$219	3.66
400% (switch value)	6.4%	\$0	1
Annual incremental forest management costs under CBFM- SFM (activity 1)			
110%	11.5%	\$215	3.87
300% (switch value)	6.4%	\$0	1
Annual incremental forest management costs under regular CBFM (activity 2)			
110%	11.6%	\$221	3.94
480% (switch value)	6.4%	\$0	1
ER performance			
10%	10.7%	\$195	3.60
ER unit value			
\$40/ tCO ₂ e (in 2020)	30%	\$492	7.56
\$80/ tCO ₂ e (in 2020)	98%	\$792	11.56
Discount rate			
d=3%		\$569	7.86
d=14%		(\$44)	0.28

ANNEX 8: ADDITIONAL DETAILS ON FINANCIAL MANAGEMENT

1. Based on the Forest Act 2019, a Forest Development Fund (FDF) bank account has been established in a class “A” commercial bank for implementing activities related to protection and promotion of the forest. The Government proposes FDF to be the distribution mechanism for the sharing of benefits of the ER Program. The Directive to govern the FDF is not yet approved. As it is imperative that the Directive is approved well in time to enable FDF operationalization, it was agreed with the Government to approve the Regulations no later than April 2021. This will enable establishment of the FDF Operations Committee by September 2021 to receive ER payments for the first reporting period ending December 2021 and distribution thereof. Similarly, for detailed operational procedures, finalizing the BSP and the development of the FDF Operational Manual, acceptable to the Bank, has been agreed to be finalized prior to the end of the first reporting period.
2. The Government envisages FDF to be operated by a multi-stakeholder federal governing body. The FDF Operations Committee (OC) will manage the financial management aspects of FDF. To ensure adequate capacity, it has been agreed to have a Finance Officer and an Accountant in the FDF OC after approval of Regulations. If required, consultant hired from REDD Readiness Project can support FDF in financial management as the work progresses. REDD Readiness Project can support capacity building of FDF as required.
3. The REDD Implementation Center (REDD IC) and Division Forest Offices (DFOs) will be the Project Management Unit (PMUs) at the federal and district levels respectively. The Provincial REDD-Desk will act as the focal entity at the provincial level to facilitate coordination as required. REDD IC will support FDF OC in consolidation of required information from DFOs and Provincial REDD Desk and in other financial management aspects as required. REDD IC already has a Finance Officer and an Accountant and has been operational for ten years with experience of implementing two of the Forestry projects financed by the World Bank. Each DFO has a Finance Officer and an Accountant, which are considered adequate for implementation of the Program.
4. The main risks identified with regard to receiving payments by the Government in 2021 and their distribution are (a) lack of required Government policies and procedures to enable FDF operationalization (b) lack of operating set-up and capacity to operationalize FDF (c) coordination and fiduciary risks due to many entities involved and (d) timely receipt of appropriate benefits by the eligible beneficiaries.
5. The identified risks are agreed to be mitigated by (a) Forest Directive approved by April 2021 with finalizing the BSP and development of FDF Operations Manual by September 2021 based on the Directive (b) Establishment of FDF OC with an Account Officer and Accountant by April 2021 based on the Regulations (c) Streamlining of procedures in BSP and FDF to minimize layers in funds flow and reporting (d) Payment to all beneficiaries in their bank accounts directly from FDF facilitated by REDD IC (e) Trimester monitoring by REDD IC of purchase and distribution of non-monetary benefits by DFOs.
6. The key financial management arrangements are described below. The details of these arrangements will be laid out in the FDF Operations Manual.
 - a. **Budgeting.** The budgeting will be based on the Government policies and procedures. A separate budget will be provided in the Federal Government’s Red Book for receipt of ER funds and distribution thereof. MoFE with support from FDF will propose a required budget in the Line Ministry Budget Information System for each FY. REDD IC will also facilitate the FDF OC in preparation of the budget based on information received from DFOs, Provincial REDD Desk and concerned beneficiaries.
 - b. **Fund Flow.** The Bank will make the ER payments or advances to the Government Treasury based on the request of MoFE, which will be promptly transferred to the FDF bank account upon receipt. If a Designated Account is required to be opened for receiving advances, such account will be operated by MoFE. The advances received will subsequently be settled from the verified eligible ER credits. The detailed



arrangements for transferring funds into the FDF bank account and distribution thereof will be laid out in the FDF Operations Manual. From the FDF, funds will flow to (a) beneficiaries bank account for monetary benefits (b) DFOs bank accounts for receiving advance for buying non-monetary benefits for distribution by DFOs and (c) REDD IC, DFOs and Provincial REDD Desk's bank accounts for operational costs.

c. **Accounting and reporting.** The FDF will maintain accounting records on cash basis as per the Government accounting procedures and Chart of Accounts. Government has agreed to implement Computerized Government Accounting System upon operationalization of FDF. It has also been agreed to keep separate records for monitoring and control for ER funds receipt, transfer to FDF and distribution/ expenditures from FDF. REDD IC will facilitate FDF OC in maintaining required accounts by obtaining required information from DFOs, Provincial REDD Desks and others as applicable. In addition to the cost centers, the beneficiaries will also be required to maintain some form of accounting and report back accordingly for ensuring intended purpose of the funds provided. The format and periodicity of the reports for various entities including for external audit will be agreed with the Bank and included in the FDF Operational Manual.

d. **Internal Control.** The required internal control measures for all levels – FDF OC, REDD IC, DFOs, Provincial REDD Desks and Beneficiaries will be laid out in the FDF Operational Manual. The monetary benefits will only be made to beneficiary bank accounts directly from FDF. For the purpose of buying and distributing non-monetary benefits, advance will be provided to DFOs to be settled timely with supporting statement of expenditure. Additional advance will not be provided without settlement of prior advance. The monitoring mechanisms for both monetary and non-monetary benefits as well as operational costs will be developed in the FDF Operational Manual. The controls and monitoring mechanism to ensure that the benefits are utilized for the intended purpose will also be developed in the FDF Operational Manual. The internal audit of FDF will be conducted by District Treasury Controllers Office as per the Government policy.

e. **Audit.** The external audit of the ER funds receipt and expenses thereof will be conducted by the Office of the Auditor General as per the Forest Act 2019. The external audit will start from the first FY of FDF operationalization upon approval of the Regulations. FDF OC will submit external audit report reflecting ER funds receipt and expenses to the World Bank beginning from the FY in which the first ER payment is received. The external audit opinion should be provided on the report separately identifying the details of ER payments from the World Bank and their distribution. The format of such report will be agreed with the World Bank and included in the FDF Operational Manual. The external audit report will be required to be submitted to the World Bank by nine months from the end of each concerned FY.

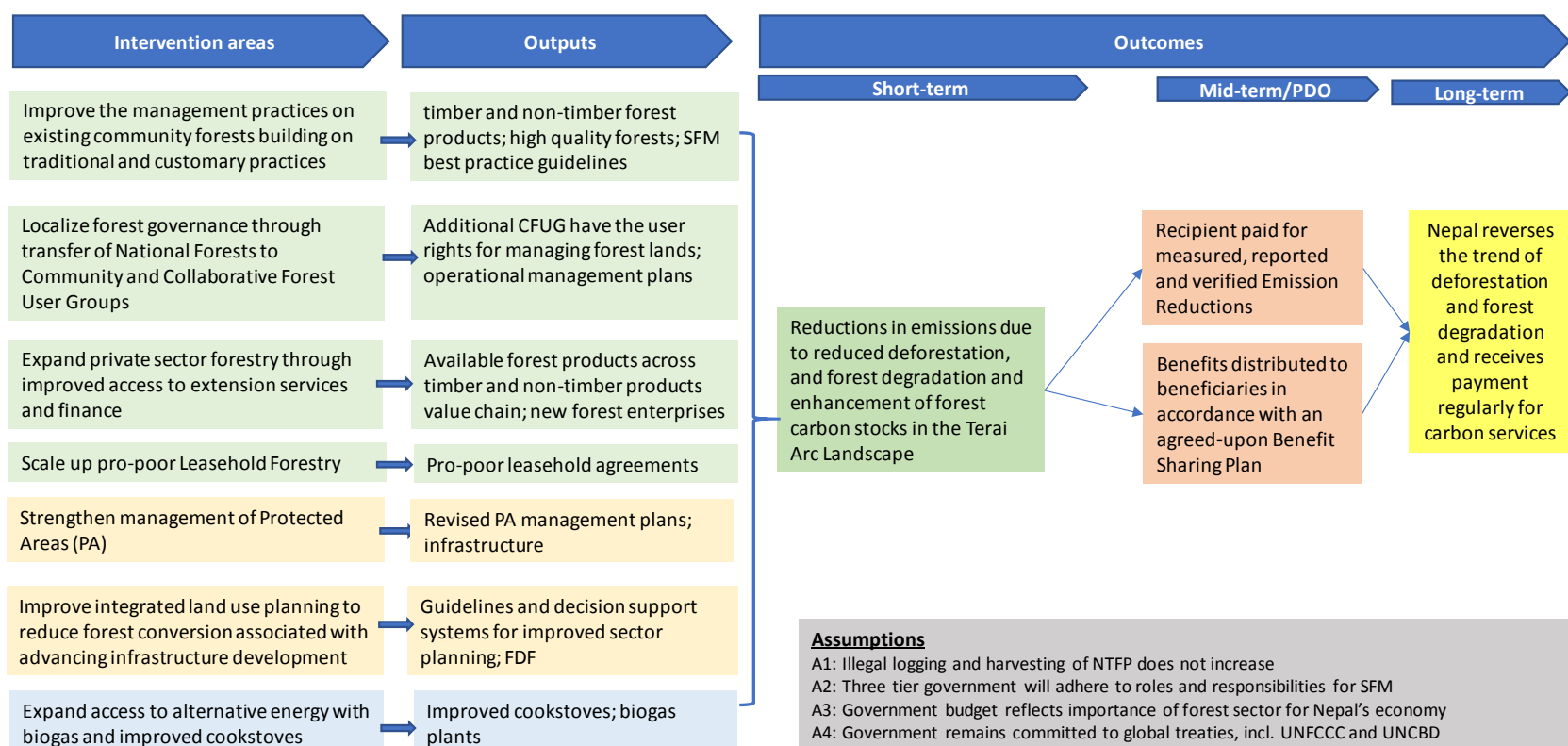
7. **Disbursement.** The disbursement details will be provided in the World Bank's Disbursement and Information Letter (DFIL). The eligible expenditure is the payment, or 'ER payment', made by the Bank to the recipient country based on verified ERs as regulated in the ERPA. MoFE will be the signatories to draw the funds (ER payment or advances) from the Bank, which will be promptly transferred to the FDF bank account by MoFE upon receipt.



ANNEX 9: THEORY OF CHANGE

Problem Statement: There are multiple threats to remaining forest ecosystems in the Terai Arc Landscape leading to emissions from deforestation and forest degradation

The **Program Development Objective** is to make payments to the Recipient for measured, reported and verified Emission Reductions related to reduced deforestation, and forest degradation and to the enhancement of forest carbon stocks in the Terai Arc Landscape, and to distribute the payments in accordance with an agreed-upon Benefit Sharing Plan.





ANNEX 10: RESOLUTION OF FCPF CARBON FUND ON NEPAL ER PROGRAM

FOREST CARBON PARTNERSHIP FACILITY (FCPF) EIGHTEENTH CARBON FUND MEETING

June 20-22, 2018
Paris, France

Resolution CFM/18/2018/3 Selection of Emission Reductions Program Document of Nepal into the Portfolio of the Carbon Fund of the FCPF

1. As per Resolution CFM/9/2014/5, the Carbon Fund (Carbon Fund) of the Forest Carbon Partnership Facility (FCPF) selected Nepal's Emission Reductions Program Idea Note (ER-PIN) into the pipeline of the Carbon Fund and provided additional funding for Nepal to develop an Emission Reductions Program Document (ER-PD) for its Emission Reductions Program (ER Program);
2. In September 2016, as per Resolution PC/22/2016/1, the Participants Committee of the FCPF endorsed Nepal's Readiness Package;
3. Nepal issued its draft ER-PD in May 2017. The Technical Advisory Panel (TAP) reviewed the ER-PD against the ER-PD requirements in the Carbon Fund's Methodological Framework dated December 20, 2013 and issued its TAP Review document in October 2017. The Carbon Fund Participants reviewed the draft ER-PD and the TAP Review document and submitted their consolidated comments to the FCPF Facility Management Team (FMT) in November 2017. Based on the findings of the TAP Review and the comments of Carbon Fund Participants, Nepal submitted to the FMT a final ER-PD in May 2018. The TAP reviewed such final ER-PD and issued its final TAP Review document to the FMT in June 2018; and
4. Nepal has presented its final ER-PD during this meeting.

The Carbon Fund Participants,

1. Acknowledge the extensive efforts made by Nepal, and the high quality of the ER-PD;
2. Decide to include Nepal's ER-PD into the portfolio of both Tranche A and Tranche B of the Carbon Fund, provided that any commercial terms (such as advance payments, price etc.) included in the ER-PD are subject to subsequent negotiations of the Emission Reductions Payment Agreement (ERPA);
3. Authorize the International Bank for Reconstruction and Development (Bank), as trustee of Tranche A and Tranche B of the Carbon Fund (Trustee), to lead the ERPA negotiation with Nepal for the ER Program, in accordance with the ERPA negotiation process and subject to completion of Bank due diligence and final Bank approval, provided that ERPA negotiations shall not start before Bank management has appraised the ER Program;
4. Unless decided otherwise by Carbon Fund Participants, commit to nominate, prior to the start of ERPA negotiations, for each Tranche of the Carbon Fund one (1) representative to act as Carbon Fund Representative of the respective Tranche of the Carbon Fund throughout the ERPA negotiation process and notify the FMT accordingly; and
5. Encourage Nepal to further develop the additional issues identified by the Carbon Fund Participants in the Chair's Summary for this meeting, and inform the FMT about corresponding developments, if any, to be shared with the Carbon Fund Participants and Observers, prior to ERPA signature.