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Report No: PAD1179

PROJECT APPRAISAL DOCUMENT

ON A

PROPOSED GRANT FROM THE
GLOBAL ENVIRONMENT FACIILTY TRUST FUND

IN THE AMOUNT OF US$24.64 MILLION

TO THE

REPUBLIC OF INDIA

FOR AN

ECOSYSTEM SERVICES IMPROVEMENT PROJECT

June 19, 2017

Environment and Natural Resources Global Practice
South Asia Region

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CURRENCY EQUIVALENTS

(Exchange Rate Effective April 28, 2017

| | | |
|---|---|---|
| Currency Unit | = | INR |
| INR67.00 | = | USD1 |
| USD1.57 | = | SDR 1 |

FISCAL YEAR

April 1 – March 31

ABBREVIATIONS AND ACRONYMS

| | |
|---|---|
| AAP | Annual Action Plan |
| AGB | Above Ground Biomass |
| BCRLIP | Biodiversity Conservation and Rural Livelihood Improvement Project |
| BMC | Biodiversity Management Committee |
| CAAA | Controller of Audit Aid and Accounts |
| CAG | Comptroller and Auditor General of India |
| CBA | Cost-Benefit Analysis |
| CBD | Convention on Biological Diversity |
| CBO | Community-Based Organization |
| CE | Citizen Engagement |
| COP | Conference of Parties |
| CPR | Common Property Resources |
| DOLR | Department of Land Resources |
| EDC | Eco Development Committee |
| ESA | Environmental and Social Assessment |
| ESIP | Ecosystem Services Improvement Project |
| ESMF | Environment and Social Management Framework |
| FDA | Forest Development Agency |
| FM | Financial Management |
| FRI | Forest Research Institute |
| FSI | Forest Survey of India |
| GA | Grant Agreement |
| GDP | Gross Domestic Product |
| GEF | Global Environment Facility |
| GEO | Global Environment Objective |
| GHG | Greenhouse Gas |
| GIM | Green India Mission |
| GIS | Geographic Information System |
| GRS | Grievance Redress Service |
| IBRD | International Bank for Reconstruction and Development |
| ICB | International Competitive Bidding |
| ICFRE | Indian Council of Forestry Research and Education |

| | |
|---|---|
| IDA | International Development Association |
| IFD | Internal Finance Division |
| IPCC | Intergovernmental Panel on Climate Change |
| IRR | Internal Rate of Return |
| ISFR | India State of the Forest Report |
| IUFR | Interim Unaudited Financial Report |
| IWMP | Integrated Watershed Management Program |
| JFM | Joint Forest Management |
| JFMC | Joint Forest Management Committee |
| KVK | *Krishi Vigyan Kendra* (Agriculture Science Center) |
| LIB | Limited International Bidding |
| MIS | Management Information System |
| MOEFCC | Ministry of Environment, Forest and Climate Change |
| M&E | Monitoring and Evaluation |
| NAEB | National Afforestation and Eco-Development Board |
| NCB | Controller of Audit Aid and Accounts |
| NDC | Nationally Determined Contribution |
| NGO | Non-Governmental Organization |
| NIC | National Informatics Center |
| NPV | Net Present Value |
| NREGA | National Rural Employment Guarantee Agency |
| NRM | Natural Resource Management |
| NTFP | Non-Timber Forest Produce |
| OFP | Operational Focal Point |
| PA | Project Agreement |
| PAO | Pay and Accounts Officer |
| PDO | Project Development Objective |
| PES | Payment for Ecosystem Services |
| PIP | Project Implementation Plan |
| PIU | Project Implementing Unit |
| PMU | Project Management Unit |
| PP | Procurement Plan |
| PRAMS | Procurement Risk Assessment Management System |
| PSC | Project Steering Committee |
| RET | Rare Endangered Threatened |
| SBD | Standard Bidding Document |
| SFD | State Forest Department |
| SFM | Sustainable Forest Management |
| SHG | Self Help Group |
| SLEM | Sustainable Land and Ecosystem Management |
| SORT | Systematic Operations Risk-Rating Tool |
| SRFD | Standard Request for Documents |
| STEP | Systematic Tracking of Exchanges in Procurement |
| TDF | Tribal Development Framework |
| TTL | Task Team Leader |
| UNCCD | United Nations Convention for Combating Desertification |

| | |
|---|---|
| UNDP | United Nations Development Program |
| UNFCCC | United Nations Framework Convention on Climate Change |
| VVK | *Van Vigyan Kendra* (Forest Science Center) |

| | |
|---|---|
| Regional Vice President: | Annette Dixon |
| Country Director: | Junaid Kamal Ahmad |
| Senior Global Practice Director: | Karin Erika Kemper |
| Practice Manager: | Kseniya Lvovsky |
| Task Team Leader: | Anupam Joshi |

**INDIA**
**Ecosystem Services Improvement Project**

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**PAD DATA SHEET**

*India*

*India Ecosystem Services Improvement Project (P133803)*

**PROJECT APPRAISAL DOCUMENT**

*SOUTH ASIA*

*0000009274*

Report No.: PAD1179

| **Basic Information** | | | |
|---|---|---|---|
| Project ID<br>P133803 | EA Category<br>B - Partial Assessment | | Team Leader(s)<br>Anupam Joshi |
| Financing Instrument<br>Specific Investment Loan | Fragile and/or Capacity Constraints [ ]<br>Financial Intermediaries [ ]<br>Series of Projects [ ] | | |
| Project Implementation Start Date<br>06-Jul-2017 | Project Implementation End Date<br>30-Jul-2022 | | |
| Expected Effectiveness Date<br>06-Oct-2017 | Expected Closing Date<br>30-Jul-2022 | | |
| Joint IFC<br>No | | | GEF Focal Area<br>Multi-focal area |
| Practice Manager/Manager<br>Kseniya Lvovsky | Senior Global Practice Director<br>Karin Erika Kemper | Country Director<br>Junaid Kamal Ahmad | Regional Vice President<br>Annette Dixon |

| |
|---|
| Borrower: Republic of India |
| Responsible Agency: Ministry of Environment, Forests and Climate Change |
| Contact: Mr. Ravi Shankar Prasad Title: Joint Secretary<br>Telephone No.: 011-24695309 Email: ravis.prasad@nic.in |

| **Project Financing Data(in USD Million)** | | | | | |
|---|---|---|---|---|---|
| [ ] | Loan | [ ] | IDA Grant | [ ] | Guarantee |
| [ ] | Credit | [ X ] | Grant | [ ] | Other |

| | | | |
|---|---|---|---|
| Total Project Cost: | 24.64 | Total Bank Financing: | 0.00 |
| Financing Gap: | 0.00 | | |

| **Financing Source** | **Amount** |
|---|---|

| | |
|---|---|
| Borrower | 0.00 |
| Global Environment Facility (GEF) | 24.64 |
| Total | 24.64 |

**Expected Disbursements (in USD Million)**

| Fiscal Year | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 0000 | 0000 | 0000 | 0000 |
|---|---|---|---|---|---|---|---|---|---|---|
| Annual | 1.00 | 4.00 | 6.00 | 5.00 | 5.00 | 3.64 | 0.00 | 0.00 | 0.00 | 0.00 |
| Cumulative | 1.00 | 5.00 | 11.00 | 16.00 | 21.00 | 24.64 | 0.00 | 0.00 | 0.00 | 0.00 |

## Institutional Data

**Practice Area (Lead)**

Environment & Natural Resources

**Contributing Practice Areas**

**Proposed Global Environmental Objective(s)**

The project development objective (PDO) is to Improve forest quality, land management and non-timber forest produce (NTFP) benefits for forest dependent communities in selected landscapes in Madhya Pradesh and Chhattisgarh.

**Components**

| Component Name | Cost (USD Millions) |
|---|---|
| Strengthen Capacity of Government Institutions in Forestry and Land Management Programs in Madhya Pradesh and Chhattisgarh | 4.00 |
| Investments for Improving Forest Quality in Selected Landscapes | 14.50 |
| Scaling-up Sustainable Land and Ecosystem Management in Selected Landscapes | 3.74 |
| Project Management | 2.40 |

## Systematic Operations Risk- Rating Tool (SORT)

| Risk Category | Rating |
|---|---|
| 1. Political and Governance | Low |
| 2. Macroeconomic | Low |
| 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 | Moderate |
| 8. Stakeholders | Substantial |
| 9. Other | |
| **OVERALL** | Substantial |

## Compliance

**Policy**

| | |
|---|---|
| Does the project depart from the CAS in content or in other significant respects? | Yes [ ] No [ X ] |
| Does the project require any waivers of Bank policies? | Yes [ ] No [ X ] |
| Have these been approved by Bank management? | Yes [ ] No [ X ] |
| Is approval for any policy waiver sought from the Board? | Yes [ ] No [ X ] |
| Does the project meet the Regional criteria for readiness for implementation? | Yes [ X ] No [ ] |

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

**Legal Covenants**

| **Name** | **Recurrent** | **Due Date** | **Frequency** |
|---|---|---|---|
| Project Steering Committee (GA, Sch. 2, Sec. I.A.1.a) | | 06-Nov-2017 | |

**Description of Covenant**

The Recipient, through MOEFCC, to establish and maintain, throughout the period of implementation of the Project, a Project Steering Committee responsible for the general oversight, and coordination of all activities related to the implementation of the project.

| **Name** | **Recurrent** | **Due Date** | **Frequency** |
|---|---|---|---|
| Project Management Unit (GA, Sch. 2, Sec. I.A.1.b) | **X** | | CONTINUOUS |

**Description of Covenant**

The Recipient, through MOEFCC to maintain, throughout the period of implementation of the Project, a Project Management Unit with terms of reference, staffing and other resources acceptable to the World Bank and housed within the GIM Division.

| Name | Recurrent | Due Date | Frequency |
|---|---|---|---|
| Safeguards (1/2) (GA, Sch. 2, Sec. I.E.1 and PAs, Sch. 2, Sec. I.C.1) | X | | CONTINUOUS |

**Description of Covenant**

ICFRE, and the States of Madhya Pradesh and Chhattisgarh ("Project Participating Entities") and the Recipient to: (i) carry out their Respective Part of the Project in accordance with the ESMF & TDF and the required plan(s) and assessment(s) prepared, and/or to be prepared thereunder, in each case in a manner and in substance as agreed with the World Bank (together the "Safeguard Documents"); and (ii) refrain from taking any action which would prevent or interfere with the implementation of the Safeguard Documents; (iii) ensure that the Project shall not involve Involuntary Resettlement and introduce any restrictions on community access to natural resources unless voluntarily agreed and documented through a consultative process satisfactory to the World Bank; and (iv) ensure that the environmental and social screening criteria set forth in the ESMF & TDF are consistently applied at all times in a manner satisfactory to the World Bank.

| Name | Recurrent | Due Date | Frequency |
|---|---|---|---|
| Safeguards (2/2) (GA, Sch. 2, Sec. I.E.3 and PAs, Sec. I.C.2 of the Schedule) | X | | CONTINUOUS |

**Description of Covenant**

The Recipient and Project Participating Entities to take all measures necessary on its part to regularly collect, compile, and submit to the World Bank, as part of the Project Reports, information on the status of compliance with the Safeguard Documents.

| Name | Recurrent | Due Date | Frequency |
|---|---|---|---|
| PIP (GA, Sch. 2, Sec. I.F.1 and PAs, Sec. I.D.2 of the Schedule) | X | | CONTINUOUS |

**Description of Covenant**

The Recipient and Project Participating Entities to carry out the Project in accordance with the Project Implementation Plan.

| Name | Recurrent | Due Date | Frequency |
|---|---|---|---|
| Project Implementation Unit (PAs, Sec. I.A of the Schedule) | X | | CONTINUOUS |

**Description of Covenant**

Project Participating Entities to maintain a Project Implementation Unit housed within their respective State Forest Departments and supported by a multi-disciplinary team of suitably qualified personnel, with experience, qualifications, functions, and terms of reference acceptable to the World Bank.

| Name | Recurrent | Due Date | Frequency |
|---|---|---|---|
| Annual Action Plan (PAs, Sec. I.D of the Schedule) | X | | Yearly |

**Description of Covenant**

Project Participating Entities to (i) prepare an Annual Action Plan covering their respective Project activities to be carried out the following Fiscal Year, which plan shall be of such scope and detail as set forth in the Project Implementation Plan; (ii) immediately furnish such draft Annual Action Plan to the Project Management Unit for consolidation, the World Bank for comment and concurrence, and the Project Steering Committee for approval no later than February 28; and (iii) ensure that Project activities are carried out in accordance with the Annual Action Plan as approved by the Project Steering Committee after taking into consideration the World Bank's views and recommendations.

**Conditions**

| Source Of Fund | Name | Type |
|---|---|---|
| GEFU | Execution and Delivery of Grant and Project Agreements (GA, Article V. 5.0.1.a) | Effectiveness |

**Description of Condition**

The execution and delivery of the Grant Agreement on behalf of the Recipient and the Project Agreements on behalf of each of the Project Participating Entities have been duly authorized or ratified by all necessary governmental and corporate action.

| Source Of Fund | Name | Type |
|---|---|---|
| GEFU | Subsidiary Agreement (GA, Article V. 5.0.1.b) | Effectiveness |

**Description of Condition**

The Subsidiary Agreement referred to in Section I.C of Schedule 2 to the Grant Agreement has been executed on behalf of the Recipient, through MOEFCC, and ICFRE.

| Source Of Fund | Name | Type |
|---|---|---|
| GEFU | Adoption of the Project Implementation Plan (GA, Article V. 5.0.1.c) | Effectiveness |

**Description of Condition**

The Recipient, through MOEFCC, has adopted the Project Implementation Plan in form and substance satisfactory to the World Bank.

## Team Composition

**Bank Staff**

| Name | Role | Title | Specialization | Unit |
|---|---|---|---|---|
| Anupam Joshi | Team Leader (ADM Responsible) | Senior Environmental Specialist | Senior Environment Specialist | GEN06 |
| Jurminla Jurminla | Procurement Specialist (ADM Responsible) | Procurement Specialist | Procurement Specialist | GGO06 |
| Anantha Krishna Karur | Financial Management Specialist | Financial Management Analyst | Financial Management Specialist | GGO24 |
| Giovanni Bo | Counsel | Counsel | Counsel | LEGDF |
| Ijeoma Emenanjo | Team Member | Natural Resources Mgmt. Spec. | Land Management Specialist | GFA13 |

| | | | | |
|---|---|---|---|---|
| Latha Sridhar | Team Member | Program Assistant | Project Assistant | SACIN |
| Madhavi M. Pillai | Team Member | Sr Natural Resources Mgmt. Spec. | Senior Natural Resources Mgmt. Specialist | GEN06 |
| Sarita Rana | Team Member | Senior Program Assistant | Project Assistant | SACIN |
| Sharlene Jehanbux Chichgar | Safeguards Specialist | Environmental Specialist | Environmental Safeguards | GEN06 |
| Varun Singh | Safeguards Specialist | Senior Social Development Specialist | Social Development | GSU06 |
| Victor Manuel Ordonez Conde | Team Member | Senior Finance Officer | Financial Management | WFALA |

**Extended Team**

| Name | Title | Office Phone | Location |
|---|---|---|---|
| Sonum Gayatri Malhotra | Research Analyst | | New Delhi |
| Vaideeswaran Sankaran | Consultant, Climate Change | - | Chennai |
| Varsha Mehta | Consultant, Social Development | | New Delhi |

**Locations**

| Country | First Administrative Division | Location | Planned | Actual | Comments |
|---|---|---|---|---|---|
| India | Madhya Pradesh | State of Madhya Pradesh | | **X** | |
| India | Chhattisgarh | State of Chhattisgarh | | **X** | |

**Consultants (Will be disclosed in the Monthly Operational Summary)**

| | |
|---|---|
| Consultants Required ? | Consultants will be required |

## I. STRATEGIC CONTEXT

### A. COUNTRY CONTEXT

1. *India in recent years witnessed impressive economic growth and poverty alleviation.* During the past decade, India's Gross Domestic Product (GDP) grew at 7.6% annually and poverty incidence reduced on average by 1.5 percentage points per year during 2005–10. Also, improvements in key development indicators have been remarkable: life expectancy increased from 31 years in 1947 to 68 years in 2015 and adult literacy increased from 18% in 1951 to 71% in 2015.

2. *Despite such impressive progress in economic growth, poverty alleviation, and improved human development indicators, India remains home to 263 million poor people*. Eighty percent of poor reside in rural areas, living on less than US$1.90/day and the country is still at the bottom of the group of middle-income countries. To address these challenges, the Government of India (GoI) through its 12th Five Year Plan (FY2013-17) put forward an ambitious goal for economic growth, poverty reduction, job creation, and environmental management. The plan foresees during this period an annual GDP growth of 8.2%, a reduction in poverty rate by 10 percentage points, and 50 million new jobs.

3. *Forests are an important safety net[1] for India's rural poor.* Despite the low availability of forest at 0.05 ha[2] per capita, an estimated 275 million[3] or about 23 percent of the population, mostly rural poor, are directly or indirectly dependent on forests. With little land and limited livelihood options, forests are the primary source for firewood, fodder, and non-timber forest products and serve as a safety net in the lean agricultural season. This is even more important for scheduled tribes, where nearly half of the tribal population of 89 million have close cultural and economic ties to these ecosystems. While forests formally contribute less than 2 percent[4] to the country's GDP, their safety net function is critical for tribal and vulnerable populations dependent on them.

4. *Besides providing a safety net, forests are also a repository of significant biodiversity.* The ancient plant-based medicine system of *Ayurveda* owes a measure of its success to the vast range of medicinal plants found in Indian forests. India is a mega diverse country, with an estimated 47,000 species of plants and 90,000 species of animals that constitute 11 percent and 7 percent respectively of the species recorded in the world. Much of this biological wealth is conserved in the over 600 protected areas (PA) covering approximately 5 percent of India's landmass.

5. *Degrading forests impact agriculture and livestock productivity and disproportionately impact the poor.* The scale and impact of land degradation and desertification is severe in the country, affecting about 32 percent and 25 percent respectively of India's total land area. Degraded landscapes are especially prone to invasive plants which compete with native species and lead to reduced productivity. A fair share of livestock rearing also depends on the overgrazed pastures and grasslands. Given that less than 5 percent of the total cropped area in India is under fodder development, the largest livestock population of the world is mainly supported by grazing in forests and feeding on agriculture residues. Managing degraded lands, therefore, is a priority in the context of achieving alleviation of rural poverty and biodiversity conservation.

---

[1] Safety net, in this context, means provisioning food, fiber, fuel and other tradable goods to rural poor who may have temporarily lost their primary livelihood option, for example, loss of agriculture due to drought

[2] Compared to an average of 0.56ha (Bank Teams Calculated from the Little Green Data Book)

[3] Unlocking Opportunities for Forest Dependent People, World Bank 2006 (Report No. 34481 – IN)

[4] http://statisticstimes.com/economy/sectorwise-gdp-contribution-of-india.php (based on 2013-14 estimates)

6. *While forest degradation contributes to climate change, forests are also threatened by the changing climate.* The vicious cycle of human-induced degradation and climate-induced desertification poses a significant challenge for the poor, who lack the means to adapt to climate change. The central Indian highlands (including districts in the states of Madhya Pradesh, and Chhattisgarh) are part of the 39 percent forest grids of India identified and mapped as having vulnerability to climate change. The results of the dynamic global response model – IBIS (Integrated Biosphere Simulator) predict that nearly 73 percent of forested grids in Chhattisgarh are expected to undergo vegetation change due to climate change. These areas also face threats of degradation due to ongoing unsustainable land use practices.

7. *The case for a new approach for managing forests and productive lands is strong.* Given that production forestry has been reduced considerably as forests have no longer been viewed as revenue sources, the approach to manage forestry resources and reverse land degradation has not kept pace with the changing paradigm of forestry dependency. The absence of a unified land use policy has resulted in unplanned and unsustainable land use, which in many places has increased the rate of land degradation. Despite a series of programs and schemes aimed at reversing land degradation (including watershed programs), soil erosion continues to severely impact land productivity. India's National Forest Policy (1988) aims to increase national forest cover to 33 percent. However, increased population pressures and overutilization of resources, together with development strategies that are largely inconsistent with conservation objectives, have undermined progress towards achieving that goal. The negative impact of this loss of forest quality is highest in the key biological corridors that connect protected areas to create a functional network. Large sections of forests and Common Property Resources (CPRs) do not have management plans that integrate biodiversity conservation in production landscapes. However, a new generation of investments under the watershed programs has emerged from a purely reforestation approach to an integrated management approach focusing on farm productivity, watershed treatments, control of soil erosion and integration of the livelihood concerns in rural communities. These investments are building-in convergence as a core focus of their design and also infusing use of new spatial technology. These approaches can be replicated in the forestry sector by targeting the improvement of degraded and open forests. Similarly, Sustainable Land and Ecosystem Management (SLEM) approaches are required to be integrated into other sector programs, primarily agriculture, land development, and watershed, in order to scale them up to increase productivity and build climate resilience.

## B. SECTORAL AND INSTITUTIONAL CONTEXT

8. *India has a wide range of policies, conventions and institutions serving as instruments of action.* India has a wide range of policy instruments for managing its forest and land resources, and the country is also a signatory to all the global conventions relevant to the Global Environment Facility (GEF) focal areas, namely, the Convention on Biological Diversity (CBD), the United Nations Framework Convention on Climate Change (UNFCCC), and the United Nations Convention for Combating Desertification (UNCCD). Key policy instruments include the National Forest Policy (1988), the National Biodiversity Action Plan (2008), and the National Action Plan on Climate Change, (2008). In terms of institutions, at the village level the Joint Forest Management Committees (JFMC), the Biodiversity Management Committees (BMC), and the Eco Development Committees (EDC) are tasked with managing forest and land resources. At the district/block level there are Forest Development Agencies (FDA) and an extension system comprising of *Van Vigyan Kendras* (VVK, meaning Forest Science Centers). At the central level there are a multitude of supportive institutions, such as the Forest Survey of India (FSI), the Indian Council of Forestry Research and Education (ICFRE), the Forest Research Institute (FRI), the Department of Land Resources (DOLR), the National Rainfed Area Authority (NRAA), and so forth. There is interplay of interactions between the policy instruments and the institutions at various levels. The proposed project will leverage the policy

instruments and institutions and will support the 10-year (2008-2018) strategy of the UNCCD, which aims "to forge a global Partnership to reverse and prevent desertification/land degradation and to mitigate the effects of drought in affected areas in order to support poverty reduction and environmental sustainability."

9. *Despite the existence of sound policies and institutions, there continue to be barriers to achieving forestry and land management outcomes.* Key forestry sector reforms, which include as key elements development of third generation[5] forestry and land management programs integrating landscape approach, convergence with other sectors, a focus on livelihood, and sustainable use, face several barriers. These barriers include the lack of: (i) skills and capacity of government agencies for ecosystem-based management of land and forest resources; (ii) strategic direction and knowledge for implementing sustainable land and ecosystem management approaches; (iii) modern technology and tools for understanding and measuring forest quality and ecosystem services; (iv) awareness and knowledge of design for sustainable resource utilization and benefit-sharing models for natural resources; and (v) effective coordination at the landscape level among various line agencies to achieve convergence and improved return on investments. The forestry sector remains underfinanced as the Ministry of Environment, Forest and Climate Change (MOEFCC) receives approximately 0.6 percent of the gross budget of India as its annual allocation. A detailed discussion on these barriers and how the project proposes to address them is enumerated in Annex 1: Detailed Project Description.

10. *The Green India Mission (GIM) is a nationwide response to climate change.* In response to these challenges, in 2011 the government initiated a new national effort – the National Mission for a Green India, commonly referred to as the Green India Mission[6] (GIM) - which aims to improve the forest cover by integrating the issues of forest quality and ecosystem services. It aims at protecting, restoring, and enhancing India's diminishing forest cover and responding to climate change by a combination of adaptation and mitigation measures. Based on Annual Plan of Operation, GIM funds will be transferred from MOEFCC to the States for reforestation. States will provide 40% share and 10% in case of North East and Himalayan States. GIM takes a holistic view of greening and focuses on multiple ecosystem services, especially biodiversity, water, biomass, preserving mangroves, wetlands, critical habitats, and so forth. It also includes carbon sequestration as a co-benefit. GIM has adopted an integrated cross-sectoral approach to implement programs on public as well as private lands, and to give local communities key roles in planning, decision making, implementation, and monitoring. The GIM builds on existing land and forest programs and seeks to develop convergence or synergies between programs to minimize duplication and increase efficiencies.

11. *The Ecosystem Services Improvement Project (ESIP) is strategically relevant to GIM and will contribute to India's Nationally Determined Contribution (NDC).* The proposed project will support the goals of the GIM by demonstrating models for adaptation-based mitigation through sustainable land- and ecosystem-management and livelihood benefits. By piloting these approaches in two States, Madhya Pradesh and Chhattisgarh, ESIP will help demonstrate the potential for nation-wide scaling up of GIM. The proposed ESIP will, therefore, directly support India's NDC that aims to create an additional carbon sink of 2.5 to 3 billion tons of CO2 equivalent by adding additional forest and tree cover by 2030.

[5] The first generation forestry programs were focused on revenue generation through clear felling of timber and replacement planting; the second generation included afforestation programs, including social and farm forestry, and participatory approaches through Joint Forest Management.

[6] The National Mission for Green India (GIM) is one of the eight Missions outlined under the National Action Plan on Climate Change (NAPCC). http://www.envfor.nic.in/major-initiatives/national-mission-green-india-gim

12. *Additionality of ESIP interventions over GIM activities including better carbon sequestration potential.* The proposed project, in many ways, brings a new and novel approach to address some of the challenges in management of ecosystems and land. It will introduce new tools and technologies for better management of natural resources, including biodiversity and carbon assets, and the use of advanced monitoring systems, which have become widely used and are considered a necessity in the forestry sector. In the absence of GEF incremental financing, the State Forest Departments would have to continue to work implementing forest plantation schemes using outdated processes that do not utilize an approach that integrates decentralized community co-management and benefit sharing from natural resources. GEF incremental funding will help sequester additional carbon of about 10 percent over baseline and presents a good opportunity to improve the carbon sequestration in the entire target area of GIM through successful demonstrative pilots. The proposed project should also change the way land degradation and desertification is monitored at the national level by setting up a web-based national system for monitoring land degradation and desertification. The details of carbon sequestration are given in Annex 2, Detailed Project Description. A snapshot of GEF Additionality is shown in table 1.1 below:

**Table 1.1: GEF Additionality**

| | GIM Activities | ESIP GEF Additionality |
|---|---|---|
| Planning | ▪ Selection of landscapes<br>▪ Development of plantation packages | ▪ Additional filter of connectivity and livelihood dependence for area selection within GIM landscapes<br>▪ Community involvement in planning and works<br>▪ Use of Geographic Information System (GIS) technology for plantation plans<br>▪ Introduction of ecosystem services concept/measurement |
| Funding | ▪ Financial resources for plantation works in GIM landscapes | ▪ Additional grant funding to link plantation with livelihoods, ecosystem services and forest quality |
| Interventions | ▪ Plantation support | ▪ Capacity building of forest staff<br>▪ Demonstrative investments showcasing full cycle (from planning to plantation and monitoring)<br>▪ New approaches for Non-Timber Forest Produce (NTFP) value addition and marketing |
| Outcomes | ▪ Increased forest cover<br>▪ Improved forest quality | ▪ Enhanced carbon sequestration<br>▪ Carbon monitoring system installed<br>▪ Livelihood co-benefits<br>▪ National system for monitoring land degradation and desertification |

13. In addition, GIM is considering scaling up ESIP good practices after demonstrative investments are made. Also two ongoing International Development Association (IDA) financed World Bank projects will complement ESIP activities. See details in Table 1.2 below.

**Table 1.2: Details of Complementary Activities**

| Other Complementary Activities | Nature of Support | Indicative Amount (US$ M) |
|---|---|---|
| Green India Mission, MOEFCC, GOI | Potential investments made to scale up ESIP good practices after demonstrative interventions are made | 115 |
| Neeranchal (IDA-World Bank) | Complementary activities conducted on Capacity Building that will support a national information and data center on watersheds, which will benefit ESIP's investments on improving land management as well as the scaling up of SLEM Best Practices (as part of watersheds).<br>A national-level M&E system and a Management Information System (MIS) to be developed under Neeranchal that will track the performance of the Integrated Watershed Management Program (IWMP) and other watershed programs. SLEM efforts fit very well with this typology and can benefit from the new MIS.<br>Complementary activities made under Neeranchal on ESIP landscapes through careful mapping for consolidating existing knowledge and information to develop innovative approaches in helping farmers achieve better agricultural performance, improve livelihood, and build resilience against climate change.<br>IWMP Implementation Support in Participating States which will support program integration (for convergence) in rainfed areas. This is a good opportunity to build convergence between two Government of India pan-India programs - the IWMP and GIM, because both will result in improving ecosystem services through improvement in land and habitats. | 13 |
| National Dairy Support Project (IDA/World Bank) | A sub-component on fodder development including demonstrations on silage making, and on reduction of wastage of dry fodder through processing and enrichments, fodder contracting and better fodder seed production. A large number of land-dependent poor earn incremental incomes by keeping cattle that graze mostly on common property resources, and they can benefit through such complimentary interventions. | 4 |
| Total Amount | | 132 |

14. *Project alignment with GEF outcomes.* The project will result in increased capacities and a higher degree of local participation in management of natural resources by establishing new community reserves that would also seek to build up equitable access to these resources among participating communities. The project, therefore, is aligned to contribute to Focal Area Objective BD2 (outcomes 2.1 & 2.3) of the biodiversity focal area. It directly supports conservation, restoration, enhancement, and management of carbon stocks in forests and non-forest lands and also helps prevent carbon emissions through reducing pressures on these ecosystems. The project will help develop and refine a national system for measuring and monitoring carbon stocks and fluxes, an activity which is currently being piloted by the Forest Survey of India (FSI). The project is, therefore, aligned to contribute to Focal Area Objective CC5 (outcomes 5.2). The project, through its investments in generating sustainable flows of forest ecosystem services, including

sustaining livelihoods of forest dependent people, will directly result in improving the quality of degraded forests and bringing a larger area under sustainable forest management practices. Under Sustainable Forest Management (SFM), carbon measuring and monitoring system will be implemented at individual state levels (in at least two states) to contribute to the greenhouse gas (GHG) inventory. The project is, therefore, aligned to contribute to SFM1 (outcome 1.2) and SFM 2 (outcome 2.1). Details regarding ESIP alignment with GEF outcomes are given in Annex 2.

### C. HIGHER LEVEL OBJECTIVES TO WHICH THE PROJECT CONTRIBUTES

15. *Government's higher level sectoral objectives.* The higher level objective of the project is to contribute to increasing global carbon sequestration, reversing land degradation, and conserving globally significant biodiversity. The project is designed to support and positively influence GIM outcomes in improving the quality of forest in 5 million hectares, which will contribute significantly to India's ambitious NDC targets. The project contributes to integrating the GEF-India Country Partnership Program on Sustainable Land and Ecosystem Management (SLEM) approach in GIM. It also supports the key elements of the *National Biodiversity Action Plan (2008)* and is aligned with the *National Forest Policy (1988),* by contributing to the objective of bringing 33 percent of India's landmass under forest and tree cover.

16. *The World Bank's twin goals and Country Partnership Strategy.* The Bank's involvement aligns with its twin goals. The intended beneficiaries of the proposed operation are extremely poor and vulnerable communities that are primarily dependent on forest and common land resources for their sustenance and livelihoods in the selected two Low Income States of Madhya Pradesh and Chhattisgarh. Besides these direct beneficiaries, benefits from the project will be shared by the larger population of the states in the form of improved ecosystem services, for example, improved water flows and increased land productivity. The project therefore provides a natural fit with the 'Inclusion' area of the World Bank's India Country Partnership Strategy[7].

17. In addition, the project directly supports India's National Biodiversity Targets Nos. 2, 3, 4, and 11; contributes to Aichi Targets Nos. 2, 5, 9, 15, and 18, and takes guidance from the CBD Conference of Parties (COP) Decision Nos. X/6(5), XI/14(B17), XI/16(1(C)), XI/22(8), and XI/28(23/24), For details, see Annex 2 (paragraph 22).

## II. PROJECT DEVELOPMENT OBJECTIVE

### A. PROJECT DEVELOPMENT OBJECTIVE

18. The Project Development Objective (PDO) is *to improve forest quality, land management and Non-Timber Forest Produce (NTFP) benefits for forest dependent communities in selected landscapes in Madhya Pradesh and Chhattisgarh.*

### B. PROJECT BENEFICIARIES

19. Approximately, 25,000 people, comprising forest dwellers, small landholders, marginal farmers, and landless livestock holders, will be direct beneficiaries of the proposed project at the community level. The indirect beneficiaries will be made up of a larger population of the states of Madhya Pradesh and Chhattisgarh which will benefit from improved forest quality and ecosystems services such as improved

[7] Country Partnership Strategy For India For The Period FY2013-2017, Report No. 76176-IN, March 21, 2013

water flows, climate amelioration, and land productivity. At the district/block level, the Forest Development Agencies (FDAs) are the key beneficiaries of capacity enhancement and supporting tools. At the state level, the State Forest Departments will be the main beneficiaries of strengthened institutional capacities, new technologies, and enhanced carbon measurement and monitoring systems.

### C. PDO LEVEL RESULTS INDICATORS

20. The project development objective will be measured through six key indicators and will be complemented by an additional nine intermediate outcome indicators described in the Results Framework (Annex 1). The RF indicators represent a sub-set of indicators within a strengthened, comprehensive monitoring and evaluation (M&E) system that will track performance and impact of the project. The PDO indicators, enumerated below, reflect outcomes attributable to the combined capacity building and investment activities proposed under the project.

i. People in targeted forest and adjacent communities with increased monetary or non- monetary benefits from forests (disaggregated by: female; ethnic minority/indigenous people)
ii. Land area where sustainable land management practices were adopted as a result of the project
iii. Average cumulative carbon sequestered per hectare in areas supported by the project
*iv.* Targeted beneficiary groups engaged in participatory planning under the project
*v.* Direct project beneficiaries, of which female

## III. PROJECT DESCRIPTION

### A. PROJECT COMPONENTS

21. The proposed GEF project will be implemented in close coordination with GIM on three components: (1) capacity building (training and technical assistance); (2) enhancement of forest carbon stocks through forest quality improvement approaches and improved livelihoods for forest dependent communities (interventions); and (3) reversal of land degradation on private land holdings and common property resource lands through development of models and capacity for scaling up of sustainable land management practices (interventions). Forest and private land holdings and Common Property Resources (CPR) lands for project support and intervention will be identified within a defined landscape planning approach to facilitate ecological connectivity between ecologically important habitats and biologically rich areas. A fourth component will provide project management coordination.

**Component 1: Strengthen capacity of government institutions in forestry and land management programs in Madhya Pradesh and Chhattisgarh (US$4 million)**

22. The objective of this component is to enhance the capacity and skills of the State Forest Departments, the Forest Development Agencies, and local communities for improving management of forest and land resources and ensuring the delivery of sustainable benefits to local communities that depend on these resources. This component provides technical assistance to: (i) build institutional capacity and capability for planning and efficient delivery of forest ecosystem quality improvement and land management programs; and (ii) develop, test, and pilot nation-wide systems for measuring and monitoring forest carbon stocks. A number of training activities are to be supported under this component to build human resource capacities for improved forest management. These include: (i) spatial planning using new tools and technologies for designing sub-projects for mainstreaming biodiversity in production forests; (ii)

training for measuring and monitoring carbon stocks in forests and related lands as well as monitoring habitat quality; (iii) training for strengthening of local self-governance institutions, including Joint Forest Management Committees (JFMCs), to establish Community Reserves that could engage in co-management, monitoring, and sustainable and equitable access to NTFP resources; and (iv) generation of baselines for making realistic assessments of the dependencies on and livelihoods from NTFPs, and for developing local management plans that include value addition and sustainable use and equitable sharing of NTFP. To implement this component, the project will provide financing for technical training assistance, training workshops, study tours, and equipment purchases.

23. **Component 2: Investments for improving forest quality in selected landscapes (US$14.5 million).** The objective of this component is to improve the quality and productivity of the existing forests so as to ensure sustained flows of ecosystem services and carbon sequestration, and to ensure the sustainable harvesting and value addition of NTFP to provide economic benefits to forest dependent communities that promote conservation and improve ecological connectivity between critical biodiversity areas. This component will complement the ongoing efforts of GIM by: (i) improving forest quality using mixes of native species; and (ii) developing models for sustainable utilization of NTFPs in collaboration with local forest communities. This component will facilitate the mainstreaming of biodiversity objectives in degraded forestlands and non-forestlands in the government's program to establish sustainable forest and land management in project areas. The project will finance on-the-ground interventions in nurseries and planting materials, community labor for forest land preparation for forest planting. In addition, technical support, and equipment and training for sustainable NTFP utilization will be financed. Provisions are made to undertake specialized activities and contract technical partners, as may be needed during implementation. There are two sub-components:

24. ***Sub-component 2.1: Enhancing and restoring carbon stocks in forestlands***: This component will support interventions for improving, upgrading, and modernizing selected forest nurseries for raising high-quality native species and planting material. It will introduce and support new and innovative processes for undertaking soil preparation, forest enrichment planting, and protection work in different degraded forest types on landscapes in production forests as well as on non-forest lands. This sub-component will also undertake demonstrative pilots for rehabilitation of degraded forest patches and simultaneously integrate sustainable resource use practices.

25. ***Sub-component 2.2: Developing community-based models for sustainable utilization of NTFP:*** This sub-component will support formalized allocation of usufruct rights, value addition, and marketing to traditional NTFP resources, and creation and management of Community Reserves, in project states. The modalities for establishing community reserves will follow the National (Wildlife) Protection Act (as amended). The result will be Geographic Information System (GIS)-based management plans for Community Reserves incorporating participatory monitoring of biodiversity. This sub-component will work with various resource user groups, women Self Help Groups (SHG), and other local stakeholders to understand the challenges of NTFP supply chains, identify potential interventions to improve NTFP marketing, and develop strategies for enhancing incomes from sustainable NTFP utilization.

**Component 3: Scaling-up sustainable land and ecosystem management in selected landscapes (US$3.74 million)**

26. The main objectives of this component are to prevent land degradation and desertification and to increase above-ground forest carbon stock through a combination of activities to implement and scale-up tried-and-tested SLEM best practices, to increase national capacity for monitoring land degradation,

and to track associated indicators and generate knowledge exchange on SLEM approaches. The goal is to benefit small and marginal farmers and other rural poor. These activities are designed to overcome the twin challenges of arresting land degradation and meeting food security targets. In particular, this component will draw heavily from the lessons and best practice approaches to sustainable land and ecosystem management that were developed and piloted under the ongoing GEF-financed SLEM project. In addition, the team has also consulted with the German Agency for International Cooperation (GIZ) India and will draw on their experiences of best practices during implementation (see more details in Annex 2: Detailed Project Description). This component will finance on-the-ground sustainable land management interventions in private land holdings and common property resource lands for scaling up of SLEM best practices in selected landscapes. It will help build national capacity for land degradation and desertification monitoring and also support development and implementation of a national knowledge network. The component will also explore synergies with the *World Overview of Conservation Approaches and Technologies* (WOCAT), which is an established global network of soil and water conservation specialists.

**Component 4: Project Management (US$2.4 million)**

27. A modest Project Management Unit (PMU) will be established as a fourth component to coordinate and monitor project implementation and progress towards the envisaged development objective. The PMU is to be housed within the Division/Cell responsible for implementing the GIM within the MOEFCC, so as to ensure that there is complete complementarity between the project and GIM and that co-financing benefits are supportive rather than competitive. Project Implementing Units (PIUs) will be established within the State Forest Departments of Madhya Pradesh and Chhattisgarh and ICFRE. In addition to the core government staff in the PMU and PIUs, this component will support hiring of specialized staff within the PMU and PIUs for project management, technical advice, and communications.

## B. PROJECT COST AND FINANCING

28. The project will be financed by a GEF grant of US$24.64 million (See details in Table 3.1). Retroactive financing up to US$4.928 million will be available for financing expenditures incurred on or after August 1, 2016.

**Table 3.1: Project Cost and Financing (including contingencies)**

| Project Components | Project Cost US$ M | GEF Financing US$ M | Percent Financing |
|---|---|---|---|
| Component 1: Strengthen capacity of government institutions in forestry and land management programs in Madhya Pradesh and Chhattisgarh | 4.0 | 4.0 | 100 |
| Component 2: Investments for improving forest quality in selected landscapes | 14.5 | 14.5 | 100 |
| Component 3: Scaling-up sustainable land and ecosystem management in selected landscapes | 3.74 | 3.74 | 100 |
| Component 4: Project Management | 2.4 | 2.4 | 100 |
| **Total Baseline Costs** | 24.64 | 24.64 | 100 |
| **Total Financing Required** | 24.64 | 24.64 | 100 |

## C. LESSONS LEARNED AND REFLECTED IN THE PROJECT DESIGN

29. The project design reflects lessons from ongoing work, such as the Biodiversity Conservation and Rural Livelihood Improvement Project (BCRLIP), and from completed work, such as the India Eco-Development Project (IEDP) and the Sustainable Land and Ecosystem Management (SLEM) project, and also from other forestry and ecosystem management projects. It also draws from a number of best practices[8] documented from several sources, particularly focusing on SLEM approaches, several of which have provided a wealth of information on good practices as well as on institutional experiences which underpin the core elements of the proposed project's design. These have also led to identification of critical areas where further institutional capacity development is needed in order to more effectively scale up and expand upon good practices, while also enabling more explicit monitoring and evaluation of investment outcomes towards advancing local and global sustainable development objectives. Several key lessons have been incorporated into project design. For example, selection of biological corridor areas for ensuring gene flow, building local stakeholder ownership and promoting participatory conservation management approaches, ensuring scaling up of demonstrative pilots, creating systems for monitoring of carbon sequestration etc. The lessons learnt and how these are integrated in project design is described in Table B.9 in Annex 2.

# IV. IMPLEMENTATION

## A. INSTITUTIONAL AND IMPLEMENTATION ARRANGEMENTS

30. The project will be implemented in the States of Madhya Pradesh and Chhattisgarh. Based on the projected vulnerability of forest grids to climate change impacts, ESIP landscapes for the first two years of project implementation have been identified. In addition, the criteria for landscape identification included filters on presence of globally significant and threatened species, socio-economic inclusiveness, forest type and degradation status, and anthropogenic pressures. These are also the identified GIM landscapes. The implementation is at the following three levels:

31. ***National Level****:* The Division/Cell responsible for the implementation and oversight of GIM is where the Project Management Unit (PMU) has been established. The Mission Director for the GIM will also be the National Project Director for ESIP and will be supported by a full time Assistant Project Director. The project will support contracting of specialized staff to handle procurement, financial management, and safeguards functions, and of core forestry sector experts. No later than one month after the effective date, the MOEFCC will establish a Project Steering Committee (PSC), which will be headed by the GIM Division. Members of the PSC will include representation from the GEF Operational Focal Point (OFP) office, and the Internal Finance Division (IFD). Representatives of the United Nations Conventions on Biological Diversity (CBD), Climate Change (CC), and Combat Desertification (CCD) will also be included. The PSC can bring on up to five additional members with technical expertise from within MOEFCC. In addition, the PSC could invite up to three external members to join as Special Invitees on specialized topics. Representatives of the Project Director, Neeranchal/Joint Secretary, IWMP, the Department of Land Resources, and the Ministry of Rural Development would be invited to all the PSC meetings. The PSC will meet at least twice a year, and more times as required, and will be the final approving authority for all matters concerning ESIP. The PSC will be established through a Government Order/Memorandum and the first meeting will be held within three months of project effectiveness.

[8] Detailed SLEM best practices' documents are available on ***slem****-cpp.****icfre****.gov.in*

32. ***State Level:*** The State Forest Departments will be the primary implementing agencies at the state level, and the GIM Nodal Officer will be responsible for overall implementation of ESIP and will be the focal point for all documentation and reporting. The states have established a PIU and the project is supporting it through contracting of a small team for project management. The State Forest Departments may use the Deputy Finance Officer of the DFO/FDA for implementing through the Force Account actual reforestation works with involvement of local communities. Funds are not envisaged to flow to the community level.

33. ***Community Level:*** The project will support capacity building of various committees, such as the JFMC and the BMC, that will play a critical role in project implementation. No funds will flow to the community level for the purpose of implementing the project, and hence, no Financial Management (FM) implementation role is envisaged at this level.

34. ***ICFRE:*** The Indian Council of Forestry Research and Education (ICFRE) will implement Component 3 of the project because of the council's demonstrated ability to implement World Bank projects, and thus, the institutional arrangements for SLEM utilized at ICFRE will be replicated for ESIP.

35. The State Forest Departments at Madhya Pradesh and Chhattisgarh and ICFRE will develop costed, time-bound Annual Action Plans for project implementation, which will be reviewed and approved by the PSC at the National Level.

36. ***Other Partner Agencies***: Specialized technical agencies identified during implementation may provide guidance, technical resources, and monitoring support during project implementation. Wherever necessary, State Biodiversity Boards may be brought in to provide technical support. In addition to bringing in experts available within these agencies, the project will be able to contract (in accordance with the Bank's Procurement/Consultant Guidelines) specialized M&E consultants who will be deployed for the project work. As far as possible, technical partners shall be of international repute.

37. The MOEFCC has prepared a Project Implementation Plan, which includes details regarding project components and reflects the implementation arrangements at all levels. (See Figure 3.1). Adopting the Project Implementation Plan would be required before declaring the project effective.

## B. RESULTS MONITORING AND EVALUATION

38. The objectives of the project's M&E system will be to facilitate result-based management, to provide the basis for evidence-based decision-making and policy formulation – especially with GIM - and to include the data in the results framework (Annex 1) and the GEF Tracking Tool. It will also address the need for learning, transparency, and accountability, as implementing agencies will be involved at various levels during M&E. The findings will be reported to the State level authorities, PSC and the World Bank. Overall, the M&E function will be coordinated by the PMU, and a MIS system will be established that will be updated regularly. A distinctive part of the project M&E will be the use of field surveys to determine the quality of forests and land management improvements and to determine the socio-economic aspects of NTFP utilization and the extent to which benefits to forest dependent communities have increased. Furthermore, M&E is an end in itself that will include establishment of: (i) a carbon monitoring system in the two states participating in the project; (ii) a system to monitor biodiversity, other biological parameters, and biological indicators; and (iii) a system for monitoring land management using an appropriate and adequate set of indicators that have been developed and validated in a stakeholder process and by technical experts. Furthermore, participatory self-monitoring by community institutions to assess their

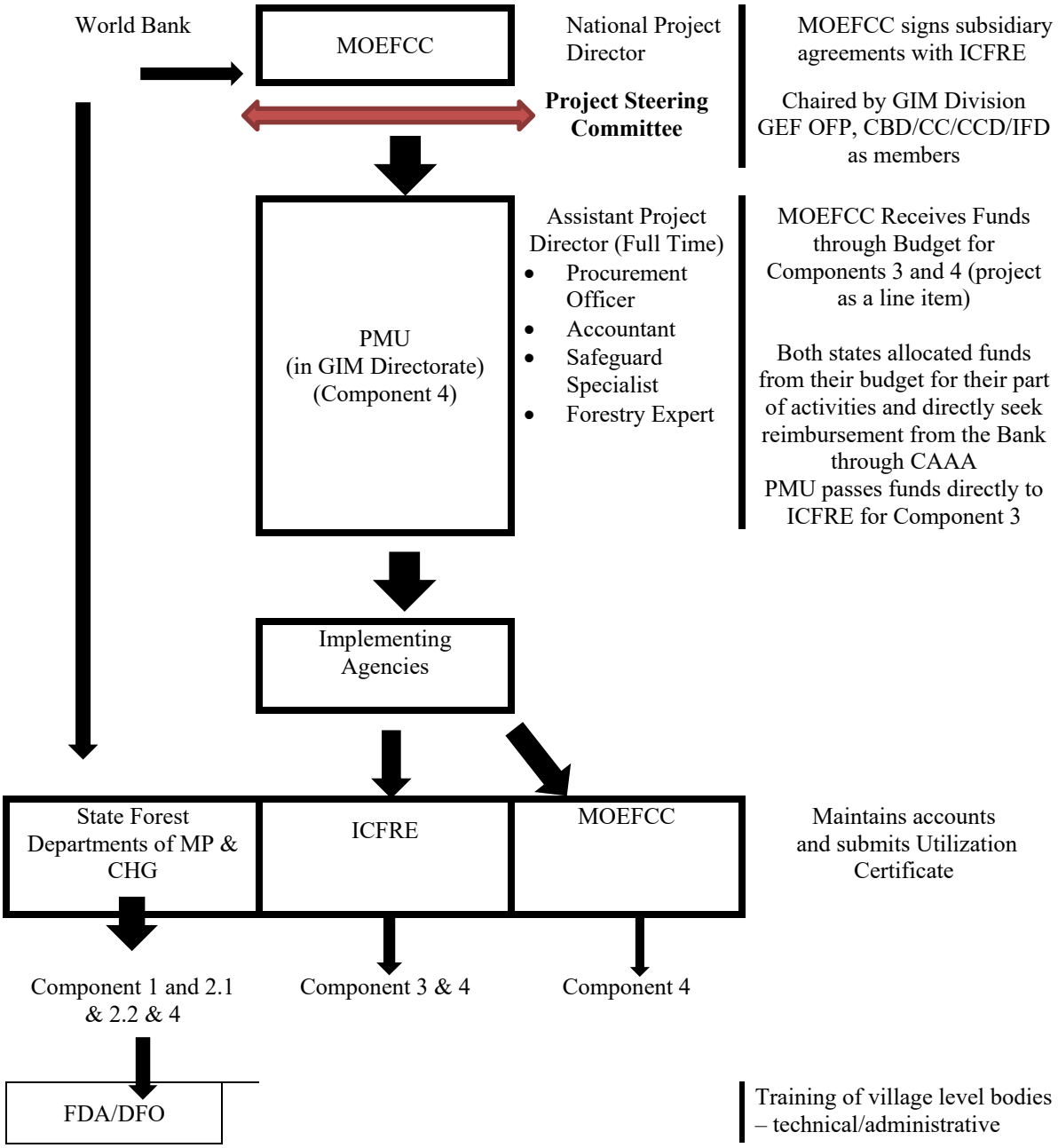
own organizational capacity and performance will be supported as an end in itself and to facilitate reporting on project indicators. This monitoring will particularly focus on management of Community Reserves and implementation of the Sustainable NTFP Use Frameworks. In addition, the PMU will commission a rigorous impact evaluation to identify livelihoods and environmental impacts in areas where project interventions have taken place and to compare them to areas without interventions (counterfactuals). This will specifically inform GIM on the impacts of the pilot investments in forest and land management, and assist GIM in making recommendations on wider applicability.

## C. SUSTAINABILITY

39. There is a strong rationale for sustaining project outcomes at the policy and program level, as well as at the state and central level, because the capacity-building efforts at the sub-national level (State Forest Departments) along with the work with national agencies would both directly contribute to the outcomes of the national GIM beyond the project period. Some of the potentially sustainable activities may include:

i. Applying SLEM best practices that would be integrated with the GIM and would continue to be used in large geographical areas beyond the project area and project period.
ii. Using technology in developing forest-quality improvement plans and increasing carbon sequestration through the planting of native species that will be sustained by becoming integrated in the GIM design and thereby be replicated over larger geographic areas across several states and over several years beyond the project period.
iii. The National online reporting platform for reporting on impact and process indicators under the UNCCD will enter the mainstream because it will be adopted at the national level.
iv. Making efforts under the project to establish systems for carbon stock measurement and monitoring at the state level which can then become part of a national exercise and facilitate the access of global carbon financing, thereby, ensuring its post-project sustainability.
v. Working at the community level in co-managing forest resources and benefit sharing so that the results could also be replicated through the baseline project investments over the next 10 years. This will help promote a more sustainable incentive mechanism that ensures forest management and conservation over a long time period.
vi. Working with the Forest Survey of India (FSI) in mapping the critical ecosystems and habitats facing the challenges of invasive species and developing carbon stock databases for different types of Indian forests. This is likely to become a regular mapping exercise of FSI carried out during an agreed time period and reported nationally.

**Figure 3.1: ESIP Implementation Arrangements and Fund Flow**




## V. KEY RISKS AND MITIGATION MEASURES

### A. OVERALL RISK RATING EXPLANATION

40. The overall risk for ESIP is rated as "Substantial", because it involves working with communities with low capacities and with State Forest Departments in low-income states that are generally used to working with traditional practices. Sector strategies and policies are rated "Substantial" as GIM is a relatively new program and states have taken longtime to prepare for it. Technical Design is also rated

"Substantial" due to low capacity of State Forest Departments to take up new approaches for improving forest quality. Forest quality improvement is a time-taking activity and outcomes may be visible only after a considerable time has elapsed, thereby increasing the risk of misinterpretations of intermediate results. Institutional capacity for implementation is also rated "Substantial" as risk of low allocations and delays in fund releases for its share in MOEFCC cannot be ruled out since this has been the experience in some projects. This risk has been mitigated by enabling fund flow arrangements whereby the participating states will be directly reimbursed for the expenditures made on project activities. Fiduciary risk is "Substantial" as the State Forest Departments have not implemented a Bank project in recent past and may face challenges in adhering to Bank processes. Managing this risk involves placing of qualified and experienced staff in PIUs. Stakeholder risk is also "Substantial" as the project beneficiaries include forest-dependent poor households with little incentive to take part in project activities. A number of mitigation actions are in place to manage these risks. The provision for recruiting a community mobilization specialist will help manage the stakeholder risk. Selection of Madhya Pradesh and Chhattisgarh provides an advantage, as both states are implementing the GIM and have identified the GIM landscapes. Both states have rich experience in the forestry sector, especially on NTFP trade. The project has been carefully designed to cover limited geographic areas for demonstrations.

## VI. APPRAISAL SUMMARY

### A. ECONOMIC AND FINANCIAL ANALYSIS

41. A preliminary economic analysis for the project has been conducted by estimating the economic value of additional carbon sequestered through project interventions, because carbon sequestration is the primary ecosystem service targeted. To arrive at the internal rate of return (IRR), the project cost of about US$25 million over a period of five years in the forests of central Indian highlands has been considered by assuming that all activities financed under the different project components contribute to enhancing the ecosystem services. The cost-benefit analysis (CBA) carefully takes into account the timing of expenses and expected benefits from additional carbon credits. Assuming that the project will result in a 10 percent incremental gain over the baseline carbon sequestration rates, the total additional carbon fixed for a 10 year period is estimated at 5.4 million tons. Using a 20 year period for a forest quality improvement project, the total additional carbon sequestered comes to 10.80 million tons. This is converted into $CO_2$ equivalent by a conversion factor of 3.666, and about 40 million tons is expected to be sequestered additionally in 50,000 ha of forestlands where project investments will result in forest quality improvement. Different scenarios have been tested to adequately understand the uncertainty relating to the expected rise in carbon credit benefits in terms of quantity and price. Based on a conservative assumption of 1.5 USD / Metric tons of carbon credit, three different scenarios were tested (A, A1 and A2). These refer respectively to an increase of 3 percent, 5 per cent and 10 percent of carbon credits after 10 years from the beginning of the project as shown below in Table 6.1. Project cost expenses occur in the first five years of the project. In each case, the Benefit-Cost ratio scores high (between 2.13 and 2.31) along with the IRR (between 28 percent and 32 percent).

| | |
|---|---|
| Baseline | 72 MT |
| 10% incremental gain | 80 MT |
| 5% incremental gain | 75.6 MT |
| 3% incremental gain | 74 MT |

**Table 6.1: Internal Rate of Return for Incremental Increases in Carbon Credits (3%, 5%, and 10%) – Scenarios A, A1 and A2**

A Incremental increase of 3% in Carbon Credits

| YEAR | Quantity Mn ton Carbon Credit | $/ Co2 | Avoided Co2 (Mn$) | TOTAL BENEFITS (Mn $) | TOTAL COSTS (Mn $) | Benefit-Cost Ratio | NET BENEFITS |
|---|---|---|---|---|---|---|---|
| | | | | | 0 | | 0 |
| 2015 | 0 | 1.5 | 0 | 0 | 13 | - | -13 |
| 2020 | 0 | 1.5 | 0 | 0 | 13 | - | -13 |
| 2025 | 5 | 1.5 | 8 | 8 | 0 | - | 8 |
| 2030 | 6 | 1.5 | 9 | 9 | 0 | - | 9 |
| 2035 | 26 | 1.5 | 39 | 39 | 0 | - | 39 |
| **TOTAL** | 37 | 1.5 | 56 | 56 | 26 | 2.13 | 28% |
| | | | | | | Average | **IRR** |

A1 Incremental increase of 5% in Carbon Credits

| YEAR | Quantity Mn ton Carbon Credit | $/ Co2 | Avoided Co2 (Mn$) | TOTAL BENEFITS (Mn $) | TOTAL COSTS (Mn $) | Benefit-Cost Ratio | NET BENEFITS |
|---|---|---|---|---|---|---|---|
| | | | | | 0 | | 0 |
| 2015 | 0 | 1.5 | 0 | 0 | 13 | - | -13 |
| 2020 | 0 | 1.5 | 0 | 0 | 13 | - | -13 |
| 2025 | 5 | 1.5 | 8 | 8 | 0 | - | 8 |
| 2030 | 7.5 | 1.5 | 11 | 11 | 0 | - | 11 |
| 2035 | 25.3 | 1.5 | 38 | 38 | 0 | - | 38 |
| **TOTAL** | 37.8 | 1.5 | 57 | 57 | 26 | 2.18 | 30% |
| | | | | | | Average | **IRR** |

A2 Incremental increase of 10% in Carbon Credits

| YEAR | Quantity Mn ton Carbon Credit | $/ Co2 | Avoided Co2 (Mn$) | TOTAL BENEFITS (Mn $) | TOTAL COSTS (Mn $) | Benefit-Cost Ratio | NET BENEFITS |
|---|---|---|---|---|---|---|---|
| | | | | | 0 | | 0 |
| 2015 | 0 | 1.5 | 0 | 0 | 13 | - | -13 |
| 2020 | 0 | 1.5 | 0 | 0 | 13 | - | -13 |
| 2025 | 5 | 1.5 | 8 | 8 | 0 | - | 8 |
| 2030 | 9 | 1.5 | 14 | 14 | 0 | - | 14 |
| 2035 | 26 | 1.5 | 39 | 39 | 0 | - | 39 |
| **TOTAL** | 40 | 1.5 | 60 | 60 | 26 | 2.31 | 32% |
| | | | | | | Average | **IRR** |

42. ***What is the project's development impact?*** The project will have high development impact at the household, landscape, sub-national and national level. In fact, carbon sequestration gains will have global impacts. There are several examples where the economic value of carbon sequestration has been estimated through plantation and forestry related projects resulting in high development impact. Pande *et al.*[9] estimated a cash flow ranging from INR 30,550/ha to INR 48,000/ha (US$470/ha to US$750) from the 7th year onwards to individual stakeholders in the ravine systems of three major rivers, Mahi, Chambal, and Yamuna by raising bamboo plantations in the medium and deep ravines. They estimated an IRR of 19.3 percent for Yamuna ravines followed by 18.4 percent for Mahi and 18.1 percent for Chambal ravines. In a similar manner, the ESIP project proposes to enhance the carbon sequestration potential of the degraded and open forests in central Indian highlands through investments focusing on improving forest quality and cover by increasing the above-ground and below-ground biomass. Other ecosystem services, including watershed services (such as augmentation of groundwater, increasing soil productivity, and increased soil moisture retention), biodiversity services (such as bees for crop pollination and soil nematodes for enhancing soil productivity, wildlife viewing for tourism, repository of medicinal plants for traditional health services), and environmental protection services (such as water filtration and cleaning, and oxygen production) will also lead to a positive developmental impact.

43. ***Is public sector provision or financing the appropriate vehicle?*** Forests continue to be identified and governed as public goods. As a result, private financing has not been mobilized. On the contrary, private sector has always acquired land for purposes other than forestry, for example mining. In India, about 100 million people are directly dependent on forests for their livelihoods. They are largely characterized as indigenous people, having low-skill base and living in remote locations, which does not create an enabling condition for attracting private sector involvement. Except in cases of sustainable forest management on private lands, investments on officially categorized forestlands are through public financing, as Indian acts and regulations do not allow access to forests by private sources. ESIP is targeting improvement of forest quality and not extraction, which reduces private sector interest.

44. ***What is the World Bank's value added?*** Introduction of new tools, techniques and approaches for forestry and land management, monitoring of carbon assets and decentralized approach for forest-dependent livelihoods through NTFP value chain improvement over a traditionally practiced plantation approach highlights the Bank's value added. The potential to significantly increase the total carbon sequestration under GIM by successfully scaling up ESIP pilots over millions of hectare and explicit mainstreaming of forest based livelihoods, which are missing in other national programs and integrating sustainable land management with forest quality improvement to substantially improve ecosystem services further highlights Bank's value added.

## B. TECHNICAL

45. The project design will help establish and demonstrate a full cycle of ecosystem services improvement, including spatial planning, area selection, species identification, planting technology, monitoring, and carbon sequestration measurements. This will comprise support to both capacity-building and demonstrative investments with an objective of integrating the project's processes into the national GIM that would allow for scaling up the ecosystem services in the 10 million ha GIM target over the next 10 years. This approach provides for increased carbon sequestration of about 10 percent over the baseline

[9] V.C. Pande, R.S. Kurothea, B.K. Rao, Gopal Kumar, A.K. Parandiyal, A.K. Singh and Ashok Kumar; Economic Analysis of Bamboo Plantation in Three Major Ravine Systems of India. Agricultural Economics Research Review, Vol.25 (No.1) January-June 2012 pp49-59.

and mainstreams the concept of improved land management through SLEM best practices within the forest landscapes. An additional integration will include the value-addition approaches for sustainable NTFP utilization. In order to maximize the complementarity of ESIP investments, the project will adopt the GIM landscapes.

## C. FINANCIAL MANAGEMENT

46. At the national level, MOEFCC will be responsible for overall project coordination and oversight Components 1, Sub-components 2.1 and 2.2, and Component 3 will be implemented in Madhya Pradesh and Chhattisgarh. MOEFCC will also be responsible for ensuring that the overall FM arrangements under the project, including the arrangements for budgeting, accounting, reporting, funds flow, internal controls, and audits, are satisfactory and are carried out in accordance with the project documents. The FM functions will be carried out through the PMU that will be established under the nodal agency of MOEFCC as well as through the PIU established at the State level and ICFRE. The PMU will be staffed with adequate and qualified FM staff. Key FM tasks will include: (i) preparing annual budgetary provisions for the project and monitoring project expenditures against the project budget; (ii) approving the annual action plan of state-level State Forest Departments/JFM (Joint Forest Management) and ICFRE; (iii) ensuring sufficient and timely fund flow for MOEFCC level activities; (iv) making regular financial reports for all levels of the project and compiling quarterly financial reports and annual financial statements of the project; (v) submitting timely annual reimbursement claims to the Bank; and (vi) ensuring annual external audits at MOEFCC, state level State Forest Departments/JFM (Joint Forest Management), and ICFRE. It will include consolidating implementing agencies' audited financial statements and audit observations, submitting a consolidated annual audit report of the project to the Bank and ensuring compliance with auditor's observations.

47. At the state level, Component 1 and Sub-components 2.1 and 2.2 will be implemented by the State Forest Departments of Madhya Pradesh and Chhattisgarh. Component 3 will be implemented by ICFRE.

48. The funds for the project will be handled by MOEFCC at the central level and will be recorded in its books of accounts. The PMU and the three PIUs will have an FM focal person, and the FM staff in the PMU will provide guidance and advisory support to all PIUs. The Recipient must make part of the proceeds of the Grant available to the participating states in accordance with the recipient's standard arrangements for development assistance for the states of India. ICFRE will enter into subsidiary agreements with MOEFCC (condition of effectiveness). An appropriate budget will be created by the state governments to enable SFD/JFM (PIU) to undertake the expenditures under the project. Disbursements under the project will be based on the IUFR (Interim Unaudited Financial Report). An annual external audit will be conducted by an independent firm of chartered accountants acceptable to the Bank under agreed Terms of Reference. The audit at the central level will be carried out by the Comptroller and Auditor General of India (CAG), and MOEFCC will be responsible for submission of consolidated audited financial statements to the Bank.

49. ICFRE will implement Component 3 of the project. ICFRE has implemented the Bank funded SLEM project and is well versed in Bank FM policies and procedures. A recent FM assessment was carried out at ICFRE and the FM arrangements continue to remain satisfactory. The Nodal Officer for the SLEM project will be the Nodal Officer for this proposed project as well, supported by the FM focal staff. The FM for the SLEM project implemented by ICFRE has been rated "Satisfactory". The implementation arrangements for SLEM at ICFRE will be replicated for ESIP.

## D. PROCUREMENT

50. Procurement of goods, works, and non-consulting services required for the proposed project and to be financed out of the proceeds of this Grant shall be done in accordance with the requirements set forth or referred to in the document "Guidelines: Procurement of Goods, Works and Non-Consulting Services under IBRD (International Bank for Reconstruction and Development) India Loans and IDA Credits & Grants by World Bank Borrowers (January 2011, revised July 2014)." Selection of consulting services required for the proposed project and to be financed out of the proceeds of the grant shall be done in accordance with the requirements set forth or referred to in the document "Guidelines: Selection and Employment of Consultants under IBRD Loans and IDA Credits by World Bank Borrowers (January 2011, revised July 2014)" and the provisions stipulated in the Grant Agreement.

51. The procurement of goods works and services shall be conducted using the e-procurement platform. The e-procurement system of MP - www.mpeprocure.gov.in - has been assessed and cleared by the Bank to be used for all Bank funded projects in MP. For other Implementing Agencies (IA), the National Informatics Center's (NIC) e-procurement platform may be used since it has been assessed and cleared to be used for all Bank-funded projects throughout India. If the IA wishes to use its own e-procurement system rather than NIC system, the platform needs to be assessed and cleared by the Bank before it can be used.. Until it receives that approval, the IA shall use manual bidding procedures.

52. The proposed project shall be implemented in the states of Madhya Pradesh and Chhattisgarh under the directives and guidance from MOEFCC. The GIM shall be the nodal agency for the implementation of this project and shall house the Project Management Unit (PMU). The Mission Director will be the Project Director supported by a full time Assistant Project Director, specialized staff for procurement, financial management, and safeguards, and core forestry sector experts at the national level. The State Forest Departments in Chhattisgarh and Madhya Pradesh will be the implementing agencies in the respective states. ICFRE is identified as the implementing agency for Component 3 All implementing agencies, that is participating states and ICFRE, have established Project Implementation Units (PIUs).

53. The preparation team also discussed use of the procurement documentation management system called Systematic Tracking of Exchanges in Procurement (STEP) for the proposed project to strengthen procurement monitoring. Therefore, all project Procurement Plans (PP) need to be submitted through STEP. The Bank will arrange training on the use of STEP when the focal persons are identified and put in place.

54. Expenses incurred for operational costs as defined in the Grant Agreement shall be procured using the existing procedures of the respective implementing agencies (MOEFCC, states, and ICFRE) and shall not be a part of their respective procurement plans.

## E. SOCIAL (INCLUDING SAFEGUARDS)

55. ESIP aims to improve forest quality as well as to provide livelihood and income benefits to about 25,000 beneficiaries comprising forest dwellers, small landholders, marginal farmers, wage labor, landless individuals, livestock holders, and NTFP collectors. Women and men from households of Scheduled Tribes (ST) and Scheduled Castes (SC) will be among the beneficiary households.

56. The project will enhance beneficiary access to forests, forest produce, and commons and pastures as well as improving soil, water, land, and forest management practices which will enhance income,

livelihood, and food security. The project will have positive impacts on men and women from sizable tribal communities in the project areas, as well as in other vulnerable groups. No involuntary acquisition of private land and/or transfer of public land with encumbrances is anticipated under the project. The key social issues for the project are ensuring: i) targeting and inclusion of tribal members and scheduled castes among the primary project beneficiaries; ii) participation and inclusion of local communities in resource planning and management; iii) equitable access to project benefits, resource use rights, benefits, training, and project investments; iv) inclusive representation and decision making in community groups; v) mitigation and management of any potential conflicts concerning natural resources; and vi) continued support and engagement of beneficiary groups with the project. ESIP will not support any project interventions involving land acquisition, restriction or loss of traditional access and rights to common property resources and protected areas, or infringement of individual and community forest rights under the Forest Rights Act. The ESMF & TDF includes strategies for consultation and participation, inclusion and beneficiary targeting, development of social mitigation plans for vulnerable households, training and capacity building for communities, women's empowerment. The TDF will ensure focused outreach, inclusion, targeting, and participation of the tribal communities in project landscapes and watersheds and in local investment/implementation plans.

57. ***Gender.*** The key gender issues which are operationally relevant for ESIP are identified as: i) the need for greater recognition of women as primary users of forests (for collection of firewood, fodder, etc.) NTFP collectors; and ii) their inclusion and capacity building for greater access to institutions and decision-making forums, information resources, and opportunities for livelihood and wage employment. ESIP will promote gender inclusive approaches across the project structures, institutions, plans and interventions in the project landscapes through a range of measures, including, but not limited to: i) orientation of project teams, partner agencies as well as village leadership, specially males, on the need to empower women with respect to access to leadership and decision making, training and capacity building; ii) gender disaggregated information included in landscape baseline; iii) exclusive consultations and focus group discussions with women with women forest users and existing women's groups in the village; and iv) facilitating women's membership, participation and inclusion in the JFMCs and FDAs at all levels (general body, executive committee and office-bearer positions).

58. ***Citizen Engagement (CE).*** Direct beneficiaries of ESIP will be forest dwellers, small and marginal landholders, landless individuals, small livestock holders, and NTFP collectors, as well as their community organizations such as JFMCs, Self Help Groups (SHGs), and other resource groups in the forest landscapes and micro-watersheds of Madhya Pradesh and Chhattisgarh. Indirect beneficiaries include larger populations in the project landscapes who will benefit from improved water flows, climate amelioration, and land productivity. Their participation and feedback in planning, rehabilitation, and protection and sustainable management of land, forests, and water resources will be crucial to attain the project objectives. The main CE activities in the project are going to be: i) participatory planning for livelihood, NTFP and NRM; ii) training of JFMCs on planning, feedback, and redressing grievance; iii) participatory biodiversity monitoring, and iv) promoting a community of practice. The primary CE results indicator will be the 'number of targeted beneficiary groups engaged in participatory planning under the project.'

## F. ENVIRONMENT (INCLUDING SAFEGUARDS)

59. The safeguard policies of Environmental Assessment (OP4.01), Natural Habitats (OP4.04), Forests (OP4.36) and Indigenous People (OP4.10) are triggered, which responds to the project design and will ensure both mitigation of potential negative impacts and scaling up of positive environmental and social outputs.

60. ESIP interventions will have positive environmental impacts by sequestering carbon, improving forest cover/quality, increasing native species populations, and augmenting natural resources (soil, water, land) and ecosystem services. The key project outputs also represent long term mitigation measures for several natural hazards and climate change impacts. The ESMF & TDF includes a list of potential negative impacts and plans for environmental screening and mitigation measures to deal with them. The key ESIP interventions are: i) training, training activities (TA), workshops, study tours on forest quality improvement and management, biodiversity monitoring and management, co-management of community reserves, and local management planning for sustainable NTFP extraction (Component 1); ii) upgrading of existing forest nurseries, rehabilitation of degraded forest patches, replanting with native species, and establishment of community based models of Community Forest Reserves and sustainable NTFP utilization (Component 2); iii) participatory watershed management and habitat improvement, soil and water conservation, restoration of pastures/common lands, utilization of a web-based MIS and knowledge network on land degradation (Component 3). MOEFCC and local agencies conducted beneficiary/stakeholder consultations in the proposed project implementation area and undertook an Environmental and Social Assessment (ESA) exercise to identify the key environment and social impacts, issues, and risks associated with ESIP interventions. An Environmental and Social Management Framework and Tribal Development Framework (ESMF & TDF) was prepared to avoid, minimize, or mitigate any adverse environmental, social, and livelihood impacts resulting from the project. The safeguard documents were disclosed in country on October 31, 2014 and on the World Bank's InfoShop on January 29, 2015. The revised documents were re-disclosed in country on January 23, 2017 and on World Bank's InfoShop on February 16, 2017.

## G. OTHER SAFEGUARDS POLICIES

61. No other safeguard policies are triggered for the project.

## H. WORLD BANK GRIEVANCE REDRESS

62. Communities and individuals who believe that they are adversely affected by a World Bank (WB) supported project may submit complaints to existing project-level grievance redress mechanisms or the WB's Grievance Redress Service (GRS). The GRS ensures that complaints received are promptly reviewed in order to address project-related concerns. Project affected communities and individuals may submit their complaint to the WB's independent Inspection Panel which determines whether harm occurred, or could occur, as a result of WB 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 (GRS), please visit http://www.worldbank.org/GRS. For information on how to submit complaints to the World Bank Inspection Panel, please visit www.inspectionpanel.org.

## VII. Results Framework and Monitoring

INDIA: Ecosystem Services Improvement Project

| **Project Development Objective (PDO)** | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ***Improve forest quality, land management and non-timber forest produce (NTFP) benefits for forest dependent communities in selected landscapes in Madhya Pradesh and Chhattisgarh*** | | | | | | | | | | | | | |
| **PDO Level Results Indicators** | ***Core*** | ***Unit of Measure*** | ***Base line*** | ***Cumulative Target Values*** | | | | | | ***Frequency*** | ***Data Source / Methodology*** | ***Responsibility for Data Collection*** | ***Description /definition*** |
| | | | | **2017** | **2018** | **2019** | **2020** | **2021** | **End Target** | | | | |
| ***Indicator One:*** People in targeted forest and adjacent communities with increased monetary or non- monetary benefits from forests (disaggregated by: female; ethnic minority/indigenous people) | | Number<br><br><br><br> | 0<br><br><br><br> | 0<br><br><br><br> | 0<br><br><br><br> | 1,000<br><br>500<br><br>500 | 3,000<br><br>1,500<br><br>1,500 | 5,000<br><br>2,500<br><br>2,500 | 5,000<br><br>2,500<br><br>2,500 | Annual | Field-based survey (socio-economic survey)<br><br>Communities' participatory monitoring<br><br>Direct observation | PMU | Increase in monetary and non-monetary benefits from improved management of NTFPs in selected landscapes. |
| ***Indicator Two:*** Land area under sustainable land management practices | ☒ | Ha | 0 | 0 | 5,000 | 10,000 | 25,000 | 25,000 | 25,000 | Annual | Field-based survey<br><br>Communities' participatory monitoring<br><br>Review of management plans<br><br>Direct observation | PMU | |
| ***Indicator Three:*** Average cumulative carbon sequestered per hectare in areas | | Tons | 2.53 | 2.53 | 2.53 | 2.60 | 2.68 | 2.73 | 2.78 | Annual | Carbon monitoring system | PMU | Areas supported by the project |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| supported by the project | | | | | | | | | | | | | consists of areas under SLEM practices and re/afforestation: 125,000 ha |
| ***Indicator Four:*** Targeted beneficiary groups engaged in participatory planning under the project | | Number | 0 | 50 | 100 | 200 | 400 | 500 | 500 | Annual | Focus group discussions<br><br>Communities' participatory monitoring<br><br>Project and activity records | PMU | Targeted beneficiary groups include tribal, vulnerable, women, farmers, livestock owners, forest dependent communities, producer groups.<br><br>Citizen engagement indicator. |
| ***Indicator Five:*** Direct project beneficiaries, of which female | | Number (%) | 0 | 2,500<br><br>50 | 5,000<br><br>50 | 10,000<br><br>50 | 25,000<br><br>50 | 25,000<br><br>50 | 25,000<br><br>50 | Annual | Project and activity records<br><br>Communities' participatory monitoring | PMU | |
| **Intermediate Result (Component 1):** ***Strengthen capacity of government institutions in forestry and land management programs in Madhya Pradesh and Chhattisgarh*** | | | | | | | | | | | | | |

| Intermediate Results Indicators | Core | Unit of Measure | Baseline 2015 | Cumulative Target Values | | | | | | Frequency | Data Source / Methodology | Responsibility for Data Collection | Description /definition |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 2017 | 2018 | 2019 | 2020 | 2021 | End Target | | | | |
| ***Intermediate Results 1.1:*** Area of forestlands and corridors under biodiversity monitoring by SFD using protocol developed by the project | | Ha | 0 | 0 | 5,000 | 10,000 | 25,000 | 25,000 | 25,000 | Annual | Review of monitoring data and information | PMU | |
| ***Intermediate Results 1.2:*** Participating states with carbon stock measurement and monitoring system supported by the project operational | | Number | 0 | 0 | 0 | 1 | 2 | 2 | 2 | Annual | Review of standard and custom reports from system | PMU | |
| ***Intermediate Results 1.3:*** Government institutions provided with capacity building support to improve management of forest resources | | Number | 0 | 4 | 6 | 8 | 8 | 8 | 8 | Annual | Project and activity records | PMU | |
| **Intermediate Result (Component 2):** ***Investments for improving forest quality in selected landscapes*** | | | | | | | | | | | | | |
| **Intermediate Results Indicators** | ***Core*** | ***Unit of Measure*** | ***Baseline 2015*** | **2017** | | | | | | ***Frequency*** | ***Data Source / Methodology*** | ***Responsibility for*** | ***Description /definition*** |
| | | | | **2017** | **2018** | **2019** | **2020** | **2021** | **End Target** | | | | |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | ***Data Collection*** | |
| ***Intermediate Results 2.1:*** New areas outside protected areas managed as biodiversity-friendly | | Ha | 0 | 0 | 5,000 | 12,000 | 20,000 | 30,000 | 30,000 | Annual | Field-based survey<br><br>Communities' participatory monitoring<br><br>Review of management plans<br><br>Direct observation | PMU | |
| ***Intermediate Results 2.2:*** Landscape area restored through treatment of 10,000 ha through project support | | Ha | 0 | 0 | 0 | 15,000 | 30,000 | 50,000 | 50,000 | Annual | Project and activity records<br>Communities' participatory monitoring | PMU | |
| **Intermediate Result (Component 3*): Scaling-up sustainable land and ecosystem management in selected landscapes*** | | | | | | | | | | | | | |
| **Intermediate Results Indicators** | ***Core*** | ***Unit of Measure*** | ***Baseline 2015*** | ***Cumulative Target Values*** | | | | | | ***Frequency*** | ***Data Source / Methodology*** | ***Responsibility for Data Collection*** | ***Description /definition*** |
| | | | | **2017** | **2018** | **2019** | **2020** | **2021** | **End Target** | | | | |
| ***Intermediate Results 3.1:*** Government agencies using the online land degradation and desertification indicator portal for reporting | | Number | 0 | 0 | 0 | 1 | 3 | 5 | 5 | Annual | Review of reports from government agencies | PMU | Government agencies: SFD, Department of Land Resources, Agricultural Extension Department |
| ***Intermediate Results 3.2:*** | | Number | 0 | 0 | 0 | 3 | 6 | 10 | 10 | Annual | Review of ICFRE platform | PMU | |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SLEM best practices disseminated on ICFRE knowledge platform | | | | | | | | | | | | | |
| ***Intermediate Results 3.3:*** Land users adopting sustainable land management practices as a result of the project | | Number | 0 | 0 | 500 | 1,500 | 2,500 | 5,000 | 5,000 | Annual | Field-based survey Communities' participatory monitoring Review of management plans Direct observation | PMU | |

## Annex 1: Detailed Project Description

1. The forestry and land management (particularly nonfarm lands and CPRs) are facing a number of barriers that hinder reforming the approaches to manage these valuable and vulnerable natural resources. Some of the barriers identified include:

i. **The skill barrier:** Despite the presence of the Forest Department in each State, there is a critical gap in terms of available skills for undertaking ecosystem-based management approaches, and for preparing Forest Management and Working Plans that reflect existing demand-supply equations. Furthermore, there are no mechanisms for regular monitoring of keystone rare, endangered, threatened (RET) and vulnerable species, except for a few mega fauna that are estimated during annual/biannual wildlife census exercises. *The proposed investments will address this barrier at the state and community level. The promotion of use of spatial approaches in developing biodiversity and land management plans within GIM landscapes will include provision for assessment of forest/habitat quality, including monitoring the population of keystone (or RET) species. At the community level, the project is to support the development of Peoples Biodiversity Registers (PBR) that inventory the local biodiversity resources. In addition, the project will support introducing and scaling up of SLEM best practices for increasing land-based productivity, especially for nonfarm lands that primarily are made up of CPR. These approaches collectively will contribute to addressing the skill barrier.*

ii. **The lack of strategic direction and knowledge barrier:** There is an absence of a work charter and defined roles and responsibilities at various levels of government in the forest sector. For instance, whatever limited patrolling is undertaken by the frontline staff, field reporting has been of limited use due to few opportunities and inadequate training facilities and scientific monitoring protocols. Consequently, there is very little or no focus on building new scientific knowledge and addressing issues such as invasive alien species and reporting on habitat quality. Often, the frontline forest staff have little understanding and exposure on topics such as economic valuation of the forest resources they protect. *The capacity-building investments proposed in the project will help develop monitoring protocols and training for frontline staff. These training modules will focus on assessment of habitat quality as well as reporting on the extent of invasive species spread within a given habitat and ecosystem. Necessary training and capacity building at the community level will also be undertaken to ensure that introduced SLEM best practices are implemented and monitored properly.*

iii. **The technology and tool barrier:** There is gap in use of new and modern planning tools and technologies in many forest departments and in relevant national agencies and their local counterparts. Forest management activities continue to be guided by earlier plantation forestry ideas. There is limited focus on issues of forest quality and reintroduction of native species mix to restore degraded ecosystems. *The project will sharply focus on incorporating the use of new technology and tools for preparing spatial forest quality improvement plans and introducing the concept of measurement of ecosystem services. Not only will this help develop an estimate of economic value of the ecosystems, it will create wide awareness in the policy and decision-making levels to reorient investments in forestry.*

iv. **The sustainable resource use barrier:** Lack of awareness and training for resource users allows the continuation of unsustainable resource harvesting practices, which continues to degrade forest ecosystems. There are limited skills in state forest departments for developing local stakeholder-based resource use models for sustainable utilization and benefit sharing of natural resources. *The project proposes to address this issue as it is related closely with income*

*generation for forest-dependent communities. From building on existing best practices on land management and sustainable resource use to value addition and marketing of NTFP, resources will be undertaken through project funds. Sustainable NTFP resource-use frameworks will be developed which should allow some degree of customization to suit local conditions and existing community practices. The project's efforts in establishing Community Reserves are designed to demonstrate mitigation of further exploitative land use changes through improved ownership and management by local communities.*

v. **The coordination and governance barrier:** There is poor coordination at the landscape level among various line agencies. This results in opportunity loss for convergence and building on each other's programs that could improve returns on investments while building tenets of sustainability in the landscape. *The project, through GIM, will support efforts for convergence with other flagship schemes and programs, such as the National Rural Employment Guarantee Agency (NREGA) and IWMP. In addition, convergence with national missions on bamboo and horticulture provide opportunities to increase the productive potential of open and degraded forests and CPRs. The use of technology, participatory approaches for ecosystem services improvement, and involvement of technical resource agencies will help improve coordination and governance.*

**Project Area and Scope**

2. The proposed ESIP will be implemented in two states - Madhya Pradesh and Chhattisgarh - and will cover 50,000 ha for forest landscape quality improvement (through direct improvement of about 10,000 ha) and an additional 25,000 ha for scaling up of SLEM best practices in private land holdings and CPR. The project will also not invest inside protected areas but will work in buffer areas, and specifically in functional biological corridors linking different protected areas. The project will adopt GIM landscapes as its operational landscapes but will introduce additional filters for final area selection. Forest grids that are facing high levels of projected vulnerability to climate change will be primarily targeted under ESIP. In addition, the criteria will also include filters on presence of globally significant and threatened species, socio-economic, inclusiveness, forest type, and their degradation status and anthropogenic pressures for fine tuning the selection of the project areas. Many of the proposed investments will be geographically targeted in biological corridor areas that are remote, fragmented, and often poorly connected. A socio-economic profile of rural/urban households and per capita incomes in Madhya Pradesh and Chhattisgarh are given below in Table B.1 and will serve as baselines for impact assessment.

**Table B.1: Profiles of Rural and Urban Income in Madhya Pradesh and Chhattisgarh**

| States | Household Income (Rs) | | | Per Capita Income (Rs) | | |
|---|---|---|---|---|---|---|
| | Rural | Urban | Total | Rural | Urban | Total |
| Madhya Pradesh | 18,025 | 33,700 | 20,649 | 3,530 | 6,328 | 4,125 |
| Chhattisgarh | 21,900 | 59,000 | 23,848 | 4,800 | 12,000 | 5,306 |
| All India | 22,400 | 51,200 | 27,857 | 4,712 | 11,444 | 5,999 |
| Source: IHDS Survey, 2004-05 | | | | | | |

3. The project's scope includes assessing vulnerabilities due to climate change in terms of potential impacts on forest composition and structure, and thereby on productivity, and informs GIM for adopting successful approaches for improving forest quality and cover, thereby enhancing ecosystem services, measured as carbon sequestered.

**Additional Carbon Sequestration Benefits Contributing to India's INDC**

4. *The GEF incremental funding sequesters additional carbon.* The project presents a good opportunity to improve the carbon sequestration in the entire target area of GIM through demonstrative pilots.

5. According to the India State of the Forest Report (ISFR 2011), the annual incremental carbon accumulation in India's forests stands at 59.2 Mt (217.07 Mt $CO_2$ equivalent). While these estimates are for the entire Indian forests, another study[10] lists carbon stocks of 125.02 Mt, 105.19 Mt and 114.18 Mt for the years 2003, 2005 and 2007 respectively in the Central Indian Highlands (harboring 10.49 percent of India's forest cover at 80,788 sq km). Taking the biomass carbon pools (after Ravindranath and Murthy 2010[11]) above ground growth rates of 1.5 t/ha/yr for moderately dense and 3.56 t/ha/yr for degraded open forest for the baseline, provides an average of 2.53 tC/ha/yr. This also takes into consideration the Intergovernmental Panel on Climate Change (IPCC) default value for below ground biomass (which is 0.26 of above ground biomass (AGB), 0.5 t/ha/yr for litter and 0.22 t/ha/yr for soil organic carbon. It is assumed that the above ground growth with GEF investments will exceed baseline growth figures (without GEF project cases) by 10 percent per annum for the same forest types. The GEF project will treat 25,000 ha of moderately dense forest and 25,000 ha of degraded open forest in selected landscapes of Madhya Pradesh and Chhattisgarh. Thus the GEF incremental/additional carbon sequestration benefit is higher than what it would be without GEF support, as shown below in Table B.2. For the purpose of the monitoring results, the average of above- and below- ground carbon at 2.78 t C/ha/yr will be achieved with GEF support. While the ESIP will monitor the carbon sequestration for 50,000 Ha supported under it, the project will also support GIM to measure carbon sequestered over 1 million Ha, assuming that complementary GIM investments will replicate the successful ESIP approaches over at least this much area, if not more.

**Table B.2: Carbon Sequestration Benefits by Forest Type**

| Forest Type | Hectares Influenced by Project (ha) | Without Project Annual Growth Rate of Above Ground Biomass (ABG) (t C/ha/yr) | With Project Annual Growth Rate of Above Ground Biomass – 10% over baseline (t C/ha/yr) | Accumulated Above Ground Biomass after 10 years with GEF support (t C in 25000 Ha ) |
|---|---|---|---|---|
| Moderately Dense Degraded Forest | 25000 | 1.5 | 1.65 | 412,500 |
| Degraded Open Forest | 25000 | 3.56 | 3.92 | 980,000 |

[10] Sheikh *et al*: Forest carbon stocks and fluxes in physiographic zones of India. *Carbon Balance and Management* 2011 **6**:15
[11] Ravindranath, N.H. and Murthy, I.K. Greening India Mission, Current Science, Vol.99, No.4, 25 August 2010

**Project Beneficiaries and Stakeholders**

6. The beneficiaries of the proposed project at the community level include about 100,000 forest dwellers and tribal members, small landholders, and marginal farmers, including landless livestock holders. An increased availability of tree and plant biomass, NTFPs, firewood, and small timber for bonafide use is expected. These are available to communities under *Nistar* rights and JFM arrangements in the states of Madhya Pradesh and Chhattisgarh. The immediate and direct benefit of the project will be a significant increase in wage labor opportunities for the local population, particularly during the lean agriculture season, when the bulk of pre-plantation activities are carried out. Development and implementation of sustainable NTFP harvest protocols will result in sustained and higher incomes for NTFP collectors, and greater bargaining capacity at a collective level. Silvopasture development interventions for reversing land degradation will result in an overall net increase in availability of fodder for cattle and other livestock. Individual farmers will also benefit from scaling up SLEM best practices at their farms. At the district/block level, the Forest Development Agencies (FDAs) are the key stakeholders. At the state level, the State Forest Departments will be the project beneficiaries because they stand to benefit from strengthened institutional capacities, use of new technologies, and enhanced carbon measurement and monitoring systems. Key project stakeholders and their roles and responsibilities are described below in Table B.3.

**Table B.3: Roles and Responsibilities of Key Identified Stakeholders**

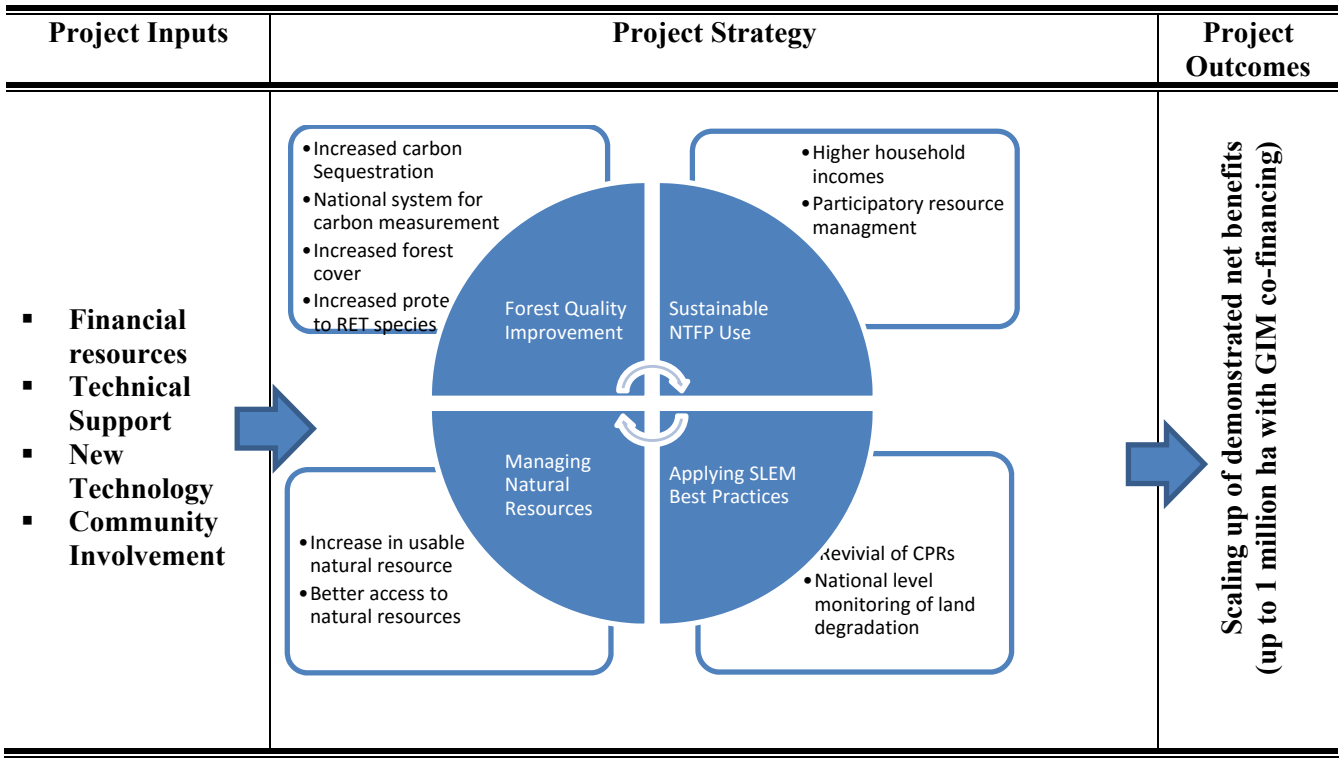
| Key identified stakeholders | Proposed Roles and Responsibilities |
|---|---|
| MOEFCC | MOEFCC will be the nodal ministry, since GIM is also housed under it. It is also the nodal ministry for UNCCD. It will also be responsible for the overall coordination of the project. |
| State Forest Departments and extension agencies (FDA/VVK/KVK) | At the State level, these will be responsible for implementing and monitoring the activities on improving forest quality, applying SLEM best practices and interfacing with the communities for co-management and sustainable NTFP use. These will also help to monitor project outcomes. |
| Other partnering/ implementing agencies | The National Afforestation and Eco development Board (NAEB), the National Biodiversity Authority (NBA), the Forest Survey of India (FSI), and so forth, may be selected as consultants/implementing/resource/partner agencies for specific technical parts of the project. |
| NGOs | Grassroots NGOs may be involved for community mobilization, SHG skill building, training of local communities, and so forth. These will be mostly contracted agencies and will be instrumental in providing implementation support. |
| Panchayati Raj Institutions | These will play a crucial role in overall implementation of reforestation programs where communities are involved by establishing 'community reserves', encouraging equitable benefit sharing, and introducing any new approaches in accessing NTFPs |
| JFMC, BMC, EDC, SHG, and so forth | Formally-recognized local community bodies will also play a critical role in the project, especially in improving the livelihoods and developing sustainable NTFP extraction approaches; these will also be useful in developing value-added products from NTFPs. |

**Project Phasing and Strategy**

7. In order to accomplish the project's development objective, and in view of the capacities within states, a phased approach with respect to various activities will be undertaken. Broadly, the project will be undertaken in two phases. Phase 1 will comprise of building capacities and training, which will be primarily concentrated in years one and two. The first year will be fully devoted to capacity building of local communities and State Forest Departments with no interventions made on field level demonstrations of forest quality restoration and related tasks. Some training may continue in year two as well. The demonstrative pilots will only follow in the second project year, after reforestation plans have been prepared, communities mobilized to provide operational support, monitoring frameworks tested, and native planting material sourced.

8. The ESIP adopts a multi-pronged strategy to address the key barriers identified that can be seen as an interrelated set of approaches delivering the intended outcomes and benefits. (See Table B.4 below). The initial interventions will build capacity by simultaneously focusing on community level institutions (JFMC and BMC) and on State Forest Departments (including FDA). Subsequently, pilots will demonstrate a full cycle of activities, starting from planning to actual implementation. If successful, these demonstrative pilots could be scaled up by the government over a large area across the country through the GIM.

**Table B.4: Project Inputs, Strategies, and Outcomes**



**Project Development Objective (PDO)**

9. The project development objective (PDO) is to improve forest quality, land management and non-timber forest produce (NTFP) benefits for forest dependent communities in selected landscapes in Madhya Pradesh and Chhattisgarh.

**PDO Level Results Indicators**

10. The project development objective will be measured through six key results framework (RF) indicators, complemented by a range of intermediary outcome indicators described in the results framework (Annex 1). The RF indicators represent a small sub-set of indicators within a more comprehensive and strengthened M&E system that will be monitored and assessed within a wider performance and impact measurement system of the project. A set of such monitoring indicators covering key environmental and social parameters are provided in the ESMF & TDF that has been developed for the ESIP. The PDO indicators reflect outcomes attributable to the combined capacity building and investment activities proposed under the project.

i. People in targeted forest and adjacent communities with increased monetary or non- monetary benefits from forests (disaggregated by: female; ethnic minority/indigenous people)
ii. Land area where sustainable land management practices were adopted as a result of the project
iii. Average cumulative carbon sequestered per hectare in areas supported by the project
*iv.* Targeted beneficiary groups engaged in participatory planning under the project
*v.* Direct project beneficiaries, of which female

**Project Components**

11. The proposed GEF project will work closely with GIM to implement three components: (1) capacity building (training and technical assistance); (2) enhancement of forest carbon stocks through forest quality improvement approaches and improved livelihoods for forest dependent communities (investment); and (3) reversal of land degradation on private land holdings and common property resource lands through development of models and capacity for scaling up of sustainable land management practices (interventions) through development of suitable models and capacity for scaling up of such practices. Forest and private land holdings and common property lands for project support and intervention will be defined through a landscape planning approach to facilitate ecological connectivity between biologically rich areas and protected forests. A fourth component will provide project management coordination.

**Component 1: Strengthen capacity of government institutions in forestry and land management programs in Madhya Pradesh and Chhattisgarh (US$4 million)**

12. This component aims to enhance the capacity and skills of the state forest and natural resources management agencies for improved forest and land resource management and thereby ensure sustainable benefits to local communities that depend on these resources. In particular, this component provides technical assistance to: (i) build institutional capacity and capability for planning and efficient delivery of forest ecosystem quality improvement and land management programs; and (ii) develop, test and pilot nation-wide systems for measuring and monitoring forest carbon stocks. A number of training activities are to be supported to build human resource capacities for improved forest management. These include: (i) spatial planning using new tools and technologies for designing sub-projects for mainstreaming

biodiversity in production forests; (ii) training for measuring and monitoring carbon stocks in forests and related lands as well as habitat quality; (iii) training for strengthening of local self-governance institutions, including Joint Forest Management Committees (JFMCs), to establish Community Reserves that could engage in co-management, monitoring and sustainable and equitable access to NTFP resources; and (iv) generation of baselines for making realistic assessments of the dependencies on and livelihoods from NTFPs, and for developing local management plans to include value addition, sustainable use and equitable sharing of NTFP. The project will provide financing for technical assistance, training and training workshops, study tours, and equipment purchases under this component. A list of indicative activities that this component will finance includes:

- Staff training in use of GIS systems and training of JFMC (and others) in preparing sustainable NTFP use plans
- Support for identifying and mapping biodiversity corridors and
- Training and protocol development for biodiversity measurements in select locations for preparing biodiversity management plans, especially in corridors
- Support for revising management plans and new local level management plans for non-forest areas (integration in district level planning)
- Support for strengthening Biodiversity Management Committees (as per the NBA)
- Support for exposure visits for frontline staff/JFMCs for improving management practices
- Technical support (by ICFRE) for developing carbon measurement and monitoring system
- Support for hardware and software procurement and its deployment in the field
- Staff training in carbon measurements and support for additional contractual staff
- Networking with national (FSI) and international institutions for carbon measurements
- Support for developing M&E frameworks and biological indicators
- Support for awareness in local communities on invasive species
- Support for contracting local NGOs for developing sustainable use frameworks
- Training of local frontline staff and JFMCs in applying NTFP frameworks
- Training for strengthening local self-governance institutions, including JFMCs, to establish community reserves for co-management, monitoring, and sustainable and equitable access to NTFP resources
- Strengthening of FDAs and *Van Vigyan Kendras* (VVKs)

**Component 2: Investments for improving forest quality in selected landscapes (US$14.5 million)**

The objective of this component is to improve the quality and productivity of the existing forests to ensure sustained ecosystems services and carbon sequestration, and to ensure the sustainable harvesting and value addition of non timber forest products to provide economic incentives to forest dependent communities that promote forest conservation and sustainable use and improve ecological connectivity between critical biodiversity areas and protected landscapes. This component will complement the ongoing efforts of GIM through demonstrative investments by: (i) improving forest quality using mixes of native species; and (ii) developing models for sustainable utilization of NTFPs in collaboration with local forest communities. This component is to facilitate mainstreaming of biodiversity objectives in degraded forestlands and non-forestlands in the government's program to establish sustainable forest and land management in project areas. The project will finance on-the-ground investments in nursery development, planting materials, community labor for land preparation for forest planting. In addition, technical support, and equipment and training for sustainable NTFP utilization will be financed. Provisions are made to undertake specialized activities and contract technical partners, as may be needed during implementation. There are two sub-components:

13. ***Sub-component 2.1: Enhancing and restoring carbon stocks in forestlands***: This component will support investments for improving, upgrading, and modernizing select forest nurseries for raising high-quality native species and planting material. It will introduce and support new and innovative processes for undertaking soil preparation, forest enrichment planting, and protection works in different degraded forest types on landscapes in production forests as well as on non-forest lands. This sub-component will also undertake demonstrative pilots for rehabilitation of degraded forest patches and simultaneously integrate sustainable resource use practices. A list of indicative activities that this component will finance includes:

- Upgrading/modernization of select forest nurseries to raise high-quality native species planting material
- Building institutional capacity on new processes for undertaking soil preparation, forest enrichment planting and protection work in degraded production forests, as well as on non-forestlands, and implementation of these processes at the community level
- Investments in restoration work on degraded forestlands
- Establishment of a forest carbon monitoring system
- Technical support for mapping and monitoring RET species

14. The landscapes for undertaking demonstrative investments for the first two years of the project have been identified and are listed in Table B.5 below. A total of 50,000 hectares of landscapes are proposed to be covered under this component (actual forest covered about 10,000 hectares). The area covered by replicating good practices piloted under ESIP from GIM resources across other landscapes in other states will also be counted towards the target of area covered under forest restored.

**Table B.5: Landscapes Identified for Undertaking Demonstrative Instruments**

| Forest Division (Range) | Landscape ID (Vulnerability Class) | Forest Area (Ha) | | | Revenue Area (Ha) | Total Area of landscape (Ha) |
|---|---|---|---|---|---|---|
| | | Very Dense | Moderately Dense | Open | | |
| **CHHATTISGARH** | | | | | | |
| KAWARDHA (PANDRIA WEST) | KWD-1 (3-2) | 0.00 | 2225.75 | 3011.91 | 2450.03 | 7687.69 |
| BILASPUR (BILASPUR) | BSP-1 (2-2) | 0.00 | 2565.26 | 1443.33 | 1431.56 | 5440.15 |
| MARWAHI (MARWAHI) | MWH-1 (2-2) | 0.00 | 1561.14 | 1441.15 | 3065.18 | 6067.47 |
| KATGHORA (PALI) | KTH-1 (2-2) | 839.92 | 2375.07 | 519.18 | 1244.24 | 4978.41 |
| BASTAR (CHITRAKOTE) | BTR-1 (3-2) | 0.00 | 3923.31 | 1231.41 | 1529.73 | 6684.45 |
| KANKER (NARHARPUR) | KKR-1 (3-2) | 0.00 | 1146.10 | 2405.87 | 4265.67 | 7817.64 |
| SOUTH KONDAGAON (MAKRI) | SKD-1 (2-2) | 2059.12 | 2670.12 | 1893.32 | 1005.01 | 7627.57 |
| RAIPUR (SONAKHAN) | RPR-1 (3-2) | 12.55 | 1461.40 | 1797.32 | 2370.04 | 5641.31 |
| EAST RAIPUR (FINGESWAR) | ERP-1 (3-2) | 0.00 | 138.90 | 3589.28 | 4146.32 | 7874.50 |
| NORTH SURGUJA (RAGHUNATHNAGAR) | NSG-1 (2-2) | 0.00 | 826.34 | 1889.85 | 3910.69 | 6626.88 |
| SOUTH SURGUJA (SITAPUR) | SSG-1 (3-2) | 0.00 | 1288.14 | 1049.74 | 3894.80 | 6232.68 |
| **Total** | | **2911.59** | **20181.53** | **20272.36** | **29313.27** | **72678.75** |

| Forest Division | Forest Area (Ha) | | | Revenue Area (Ha) | Total Area of Landscape (Ha) |
|---|---|---|---|---|---|
| | Very Dense | Moderately Dense | Open | | |
| **MADHYA PRADESH** | | | | | |
| SATNA | 20 | 10467 | 7967 | 64038 | 82492 |
| UMARIA | 200 | 12311 | 5867 | 21635 | 40013 |
| DINDORI | 200 | 16422 | 6578 | 42374 | 65574 |
| S. BALAGHAT | 300 | 14150 | 9344 | 21143 | 44937 |
| HOSHANGABAD | 30 | 14356 | 9433 | 42696 | 66515 |
| SOUTH SEONI | 0 | 7844 | 7706 | 29276 | 44826 |
| NORTH BETUL | 50 | 6830 | 5744 | 23219 | 35843 |
| W. BETUL | 50 | 6444 | 4444 | 25524 | 36462 |
| RAISEN | 100 | 17433 | 12044 | 62079 | 91656 |
| SEHORE | 0 | 8222 | 8044 | 56809 | 73075 |
| DHAR | 0 | 2011 | 4489 | 84029 | 90529 |
| JHABUA | 0 | 3733 | 5622 | 65971 | 75326 |
| BADWANI | 0 | 4322 | 5689 | 50224 | 60235 |
| SENDHWA | 0 | 2111 | 2778 | 24527 | 29416 |
| SOUTH SAGAR | 27 | 4770 | 4304 | 400 | 9501 |
| S. PANNA | 35 | 8889 | 5833 | 23844 | 38601 |
| SHEOPUR | 14 | 20844 | 19367 | 32938 | 73163 |
| SHIVPURI | 61 | 12656 | 14278 | 84922 | 111917 |
| **Total** | 1087 | 173815 | 139531 | 755648 | 1070086 |

15. ***Sub-component 2.2: Developing community-based models for sustainable utilization of NTFP:*** This sub-component will support formalized allocation of usufruct rights, value addition and marketing of traditional NTFP resources, and creation and management of Community Reserves. The result will be GIS-based management plans for Community Reserves incorporating participatory monitoring of biodiversity. The modalities for establishing community reserves will follow the National Wildlife (Protection) Act (as amended). This sub-component will work with various resource user groups, women Self Help Groups, and other local stakeholders to understand the challenges of NTFP supply chains, identify potential interventions to improve NTFP marketing, and develop strategies for enhancing incomes from sustainable NTFP utilization. Since tribal and other NTFP collectors have been identified as key stakeholders of the project, a participatory approach is to be undertaken for implementing this sub-component. A list of indicative activities that this component will finance includes:

- Generation of community level baseline assessments of livelihood dependency on NTFPs for developing local plans for sustainable and equitable use of NTFP in 10 communities
- Value addition investments to traditional NTFP resources
- Support for creating at least two community reserves
- Capacity building support for NTFP user groups, women's self-help groups (SHG)
- Support for GIS based management plans for community reserves incorporating participatory monitoring of biodiversity

**Component 3: Scaling-up sustainable land and ecosystem management in selected landscapes (US$3.74 million)**

16. The main objectives of this component are to prevent land degradation and desertification and increase above-ground forest carbon stock through a combination of investments to implement and scale-up tried-and-tested SLEM best practices (particularly drawing from lessons and best practice derived from the GEF-supported on-going SLEM project) in private land holdings and CPR lands, to increase national capacity for monitoring land degradation and track associated indicators, and to generate knowledge exchange on SLEM approaches. The goal is to benefit small and marginal farmers and other rural poor and to develop a national knowledge platform for supporting a community of practice on SLEM. These activities are designed to overcome the twin challenges of arresting land degradation and meeting food security targets. This component will finance on-the-ground sustainable land management investments in private land holdings and common property lands and enhance knowledge and capacity for further scaling up of these approaches at the national level. It will draw heavily from the best practices and approaches that were tried and successfully developed under the on-going GEF supported SLEM project. This component can help increase national capacity for monitoring the status of land degradation and desertification and SLEM outcomes, as well as the results of UNCCD action programs at the country level.

17. A list of indicative activities that this component will finance includes:

- Application and scaling up of the existing and tested SLEM best practices such as participatory watershed management, approaches to improve soil fertility and land productivity, restoration of overgrazed pastures and other common lands, and improvement of habitat quality in micro-watersheds.
- Training support to beneficiaries and extension workers for applying identified SLEM best practices
- Obtaining input for applying identified SLEM best practices (seeds/seedlings/organic inputs, and so forth)
- Financing of small works for improving common property resources (construction of check dams/gully plugs/soil-moisture conservation works/drainage line improvement, and so forth)
- Support for agro-forestry based activities through stakeholder awareness, capacity building and technological support (improved seeds/saplings/ techniques), value addition and market linkages with technological institutes such as ICAR, the Agriculture Science Center *Krishi Vigyan Kendra (*KVK), state agriculture departments, and CBOs
- Capacity building of VVKs for promoting restoration of degraded common property resources, sensitizing workshops, creation of new extension material, and so forth
- Community capacity building and technical support for afforestation in degraded forests and establishing linkages with other afforestation programs
- Development of an online national reporting database/MIS for capturing trends and status of key impact and performance indicators on land degradation and desertification, and provide training (national/sub-national/agency) on the use of the national online portal
- Development of a national database on SLEM practitioners for the development of institutional and individual networks
- Development of an interactive web-based platform with direct access and use at the farm level with help from extension services
- Development of a community of practice by connecting stakeholders with common interests in adopting and expanding SLEM approaches

- Organization and implementation of learning events at the interface of the community, farm, and common lands, and provision of technical support for the preparation and dissemination of SLEM knowledge products
- Development of software and hardware infrastructure for dissemination of best practices to end users .

18. For the past several years, various agencies have been working on developing approaches/models/practices to address the issue of land degradation both in private farmlands and CPR areas. Several of these have been successfully tested and documented. Some of these could be accessed at www.icfre.org or www.ccarai.org, among others. A select list of available best practices is also given in Table B.6 below. This list describes SLEM best practices that can be replicated in ESIP project areas.

**Table B.6: SLEM Best Practices**

| S. No. | Best Practice | Technical Features | Agency(ies) |
|---|---|---|---|
| 1. | Madhya Pradesh: Climate-Proofing Fish Farming | • Guidelines for designing ponds with increased depth and reduced sizes to counter evaporation losses due to climate change<br>• Specific fish species recommended | GIZ and MOEFCC |
| 2. | Madhya Pradesh: Eco-Restoration and Institution Strengthening | • Strengthening of village institutions for sustainable resource management<br>• Vulnerability assessment to identify low-cost and resource-friendly adaptation options<br>• Use of stone-exits and stone-bunds for soil conservation | GIZ and MOEFCC |
| 3. | Rajasthan: Improving Pasture Management and Livestock Rearing | • Introduction of group pasture management activities for increased fodder | GIZ and MOEFCC |
| 4. | West Bengal: Livelihood Diversification Through Integrated Production Systems | • Introduction of integrated crop production systems and diversification – new varieties and changed timing of farm operations<br>• Cropping complemented with fisheries and livestock rearing | GIZ and MOEFCC |
| 5. | Orissa: Agro-Biodiversity Innovations for Sustainable Land and Ecosystem Management | • Identification of Indigenous Traditional Knowledge Systems by using flood-resistant local rice varieties and use of local low-cost resources for disease resistance<br>• Complement agriculture by introducing backyard poultry and pisciculture | ICAR/NAIP |
| 6. | Rajasthan: Chauka System for Management of CPR for Sustainable Livelihood | • Slope and terrain modification (land shaping) for reducing water erosion and channeling rainwater for livestock use<br>• Use of indigenous grasses and other fodder species – steps for drought proofing | Gram Vikas Navyuvak Mandal |

| S. No. | Best Practice | Technical Features | Agency(ies) |
|---|---|---|---|
| 7. | Gujarat: WADI – A Tree Based Farming System Model | • Systematic regeneration of wasteland through integration of non-pesticide management with farm ponds, bunding, gully plugging, soil moisture conservation<br>• Most beneficial for small and marginal farmers to diversify incomes sources | BAIF, India |
| 8. | West Bengal: Land Shaping for Climate Change Adaptation and Sustainable Livelihoods in Sundarbans | • Excavation of low lying area for pond development and raising of other land<br>• Guiding principles for pond embankment<br>• Assured irrigation for crop diversification | ICAR/NAIP (GEF) |
| 9. | Nagaland: Integrated Farm Development for Sustainable Land Productivity | • Integrates livelihood and ecological security<br>• Combines agricultural innovations with horticulture, NTFP trade, small ruminants with access to markets | Soil & water Conservation Directorate/SLEM-GEF |
| 10. | Madhya Pradesh: Rehabilitation of Degraded Bamboo Forests | • Introduces new techniques for regenerating and managing bamboo forests | MP Forest Department/SLEM-GEF |

**Component 4: Project Management (US$2.4 million)**

19. A modest Project Management Unit (PMU) will be established to coordinate and monitor project implementation and progress towards the envisaged development objective. The PMU will be housed within the Division/Cell responsible for implementing the GIM within the MOEFCC, so as to ensure that there is complete complementarity between the project and GIM and that co-financing benefits are supportive rather than competitive. Project Implementing Units (PIUs) will be established within the State Forest Departments of Madhya Pradesh and Chhattisgarh and within ICFRE. Other than the core Government staff, this component will support hiring of specialized staff within the PMU and PIUs for project management, technical advice, and communications. A list of indicative activities that this component will finance includes:

- Contractual staff for project management and fiduciary obligations
- Professional staff (forestry/land management/restoration ecologist, and so forth)
- Provisions for undertaking special studies
- Support for office equipment

20. The ESIP project design and identified investments will go a long way in supporting the National Biodiversity Targets, the Aichi Targets and the CBD COP decisions. Several of these will receive indirect support, but a few of them stand out that will be served directly through ESIP implementation. The ESIP contribution to these is given below in Table B.7. The ESIP is also aligned with a number of GEF 5 outcomes (see Table B.8 below).

**Table B.7: ESIP Contributions to India's National Biodiversity Targets, Aichi Targets, and CBD COP Decisions**

| ESIP Activity | Contribution to | | |
|---|---|---|---|
| | National Biodiversity Target | Aichi Target | COP Decision |
| • Participatory approach for developing sustainable NTFP use frameworks<br>• Involvement of local communities in afforestation and conservation efforts<br>• Support to Peoples Biodiversity Registers | ***Target 11***<br>By 2020, national initiatives using communities' traditional knowledge relating to biodiversity are strengthened, with a view to protecting this knowledge in accordance with national legislations and international obligations | ***Target 18***<br>By 2020, the traditional knowledge, innovations and practices of indigenous and local communities relevant for the conservation and sustainable use of biodiversity, and their customary use of biological resources, are respected, subject to national legislation and relevant international obligations, and fully integrated and reflected in the implementation of the Convention with the full and effective participation of indigenous and local communities, at all relevant levels | ***XI/14.Article 8(j) and related provisions***<br>***B17.*** Encourages parties to take concrete actions to facilitate participation by indigenous and local communities in the development and implementation of national biodiversity strategies and action plans and other work under the Conventions |
| • Identification and restoration of vulnerable forest landscapes<br>• Use of new tools and technology in designing restoration approaches | ***Target 3***<br>Strategies for reducing rate of degradation, fragmentation and loss of all natural habitats are finalized and actions put in place by 2020 for environmental amelioration and human well-being | ***Target 5***<br>By 2020, the rate of loss of all natural habitats, including forests, is at least halved and where feasible brought close to zero, and degradation and fragmentation is significantly reduced<br>***Target 15***<br>By 2020, ecosystem resilience and the contribution of biodiversity to carbon stocks has been enhanced, through conservation and restoration, including restoration of at least 15 per cent of degraded ecosystems, thereby contributing to climate change mitigation and adaptation and to combating desertification | ***XI/16.Ecosystem restoration***<br>***1(C).*** Identifying degraded ecosystems that have the potential for ecosystem restoration, bearing in mind that such areas may be occupied or used by indigenous and local communities<br>1 (D). Promoting best practices and appropriate technologies that can be productively applied to ecosystem restoration |
| • Investments on NTFP value | ***Target 2***<br>By 2020, values of biodiversity are | ***Target 2***<br>By 2020, at the latest, biodiversity values have been | ***XI/22.Biodiversity for poverty eradication and development*** |

| ESIP Activity | Contribution to | | |
|---|---|---|---|
| | National Biodiversity Target | Aichi Target | COP Decision |
| addition to increase dependent people's incomes | integrated in national and state planning processes, development programs, and poverty alleviation strategies | integrated into national and local development and poverty reduction strategies and planning processes and are being incorporated into national accounting, as appropriate, and reporting systems | ***8.*** Encourages Parties and all partners to promote biodiversity and development projects that empower poor and vulnerable people, particularly women and indigenous and local communities, for sustainable development and poverty eradication<br>***X/6.Integration of biodiversity into poverty eradication and development***<br>***5.*** Welcomes the increased efforts and attention to mainstreaming biodiversity and ecosystem services into poverty eradication and development |

**Table B.8: ESIP's alignment with GEF 5 Strategy outcomes**

| Focal Area Objectives | Expected FA Outcomes | Expected FA Outputs | Role of ESIP |
|---|---|---|---|
| **BD 2** | **Outcome 2.1:** Increase in sustainably managed landscapes that integrate biodiversity conservation | **Core Output 1:** Policies and regulatory frameworks (two) production sector | Development of biodiversity monitoring framework; scaling up of SLEM best practices |
| | | | |
| **CC 5** | **Outcome 5.2:** Restoration and enhancement of carbon stocks in forests and non-forest lands | **Core Output 1:** Carbon stock monitoring systems established | Support to carbon sequestration measurement and capacity building of staff in carbon monitoring |
| **SFM1** | **Outcome 1.2:** Good management practices applied in existing forests | **Core Output 2:** Forest area (50,000 ha) under sustainable management separated by forest type | Support for management practices on restoration, NTFP use and SLEM approaches |

| Focal Area Objectives | Expected FA Outcomes | Expected FA Outputs | Role of ESIP |
|---|---|---|---|
| **SFM2** | **Outcome 2.1:** Enhanced institutional capacity to account for GHG emission reduction and increase in carbon stocks | **Core Output 2:** National forest carbon monitoring systems in place (at least in 2 states) | Support for developing carbon monitoring system and a reporting system on land desertification and degradation |

**Lessons Learned and Reflected in the Project Design**

The project design took advantage of a number of lessons learnt from ongoing and earlier projects. How these are integrated in the project is described in Table B.9 below.

**Table B.9: Lessons learnt and integrated in project design**

| | |
|---|---|
| **1. Lesson Learned** | ***Building local stakeholder ownership is a pre-requisite to project implementation and intended outcomes.*** |
| **Background and Context** | The Bank supported (ongoing) BCRLIP adopted the approach for building local stakeholder ownership of the project by way of developing participatory village level micro plans that cater to the expressed needs of the local population. This significantly increased participation in project activities while providing critical grant funding to meet some of the livelihood needs of the people. |
| **Integration with Project Design** | During the preparation phase itself, project officials held consultations in the actual GIM landscapes where the proposed project is to be implemented. During implementation, the same set of stakeholders can benefit from proposed investments, thereby developing mutual trust, confidence, and ownership of project activities, which is a critical ingredient for its success. |
| **2. Lesson Learned** | ***Participatory conservation management approaches yield better ecological and economical outcomes.*** |
| **Background and Context** | The Bank supported IEDP clearly demonstrated that a shift from command and control approaches to participatory conservation management results in better ecological outcomes measured as stability or increase in endangered flora/fauna, reduced incidence of forest fires and poaching, and increased vegetation cover. This is achieved, as local communities experience higher incomes and improved and sustained flows of benefits from forest resources through their direct participation in conservation management that provides new opportunities for livelihoods. Examples include: community managed ecotourism in the Periyar Tiger Reserve (Kerala); training of local youth as nature guides for generating regular employment in the Pench Tiger Reserve (Madhya Pradesh); utilizing voluntary labor to build stonewalls for prevention of crop raiding by wildlife in Ranthambhore Tiger Reserve (Rajasthan); and establishing mango orchards to change cropping patterns in Gir (Gujarat). |
| **Integration with Project Design** | A strong community centric consultation approach was adopted for developing participatory plantation plans in GIM landscapes that can directly improve availability of locally traded NTFP for self-use and trading and that as a result can provide for better patrolling and protection of plantation subplots. |

| | |
|---|---|
| **3. Lesson Learned** | ***Ecological connectivity between protected areas ensures gene flow.*** |
| **Background and Context** | Recent research by scientists in the central Indian highlands demonstrated that biological corridors are playing an important role in ensuring gene flow across physically separated protected areas, which is critical for the continuation of evolutionary processes and reduction of inbreeding. |
| **Integration with Project Design** | Key biological corridors within GIM landscapes will be selected for demonstrative pilot projects for improvement of forest quality and reducing land degradation within corridors for ensuring their functionality is maintained. |
| **4. Lesson Learned** | ***Creating systems to monitor forest carbon stocks will enhance afforestation efforts, allocation and targeting of resources.*** |
| **Background and Context** | While afforestation and associated forest management programs have been demonstrated to provide local benefits, the degree to which they have been able to be used for tracking actual improvements in the health of forests, as well as for articulating linkages and relevance to global environmental benefits, has been limited due to a lack of systems to monitor forest carbon stocks. Developing such systems and capacity in India is therefore desirable, as it will: (i) allow MOEFCC to better justify sustaining these investments in the long term; (ii) enable India to access international carbon and REDD (United Nations Collaborative Program on Reducing Emissions from Deforestation and Forest Degradation in Developing Countries) financing; (iii) provide a valuable new metric to be able to truly gauge the extent of success in reversing forest degradation; and (iv) help improve the targeting of financial and technical resources in forest types for maximum gains in carbon sequestration. |
| **Integration with Project Design** | A complete system of measuring and monitoring carbon sequestration in different forest types will be established in two states that have the potential for nation-wide scaling up using government funding. |
| **5. Lesson Learned** | ***Sustainable management of NTFPs requires building community capacity.*** |
| **Background and Context** | Experiences from SLEM under the World Bank and in projects led by the United Nations Development Project (UNDP), (for instance, a project in Madhya Pradesh using Bamboo, a National Agriculture Innovation Project conducted in several states, and a Watershed Development project in Uttarakhand) clearly show that solutions to address issues of NTFP emanate from building increased capacity for community-level planning around NTFP harvesting and uses so as to produce value-added products using the raw materials, and also from developing organized markets to enable households to be able to obtain the value addition. Another World Bank funded project, the Andhra Pradesh Forestry Project (APFP), demonstrated that building community capacity can result in more effective community management of forests, improved empowerment, positive changes in underlying state policies, and benefits to communities from greater access to markets for timber and NTFPs. |
| **Integration with Project Design** | A strong element of project design integrates the principle of community engagement in planning and use of NTFP. Investments are planned to build community capacity for establishing and managing Community Reserves. |
| **6. Lesson Learned** | ***Knowledge exchange between farm communities enhances resilience to climate change and improves farming practices.*** |

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| **Background and Context** | Several experiences globally have shown that knowledge management and exchange results in informed decision making regarding cultural practices, innovation, and adoption of best practices. Examples can be seen in the World Bank-funded Andhra Pradesh Drought Adaptation Initiative, the Karnataka Watershed Project (Sujala), and various events supported under the TERRAFRICA platform. A similar example is also available in Zambia, where success of conservation agriculture is based on small-scale demonstrations utilizing strong technical support and sharing results for scaling up practices. |
| **Integration with Project Design** | A sub-component is specifically designed to create a Community of Practice through a national knowledge network that involves local extension services to freely provide best practice information focusing on reversing land degradation, increasing climate resilience, improve land based productivity, and undertake participatory natural resource management. |
| **7. Lesson Learned** | ***Several small operations end up being demonstrative pilots without opportunities for scaling up.*** |
| **Background and Context** | The World Bank and other GEF Implementing Agencies have undertaken several small operations that appear fragmented, only cover small geographic areas, and after completion do not get noticed. Despite providing incremental additional GEF funding for developing innovative solutions for complex challenges, when these activities are completed they are recognized only as demonstrative projects offering little or no scaling up results. |
| **Integration with Project Design** | The project design has taken a proactive step of merging the two GEF operations of ESIP and SLEM 2 into one, with a view to obtaining strategic benefits and higher achievement of the Global Environment Objective (GEO). The first strategic benefit is that SLEM best practices can be fully integrated into the GIM with a possibility of scaling up over millions of hectare, thereby significantly increasing progress towards meeting the GEO. The second strategic benefit is that the investments in land degradation can simultaneously benefit from complementary investments on forest ecosystem services. This results in making a positive impact over a larger part of the landscape, as opposed to fragmented application of best practices on small private landholdings. |
| **8. Lesson Learned** | ***Direct investment support to farmers linked with facilitation and training can significantly build up their technical and entrepreneurial capacity.*** |
| **Background and Context** | Direct investment support to farmers allows a wide range of innovations to be implemented, and under appropriate conditions, may increase innovation among smallholders and supporting stakeholders. A variety of funding schemes have been tested and adapted in several countries throughout Africa, Asia, and Eastern Europe with specific types of farmers, operations, and support mechanisms. Innovation Funds work better whenever decentralized settings are used and where support institutions have the necessary skills and experience to implement them. Funding mechanisms can be made more sustainable by embedding them within prevailing mechanisms for fostering innovation. The Bank's Moldova Agricultural Competitiveness Project is helping to enhance key elements of the country's agriculture sector competitiveness by focusing on important aspects of institutional development and on direct support to farmers. With GEF funding, the project can provide institutional support, capacity building, and financial support for SLEM. Global environmental benefits in the |

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|---|---|
| | Moldova project can be achieved because of improved stability of agro-ecosystems, increased levels of carbon sequestration, and reduced land degradation including erosion. |
| **Integration with Project Design** | This project will provide direct support, through demonstrative investments for the implementation and scaling up of proven SLEM best practices in the project area. The project will build these investments by drawing from best practices and approaches from on-going GEF supported projects. The proposed project will also provide technical assistance for institutional capacity building and for supporting training activities for improved forest management. |
| **9. Lesson Learned** | ***A multi-stakeholder approach to project implementation with partnerships between state agencies and civil society is valuable.*** |
| **Background and Context** | The Bank supported Sahel and West African Program (SAWAP), in collaboration with TerrAfrica and the GEF, clearly demonstrated that multi-stakeholder approaches can improve project performance and accountability, increase partners' capacities, and provide new learning opportunities for project beneficiaries. The (completed) Niger Community Action Program (CAP) was designed to provide poverty reduction and improved governance by stimulating economic growth, improving natural resource management, raising levels of food security, and empowering communities. As part of preparation activities, GEF financed a multi-stakeholder study analyzing the existing institutional and legislative frameworks for NRM. GEF funds were used to support the project component focusing on decentralization in natural resource management. |
| **Integration with Project Design** | The proposed project will support multi-stakeholder consultations for developing a national research agenda, and will implement innovative approaches and field based activities. The project, through one of its sub-components, will also coordinate with civil entities to better understand the challenges to sustainable NTFP utilization. Grassroots NGOs may be involved in community mobilization and in the training of local communities. |
| **10. Lesson Learned** | ***Identifying and highlighting innovative project beneficiaries is an effective way to encourage replication.*** |
| **Background and Context** | As part of the objective to assist local communities in strengthening their local capacity by using their local knowledge, the World Bank Indigenous Knowledge for Development Program provides support to farmers for scaling up the dissemination of the Zai technique in three provinces in central Burkina Faso. The Zai technique was invented by a Burkinabe farmer in the early 1980's by constructing stone bunds and digging 20-30 cm planting holes (tassas/zai) which are then filled with manure. Using this system, farmers in the region have brought back into production approximately 100,000 ha of abandoned and degraded lands. The intervention has also raised yields from an average of 150-300 kg/ha to 400 kg in poor rainfall years, and 700-1000 kg/ha in good rainfall years. Adoption of this technology has enabled the average farming household to shift from an annual cereal deficit of 644 kg to a surplus of 153 kg per year. |
| **Integration with Project Design** | One of the central strategies of this project is to draw from SLEM best practices and approaches, such as the Zai technique, that have been developed elsewhere. These best practices will be screened for suitability to the proposed project's context by analyzing the specific circumstances concerning the selected best practice's implementation terrain, ecosystem, and climate. |

## Annex 2: Implementation Arrangements

**Institutional and Implementation Arrangements**

1. The project will be implemented in the states of Madhya Pradesh and Chhattisgarh. Based on the projected vulnerability of forest grids to climate change impacts, ESIP landscapes for the first two years of project implementation have been identified. In addition, the criteria for landscape identification included using filters on the presence of globally significant and threatened species, socio-economic inclusiveness, forest type and degradation status, and anthropogenic pressures. These are also the identified GIM landscapes. The implementation will be at the following three levels:

2. ***National Level:*** The Division/Cell responsible for the implementation and oversight of GIM is where the PMU has been established. The Mission Director for GIM will also be the National Project Director for ESIP and will be supported by a full time Assistant Project Director. The project will support contracting of specialized staff for procurement, financial management, and safeguards functions, and of core forestry sector experts. The MOEFCC will establish a Project Steering Committee (PSC), which will be headed by the GIM Division. Members of PSC will include representation from the GEF OFP office and from the divisions of CBD, CC, CCD, and IFD. The PSC can also bring on up to five additional members with technical expertise from within MOEFCC. In addition, the PSC could invite up to three external members as special invitees on specialized topics. Representatives of the PSC will meet at least twice a year, and more times as required, and will be the final approving authority for all matters concerning ESIP. The PSC will be established through a Government Order/Memorandum and the first meeting will be held within three months of the project becoming effective. Component 4 (Project Management) will be implemented through this PMU.

3. ***State Level:*** The state forest departments will be the primary implementing agencies at the state level, and the GIM Nodal Officer will be responsible for overall implementation of ESIP and will be the focal point for all documentation and reporting. The project will support contracting of a small team which shall be established as a Project Implementation Unit (PIU) in each state to provide project management support. Funds will flow to FDA for implementing actual reforestation works with the involvement of local communities. Funds are not envisaged to flow to the community level. Component 1 (Strengthening Capacity and Skills of Government Institutions for Effective Delivery of Forestry and Land Management) and Components 2.1 and 2.2 will be implemented and managed by the PIUs.

4. ***Community Level:*** The project will support capacity building of various committees, such as the JFMC and the BMC that could play a critical role in project implementation.

5. ***ICFRE:*** ICFRE will implement Component 3 of the project because of the council's demonstrated ability to implement World Bank projects, and thus the institutional arrangements for SLEM utilized at ICFRE will be replicated for ESIP. ICFRE is registered as a society under the Societies Act and has been functioning 1991. The Director General of ICFRE will deputize the Project Director, who will be the Nodal Officer for ESIP. MOEFCC will execute a Subsidiary Agreement with ICFRE (condition of effectiveness).

6. ***Other Partner Agencies***: Specialized technical agencies identified during implementation may provide guidance, technical resources, and monitoring support during project implementation. Wherever necessary, State Biodiversity Boards may be brought in to provide technical support. In addition to bringing in experts available within these agencies, the project will be able to contract (in

accordance with the Bank's Procurement/Consultant Guidelines) specialized M&E consultants who will be deployed for the project work. As far as possible, technical partners shall be of international repute.

**Project Administration Arrangements**

7. Funds will flow through the government and state budgetary processes. MOEFCC will receive funds for its share of expenditures primarily for Project Management. The PMU will collate and endorse the Annual Action Plans received from the respective GIM Nodal Officers of the participating states, based on which the states will undertake project activities. The respective state governments will release funds to a GIM Nodal Officer in a separate bank account that will have to be maintained for receiving project funds throughout the project period. The Nodal Officers will then release funds to the FDA/DFO as set out in the Annual Action Plan. The participating states will have to produce Utilization Certificates in order to receive subsequent installments, as well as the next year's funding, from the state government. The states, after incurring expenditures as per the approved Annual Action Plans will seek reimbursement directly from the World Bank through the Controller of Audit Aid and Accounts (CAAA) under existing rules and administrative processes. ICFRE will submit Annual Action Plans directly to the PMU and will receive funds directly into a separate account from MOEFCC. All implementing entities will furnish regular monitoring reports on both physical and financial achievements. In addition, specialized agencies may be contracted for undertaking a focused M&E. (See Figure C.1).

**Financial Management, Disbursements and Procurement**

8. At the national level, MOEFCC will be responsible for overall project coordination and oversight. The project will be implemented in Madhya Pradesh and Chhattisgarh. MOEFCC will also be responsible for the overall FM arrangements under the project, and in ensuring that the arrangements for budgeting, accounting, reporting, funds flow, internal controls, and audits are satisfactory and are carried out in accordance with the project documents. The FM functions will be carried out through the PMU that will be established under the nodal agency of MOEFCC as well as through the State Forest Departments. The PMU will be staffed with adequate and qualified FM staff. Key FM tasks will include: (i) preparing annual budgetary provisions for the project and monitoring of project expenditures against project budget for investments to be made by MOEFCC; (ii) approving annual action plans of state-level State Forest Departments/JFM (Joint Forest Management) and ICFRE; (iii) ensuring sufficient and timely funds flow for MOEFCC level activities; (iv) making regular financial reports at all levels of the project and compiling quarterly financial reports and annual financial statements of the project; (v) submitting timely annual reimbursement claims to the Bank; and (f) ensuring annual external audits at MOEFCC, state level State Forest Departments/JFM (Joint Forest Management) and ICFRE as per the agreed TOR with the Bank. This will include consolidating implementing entities' audited financial statements and audit observations, submitting consolidated annual audit reports of the project to the Bank, and ensuring compliance with the auditor's observations.

**Project Budgeting**

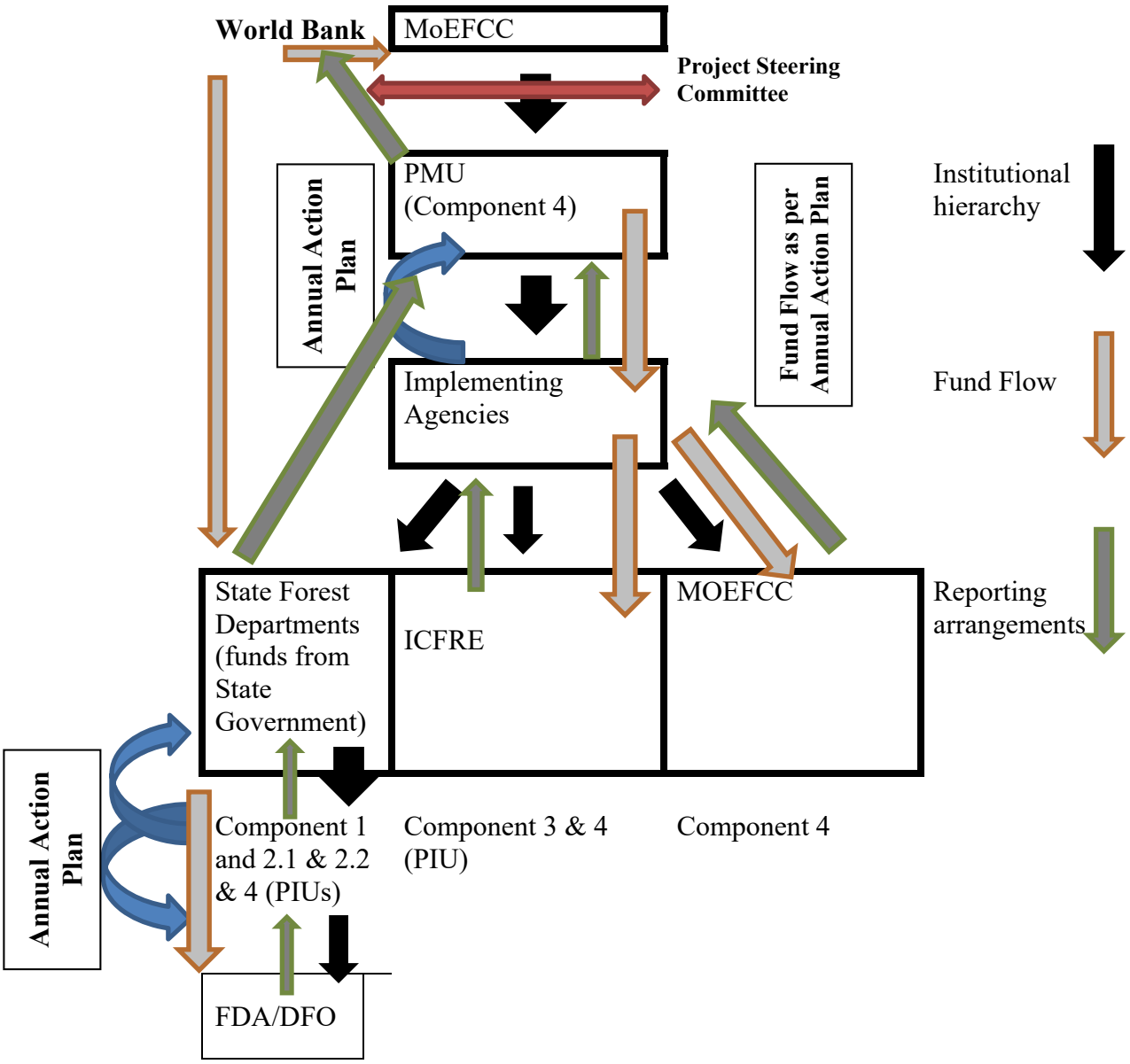
9. All implementing agencies (participating states and ICFRE) will submit an Annual Action Plan (AAP) which must be approved by the Project Steering Committee.

10. At the government level, the project's funding requirements will be provided through the budget of the MOEFCC as a separate budget line for external-aided projects. Adequate provisions will be made by MOEFCC in the budgets. MOEFCC needs to ensure that budget provision match the approved AAP at

the state levels for the respective state shares for the implementation of the project activities in Madhya Pradesh and Chhattisgarh. Under existing rules and procedures, the states will seek reimbursement of funds directly from the World Bank through the CAAA. MOEFCC will be required to make allocations for the AAPs of ICFRE for the project for its share of budget. ICFRE will be funded directly by the government.

11. At the state level, the states are required to designate a budget head for the project and ensure that allocations are maintained so that the shares of both the MOEFCC and the state can be transferred to the implementing agencies.

**Figure C.1: Flow of Project Funds**



**Funds flow**

12. Based on the AAP proposed by State Forest Departments and ICFRE and approved by the Project Steering Committee, funds will flow from the government (MOEFCC) as grants. MOEFCC will release 100 percent of approved AAP funds to implementing agencies (for instance, ICFRE) at the beginning of the fiscal year but not later than 3rd month of the fiscal year. The state governments will also allocate the required budget for ESIP, and once expenditures have been incurred under the approved AAP, will seek reimbursement directly through CAAA. An appropriate budget will be created by the state governments to enable SFD and JFM (PIU) to incur expenditures under the project.

13. Similarly, funds for the AAP proposed by ICFRE and approved by the PSC will be released by MOEFCC pursuant to the subsidiary agreement to be entered into by MOEFCC with ICFRE prior to the implementation of the project.

14. **ICFRE** will open a project-specific bank account in a nationalized bank. MOEFCC will transfer the funds to them in their respective separate bank accounts opened for the purpose of the grant and will ensure that funds matching the requirements of AAP are advanced for implementing the project activities for each financial year. This bank account will be exclusively used for receiving and spending money related to this project.

**Accounting**

15. **National Level:** MOEFCC is the primary coordination and oversight agency at the central level and will also carry out overall monitoring of project expenditures against the project budget. The implementing entities in the state will monitor expenditures against their own budget as well. A MOEFCC Pay and Accounts Officer (PAO) will maintain the funds through a budget and will use the treasury for drawing funds. The funds will be processed through the central government budget and the funds will pass through MOEFCC PAO to the agencies. Once the payment order is issued by the department, the PAO will issue the funds to the respective agencies. PAO will maintain accounts under the government accounting system, showing transfers made to agencies, and will reconcile all payments with the treasury system.

16. **State Level:** At the state level the forest department will maintain accounts in customized accounting software which has been implemented by the state. Separate books of accounts along with a cash book will be maintained for the grant to record utilization of funds.

17. **ICFRE** will use computerized accounting software for the preparation of accounts. The grant funds will be accounted for in a separately maintained bank account, cash book, and books of account. Separate ledger accounts will be maintained for the grant-funded activity to record utilization of funds. The responsibility of accounting for the grant funds will vest with the Project Director and Finance Officer of the PIU.

18. All grant-related receipts and payments/ withdrawals will be reconciled with monthly bank statements.

**Staffing**

19. **National Level**: The Mission Director for GIM will also be the National Project Director for ESIP and will be supported by a full time Assistant Project Director. The project will support contracting of specialized staff for procurement, financial management, and safeguards and of core forestry sector experts.

20. **State level:** In both states the GIM Nodal Officer will be responsible for overall implementation of the project and will be the focal point for all documentation and reporting. All IAs (PIU) will have an FM person, and FM staff in the PMU shall provide guidance and advisory support to the project.

21. **ICFRE:** The Project Director implementing the SLEM project will be the Nodal Officer on all matters concerning the grant. The Project Director will be assisted by the Financial Advisor and Chief Accounts Officer (FA&CAO) of ICFRE. The Project Director and FA&CAO will be responsible for all matters relating to financial management of the grant. As a part of the preparation process, FM capacity assessment was analyzed and it was concluded that the existing FM staff is considered adequate to support the use of funds under the Grant.

**Reporting and disbursement**

22. MOEFCC will submit quarterly Interim Unaudited Financial Report (IUFRs) in the format proposed by the Bank within 45 days of the end of each calendar quarter for expenditures incurred by it and ICFRE. These reports will be prepared by MOEFCC based on expenditures reported in the quarterly IUFRs submitted by ICFRE to MOEFCC. MP and Chhattisgarh will submit IUFRs to MOEFCC and the Bank within 45 days of the end of each calendar quarter. The financial reporting for the project will be to MOEFCC through quarterly IUFRs prepared by all implementing agencies in an agreed format. MOEFCC and state implementing agencies will submit withdrawal applications to CAAA in DEA for subsequent submissions to the Bank for reimbursement of claims.

23. All expenditures reported in the IUFRs will be subject to confirmation and certification and will be reconciled with audited financial statements. Any differences identified will be resolved in a timely manner.

24. Table C.1 specifies the categories of eligible expenditures that may be financed out of the proceeds of the grant ("Category"), the allocations of the amounts of the grant to each category, and the percentage of expenditures to be financed for eligible expenditures in each Category.

**Table C.1: Categories of Eligible Expenditures from Grant Proceeds**

| Category | Amount of the Grant Allocated (expressed in US $) | Percentage of Expenditures to be Financed (inclusive of Taxes) |
|---|---|---|
| Goods, works, non-consulting services, consultants' services, training and operating costs | 24,640,000 | 100% |
| **TOTAL AMOUNT** | 24,640,000 | |

For the table, "operating cost" is defined as "reasonable costs of incremental expenditures incurred at the national and state levels on account of the project implementation, management, and monitoring, including, among other things: (i) costs of incremental staff salaries (other than consultants); (ii) dissemination of project-related information; (iii) office rental and leasing, and costs of equipment operation, maintenance, and repair. (iv) office supplies and utilities; (v) travel and boarding/lodging allowances; (vi) leasing, operation, and maintenance of vehicles; (vii) advertising and communication expenses; and (viii) bank charges. Training is defined as the reasonable and necessary costs of training related to project implementation, including any fees owed to educational and other institutions that provide training, costs related to attendance and organization of conferences, seminars, study tours, and workshops, and the trainees' cost of travel, boarding, lodging, and per diem allowances.

**Internal Control/Internal Audit**

25. All financial controls applicable to routine expenditures will also apply to the expenditures made from the grant funds. All payments will be approved in accordance with the schedule of powers in place at the agencies. An audit report corresponding to the TF099872 at MOEFCC is outstanding, which is likely to be resolved by end of July 2017.

**External Audit**

26. The accounts of the project at the state level will be audited by the state auditor general, and ICFRE will be audited by an auditor selected by CAG. The audit report will provide details of amounts drawn from the budget, transfers made, and expenditures made at the state level and by the ICFRE.

27. The annual audit report submitted by the SFDs and ICFRE should consist of the following: (i) consolidated annual financial statements; (ii) an audit opinion; and (iii) a management letter highlighting weaknesses, if any, and identifying areas for improvement. The annual financial statements should also include a statement of reconciliation of expenditures reported in the IUFR and withdrawal claims submitted during the year.

28. The following Table C.2 shows audit reports that will be monitored in the Audit Reports Compliance System (ARCS) and risk ratings:

**Table C.2: Audit Report Schedule and Risk Ratings**

| Implementing Agency | Auditor | Auditors | Audit Due Date |
|---|---|---|---|
| State Forest Departments | Consolidated audited financial statements and statements of expenditures (SOE) | CAG | 9 months after the end of each fiscal year (March 31st) that is December 31 |
| ICFRE | Consolidated audited financial statements and SOE | CAG Empaneled | 9 months after the end of each fiscal year (March 31st) that is December 31 |
| MOEFCC | Consolidated audited financial statements | CAG | 9 months after the end of each fiscal year (March 31st) that is December 31 |

**Risk Rating**

| Implementing Agency | Risk Rating | Reason |
|---|---|---|
| State Forest Departments | Substantial | The State Forest Department has not implemented Bank-funded project in the near past. |
| ICFRE | Moderate | ICFRE had implemented SLEM project funded by the World Bank in the past and they are familiar with the Bank FM and disbursement procedures. |
| MOEFCC | Moderate | MOEFCC has already implemented various projects funded by the World Bank in the past and they are familiar with the Bank FM and disbursement procedures. |

**Supervision**

29. The supervision will be limited to half-yearly supervision since the overall risk rating is "Substantial." This will require field-visit supervision and desk review. Furthermore, if any future requirements arise in the field for strengthening the FM reporting arrangements, more field visits can be carried out based on the facts and issues.

**Procurement**

30. Procurement of all goods, works and non-consulting services required for the proposed project and that are to be financed out of the proceeds of the Grant shall be done in accordance with the requirements set forth or referred to as the "Guidelines: Procurement of Goods, Works and Non-Consulting Services under IBRD Loans and IDA Credits & Grants by World Bank Borrowers (January 2011, revised July 2014)." Selection of consulting services required for the proposed Project and to be financed out of the proceeds of the Grant shall be done in accordance with the requirements set forth or referred to as the "Guidelines: Selection and Employment of Consultants under IBRD Loans and IDA Credits by World Bank Borrowers (January 2011, revised July 2014)," and the provisions stipulated in the Grant Agreement.

31. Procurement under the proposed project shall involve procurement of goods, works, and non-consultancy services and shall be conducted through the e-procurement portal. The e-procurement system of Madhya Pradesh - www.mpeprocure.gov.in - has been assessed and cleared by the Bank to be used for all Bank-funded projects in MP. For other implementing agencies (IA)s, the NIC e-procurement platform system of e-procurement may be used since it has been assessed and cleared to be used for all Bank-funded projects across India. If the IA wishes to use its own e-procurement platform rather than NIC system, the platform needs to be assessed and be cleared by the Bank before it can be used. Until such approval, the IA shall use manual bidding procedures. Procurement of Consultancy service shall continue using a manual system until such time as the electronic model Standard Request for Proposals (SRFP) is made available to the project.

32. For each contract to be financed by the grant, the different procurement methods or consultant selection methods, prior review threshold, timeframe, and so forth, are specified in the Procurement Plan. The Procurement Plan, that is prepared using STEP, will be updated at least annually or as required to reflect the actual project implementation needs and improvements in institutional capacity. The

General Procurement Notice (GPN), first published in 2015, was republished on June 9, 2016, in UNDB. A Specific Procurement Notice (SPN) or Request for Expression of Interest (REOI) shall be published against corresponding contract packages when it becomes ready. All goods, works, and services financed under the proposed project shall be procured using the Bank's Standard Bidding Documents (SBDs) and Standard Request for Proposals (SRFPs).

**Implementation Arrangements for the Project:**

33. The proposed project shall be implemented in the states of Madhya Pradesh and Chhattisgarh under directives and guidance from the Ministry of Environment, Forest and Climate Change (MOEFCC). The Green India Mission (GIM) will be the nodal agency for the implementation of this project and will house the Project Management Unit (PMU) at the national level. The Mission Director of GIM will be the Project Director, who will be supported by a full time Assistant Project Director, specialized staff for procurement, financial management, and safeguards, and core forestry sector experts at the national level.

34. At the state level, the State Forest Departments will be the implementing agencies and therefore shall establish Project Implementation Units (PIU) in the respective states. The GIM Nodal Officer in the respective states shall be the focal person for implementation of this project and will be supported by other experts, such as procurement and finance personnel. Component 3 will be implemented by ICFRE.

35. Staffing: All IAs (PMU/PIUs) shall have a procurement focal officer. The procurement specialist in PMU, under the guidance of the Additional Project Director, shall be the Nodal Officer for all procurement activities for this project and shall provide coordination, guidance, and advisory support to all the PIUs.

**Capacity Assessment of the Implementing Agencies**

36. A procurement capacity assessment has been conducted during the preparation stage using the Procurement Risk Assessment Management System (PRAMS) questionnaire. The initial assessment concluded that there is no focal person for procurement in the states of Madhya Pradesh and Chhattisgarh. The respective IA is to identify a local person to be responsible for PIU procurement activities, including preparation of PP in STEP. The identified official, if not familiar with World Bank procurement procedures, may have to undergo training before initiating any procurement activities because the procurement procedures of participating states differ in many ways from World Bank procedures, such as in the areas of purchase preferences, a two envelope system, a weak grievance mechanism system, multiple entities handling procurement, and so forth. Furthermore, except for ICFRE, the other IAs have not implemented any Bank-funded project in recent years. In view of this, the risk rating at the initial assessment has been rated as "High." This could be brought down to the "Substantial" level after implementing the suggested risk-mitigation measures.

37. ICFRE is identified as the implementing agency for Component 3 of the project. It is based in Dehradun and is functioning under the central government of India and utilizing central government procedures. ICFRE has implemented SLEM projects funded by the World Bank in the past and is familiar with the Bank procurement procedures. A separate capacity assessment was carried out on ICFRE using the PRAMS questionnaire. A Nodal Officer with previous experience on the SLEM project will be appointed as Nodal Officer for ESIP. The Nodal Officer will be supported by a procurement focal person with prior experience on the SLEM project. While conducting capacity assessment, the team also

reviewed the ISR rating of the SLEM project implemented by ICFRE, and it received a consecutive "Satisfactory" rating throughout the project life. Therefore, the capacity assessment risk for ICFRE was rated as "Moderate."

38. Overall, the staff handling procurement functions were found to be well versed in their own procedures. However, they do not have experience in the Bank procurement procedures, except for ICFRE. Therefore, the staff handling procurement in this project needs to undergo procurement training. Because the project is being implemented by multiple agencies in different parts of the country, the overall risk for the project is rated as "Substantial."

39. As a result of capacity assessment, a number of mitigation measures have been proposed. Some of the mitigation measures that need immediate attention on a priority basis are, but not limited to: identifying a procurement focal person in some agencies for the proposed project; having staff members attend training sessions to become familiar with Bank procurement procedures; and establishing a complaint handling mechanism. The mitigation measures are elaborated in the Table C.3 below.

**Table C.3: Procurement Risk and Mitigation Measures**

| Risk factor | Rating | Mitigation measures | Residual risk |
|---|---|---|---|
| Legal framework | High | All identified IAs are using different procurement guidelines, which is inconsistent with the Bank Procurement Guideline. All the IAs shall use the Bank Procurement Guideline along with its SBDs and SRFP to maintain consistency. | Substantial |
| Institutional framework and staffing | High | All IAs have established PIUs. They have also identified Procurement Officers. However, while dealing with these identified officers, it was noted that they have limited knowledge of Bank procurement procedures. Therefore, these staff need to become more familiar with Bank procurement procedures by attending training in ASCI or NIFM. The Bank shall also provide handholding support as and when required. | Substantial |
| Inconsistencies in procurement system | High | Use of Bank approved Standard Bidding Documents;<br>Attending training/workshops and so forth<br>Handholding support wherever necessary. | Substantial |
| Lack of transparency, fairness and grievance mechanism system in procurement process | High | Use of the e-procurement system, disclosure of project related information, establishment of a grievance mechanism system, and use of STEP for preparation of PP. | Substantial |
| Multiple implementing agencies | High | Establish a strong coordination unit in PMU, which will enable clear lines of communication in the system. | Substantial |
| Overall residual risk | | | Substantial |

40. Procurement risks and progress on various mitigation measures will be reassessed during the implementation phase, and risk ratings will be assessed accordingly. Furthermore, Bank officials will conduct a post review of those contracts falling under the Bank's post-review threshold level. Therefore, all IAs are required to make all relevant documentation available to the Bank or to its nominated auditors, as and when required. The overall risk of the project is rated as "Substantial."

**Procurement arrangements under the proposed project**

41. Procurement arrangements have been decentralized, and respective IAs shall conduct procurement operations independently under the provisions of the approved procurement plan. In the case of PIUs in Chhattisgarh and Madhya Pradesh, the line departments (District Forest Department) may also be involved in procurement of small-value goods and works. Due to the nature of the project, all procurements activities (goods, works, and non-consulting services) are of small value and fall under the shopping method. In some cases, such as raising nurseries and plantation works in both the states, it is likely that there will be no contractors to take up the work in remote areas. Therefore, it is likely that they will use a Force Account, which will have to be agreed in advance through the PP in STEP.

42. The hiring of consultants' services (firms and individual) shall be done in accordance with the Bank's Consultant Guidelines. As a part of institutional capacity building, a number of project activities will require the service of consultants (firms and individuals). These activities can involve the hiring of consultants for: (i) building institutional capacity and establishing confidence for the planning and efficient delivery of forest ecosystem-quality improvement and land management programs; (ii) developing and testing pilot nation-wide systems for measuring and monitoring forest carbon stocks; and (iii) hiring of M&E consultants and other firms, all of which will be handled by the PMU.

43. While the above activities will complement the ongoing efforts of GIM through demonstrative investments, the Component 2 activities will facilitate mainstreaming of biodiversity objectives in degraded forestlands and non-forestlands in the government's program to establish sustainable forest and land management in project areas.

**Selection of Consultants:**

44. The PMU/PIU shall use a Standard Request for Proposal (SRFP) for selection of consultants. The following methods will be adopted depending upon the size and complexity of assignments and as agreed to in the Procurement Plan in STEP.

- Quality and Cost Based Selection (QCBS)
- Quality Based Selection (QBS)
- Selection under Fixed Budget (FBS)
- Least Cost Selection (LCS)
- Selection based on Consultant's Qualification (CQS)
- Single Source Selection (SSS)
- Individuals.

45. QCBS selection method shall be the preferred method of hiring of consulting firms. However, other selection methods such as CQS, SSS, and any other methods as applicable may be adopted depending upon the requirements.

46. A short list of consultants for services estimated to cost less than US$800,000 equivalent per contract may be composed entirely of national consultants in accordance with the provision of paragraph 2.7 of the Consultants Guidelines.

**Procurement of Goods, Works and Non-Consulting Services**

47. International Competitive Bidding (ICB): There is no ICB contract for the proposed project.

48. National Competitive Bidding (NCB): Procurement of goods, works, and non-consulting services shall be conducted in accordance with paragraphs 3.3 and 3.4 of the World Bank Procurement Guidelines using the Bank's Standard Bidding Documents (SBDs). In addition, the following additional provisions shall apply:

- Only the model bidding documents for NCB agreed to by the Government of India's Task Force (and as amended from time to time), shall be used for bidding.
- Invitations for bid shall be advertised in at least one widely-circulated national daily newspaper at least 30 days prior to the deadline for the submission of bids. Alternatively, the advertisement can be placed on a widely-used website or electronic portal with free national and international access along with an abridged version of the advertisement being published in a widely-circulated national daily newspaper, and providing on the the website or electronic portal information on how the details of the invitation to bid can be downloaded).
- No special preference will be accorded to any bidder either for price or for other terms and conditions when competing with foreign bidders, state-owned enterprises, small-scale enterprises, or enterprises from any given State.
- Except with the prior concurrence of the Bank, there shall be no negotiation of price with the bidders, even with the lowest evaluated bidder.
- Extension of bid validity shall not be allowed with reference to contracts subject to Bank prior review without the prior concurrence of the Bank either (i) for the first request for extension if it is longer than four weeks, or (ii) for all subsequent requests for extension irrespective of the period. Such concurrence will be considered by Bank only in cases of Force Majeure and circumstances beyond the control of the purchaser or employer.
- Rebidding shall not be carried out with reference to contracts subject to Bank prior review without the prior concurrence of the Bank.
- The system of rejecting bids outside a pre-determined margin or "bracket" of prices shall not be used in the project.
- Rate contracts entered into by Directorate General of Supplies and Disposals (DGS&D) will not be acceptable as a substitute for NCB procedures unless agreed to by the Bank on a case to case basis. Such contracts will be acceptable however for any procurement under the shopping procedures.
- The two or three envelope system will not be used (except when using an e-procurement system assessed and agreed to by the Bank).

49. Shopping: A shopping method in accordance with paragraph 3.5 of the Procurement Guidelines shall be adopted for procuring readily available off-the-shelf goods of a value of less than US$100,000 for goods and US$200,000 for simple civil works. For the shopping procedure, a list of vendors and contractors already registered with government departments may be used for inviting quotations. The procurement plan should determine the cost estimate of each contract, and the aggregate total amount.

The borrower should solicit at least three price quotations for the purchase of goods, materials, or services (non-consulting) to formulate a cost comparison report.

50. Framework Agreements: A DGS&D rate contract will be acceptable as a framework agreement for procurement of goods. Implementing agencies may also have the option to set-up new framework agreements under paragraph 3.6 of Guidelines.

51. Direct Contracting: Goods, works, and non-consulting services which meets the requirement of para 3.6 of the Bank Procurement Guidelines may be procured following the Direct Contracting method.

52. Force Account: When contractors and suppliers are unlikely to bid at a reasonable price because of the remote location and risk associated with a project or because a particular government agency has a sole right in a certain type of work or supply, the IAs may use their own government departments' personnel and equipment, or some other government-owned construction unit that may be the only practical method, provided that the IAs have sufficient managerial capacity and possess the required technical and financial controls to report to the Bank on expenditures under paragraph 3.9 of the Guidelines.

53. Community Participation: Those project activities which merit community participation in implementing the sub-project activities shall be performed in accordance with paragraph 3.19 of the Guidelines.

54. Retroactive Financing: Retroactive financing up to US$4.928 million will be available for financing expenditures incurred on or after August 1, 2016.

55. Method of Procurement: The following methods of procurement outlined in Table C.4 shall be used for procurement under the project. It has been agreed that if a particular invitation for bid is comprised of several packages, lots or slices, and invited in the same invitation for bid, then the aggregate value of the whole package determines the applicable threshold amount for procurement and also for the review by the Bank.

**Table C.4: Procurement Methods**

| Category | Method of Procurement | Threshold (US$ Equivalent) |
|---|---|---|
| Goods and Non-consulting services(excluding IT contracts) | ICB | >3,000,000 |
| | LIB | wherever agreed by Bank |
| | NCB | Up to 3,000,000 (with NCB conditions) |
| | Shopping | Up to 100,000 |
| | DC | As per para 3.7 of Guidelines |
| | Force Account | As per para 3.9 of Guidelines |
| | Framework Agreements | As per para 3.6 of Guidelines |
| Works | ICB | >40,000,000 |
| | NCB | Up to 40,000,000 (with NCB conditions) |
| | Shopping | Up to 200,000 |
| | DC | As per para 3.7 of Guidelines |
| | Force Account | As per para 3.9 of Guidelines |
| | Community Participation | As per para 3.19 of Guidelines |

| Category | Method of Procurement | Threshold (US$ Equivalent) |
|---|---|---|
| Consultants' Services | CQS/LCS | Up to 300,000 |
| | SSS | As per para 3.9-3.11 of Guidelines |
| | Individuals | As per Section V of Guidelines |
| | QCBS/QBS/FBS | for all other cases |
| | (i) International shortlist<br>(ii) Shortlist may comprise national consultants only | >800,000<br><br>Up to 800,000 |

**Prior Review by the World Bank**

56. The Bank shall conduct a prior review of the following contracts:

- Works: All contracts more than US$10 million equivalent
- Goods: All contracts more than US$1million equivalent
- Non-Consulting Services: All contracts more than US$1 million equivalent
- Consultancy Services: Above US$500,000 equivalent for firms, and US$200,000 equivalent for individuals

57. In addition to the requirements of paragraph 56 above, the IAs will have to seek prior concurrence on justifications for all contracts to be issued on limited international bidding (LIB), single-source (>US$10,000) or direct contracting (>US$10,000) and the resultant contract shall be subject to the Bank's prior review. These thresholds are for the initial 18-month period and it may be modified based on the procurement performance of the project.

58. Supervision mission: In addition to the prior review to be carried out by the Bank office, procurement staff will participate in two formal review missions annually, along with the implementation support mission which will include Procurement Post Review (PPR) of those contracts falling below the prior-review threshold. For avoidance of doubts, the Bank, shall be entitled to conduct, at any time, independent procurement reviews of all the contracts financed under the Financing.

59. Procurement Planning: The implementing agencies shall provide input for the preparation of the Procurement Plan using Systematic Tracking of Exchanges in Procurement (STEP) covering the first 18 months of the project implementation. The prior review thresholds will also be indicated in the procurement plan. The Procurement Plan agreed at negotiations on May 19, 2017 and will be subsequently updated annually (or earlier or later, if required) and will reflect the changes in prior review thresholds, if any. All Procurement Plans, and their updates, or modifications shall be subject to Bank prior review and no objection before implementation.

60. STEP: An online Systematic Tracking of Exchanges in Procurement (STEP) shall be adopted to prepare the Procurement Plan. It is a web-based tool owned by the Bank which helps to track dates of different stages of procurement activities that are planned or under implementation. The system establishes a new, easy-to-use, and more efficient way for Bank teams and clients to interact on a real time basis, while at the same time providing an audit trail of the process. The Bank will make arrangements to train the staff of IAs in operating STEP.

61. Complaint Handling Mechanism: The IAs shall establish a complaint handling mechanism to more effectively address complaints and grievances from contractors and suppliers. On receipt of a complaint, immediate action will be initiated to acknowledge the complaint and redress it within a reasonable

timeframe. All complaints during the bidding/award stage as well as complaints during the contract execution, along with the analysis and response of the PMU/PIU, shall be submitted to the Bank for review.

**Anti-Corruption Measures**

62. Disclosure Requirements: The project shall comply with the disclosure requirements stipulated in the Banks' Procurement Guidelines and Consultant Guidelines, January 2011, revised July 2014. Accordingly the following documents shall be disclosed on the project's website: (i) a Procurement Plan and all subsequent updates; (ii) invitations for bids (IFB) for goods; (iii) requests for expression of interest (REOI) for selection and hiring of consulting services; (iv) a short list of consultants; (v) contract awards; (vi) lists of contracts following Direct Contracting (DC), Consultant Qualification Selection (CQS), or Single Source Selection (SSS) on a quarterly basis; and (vii) action-taken reports on a quarterly basis on complaints received.

63. The "Guidelines on Preventing and Combating Fraud and Corruption in Projects Financed by IBRD Loans and IDA Credits and Grants", dated October 15, 2006 and revised in January 2011 are applicable to the project.

64. The following details shall be published by the PIU through client connection, or sent to the Bank for publishing on their behalf on the Bank's external website and UNDB online: (i) a General Procurement Notice (GPN); (ii) requests for expression of interest for consulting services estimated to cost more than US$300,000; and (iii) contract award details of all consulting services with an estimated cost of more than US$300,000. The project shall also publish on its website any information required under the provisions of disclosure, as specified by the Right to Information Act of India.

**Environment and Social (Including Safeguards)**

65. The forestry sector and land management are not free of environmental and social challenges. Despite an expectation of positive environmental and social outcomes from proposed ESIP investments, caution has to be exercised in addressing any adverse impacts. Given that there are issues concerning access and use of natural resources, competing demands on land, low investments on rejuvenation of CPRs, high degree of forest dependency by the extreme poor for their livelihoods, land use changes, release of carbon from forest degradation, and so forth, the environmental and social development issues are central to the forestry sector and land management. As a result, the borrower prepared an Environmental and Social Management Framework and Tribal Development Framework (ESMF & TDF) that will be supported by an environmental and a social safeguards specialist in PMU. The technical resource agencies and the grassroots NGO will also share responsibilities in assessing the implementation of the ESMF & TDF and reporting any deviations. Monitoring and reporting on key safeguard indicators and processes will be an integral part of the project MIS and M&E systems. Training and capacity building of project implementers and stakeholders on safeguards will be undertaken.

66. A number of social inclusion strategies have been developed for ensuring that positive impacts are maximized and negative impacts are contained. The social inclusion strategies focus on ensuring the inclusion of the primary stakeholders, especially tribal, women, SCs and forest-dependent households within the project implementation structures, community institutions and interventions proposed under ESIP. A detailed account of these is given in the ESMF & TDF, but the key social inclusion strategies include the following:

- Representation in JFMCs and Project-Consultation Forums
- Participation in Decision-Making and Equitable Cost and Benefit Sharing Norms
- Adoption of Community-Based Approaches for Planning and Monitoring
- Gender and Women's Empowerment Strategy and Gender inclusive mobilization
- Tribal Development Framework

67. A number of environmental safeguard policies are triggered by the project that will be monitored throughout the implementation. The triggered policies are shown in Table C.5 below:

**Table C.5: Safeguard Policies Triggered by the Project**

| Safeguard Policies Triggered by the Project | Yes | No |
|---|---|---|
| Environmental Assessment (OP/BP/GP 4.01) | [X] | [ ] |
| Natural Habitats (OP/BP 4.04) | [X] | [ ] |
| Pest Management (OP 4.09) | [ ] | [X] |
| Cultural Property (OPN 11.03, being revised as OP 4.11) | [ ] | [X] |
| Involuntary Resettlement (OP/BP 4.12) | [ ] | [X] |
| Indigenous Peoples (OP 4.10) | [X] | [ ] |
| Forests (OP/BP 4.36) | [X] | [ ] |
| Safety of Dams (OP/BP 4.37) | [ ] | [X] |
| Projects in Disputed Areas (OP/BP/GP 7.60)* | [ ] | [X] |
| Projects on International Waterways (OP/BP/GP 7.50) | [ ] | [X] |

68. A simple safeguards monitoring and reporting arrangement is being put in place for ESIP for ensuring that positive impacts are scaled up and negative impacts are quickly identified, reported, and acted upon. See Table C.6 below. The Semi-Annual Progress Report submitted to the Bank will include a section on the safeguards reporting on the implementation status of the ESMF & TDF.

* *By supporting the proposed project, the Bank does not intend to prejudice the final determination of the parties' claims on the disputed areas*

**Table C.6: Safeguards monitoring and Reporting Arrangements**

| |
|---|
| Environmental and Social Safeguards Specialists provide Implementation Support and Guidance on Implementing the ESMF & TDF and Social Inclusion Strategies; they compile safeguards reporting from Implementation Partners and send consolidated safeguards report to the Bank as part of the six monthly progress report. |
|  |
| Technical, Resource, Partner Agencies provide implementation support and advise on mitigation action and monitoring of safeguards issues; they also report on their own implementation activities (progress report includes a section on safeguards). |
|  |
| Village Institutions (JFMC, BMC, EDC and so forth), NGO and DFO/FDA report on Safeguards Issues, including implementation of Mitigation Action (progress report includes a section on safeguards). |
|  |
| Project Funded Activities at the Community and State Level<br>Forest Quality Improvement (Plantation)<br>Value Addition to NTFP and Sustainable Use Framework<br>Carbon Measurement and Monitoring<br>Training and Capacity Building<br>Improved Planning and Coordination<br>Application of SLEM Best Practices |

**Monitoring and Evaluation (M&E)**

69. The objective of the project's M&E system will be to facilitate result-based management and to provide the basis for evidence-based decision-making processes. The M&E will employ different tools and approaches to provide continuous feedback to project management and other stakeholders on the progress and quality of project implementation. This will include regular reporting of outputs and outcomes based on indicators (specified in the Results Framework in Annex 1 and in the Tracking Tool) and drawing on multiple information sources. The project will invest in a fully computerized, web-based MIS system, which will capture all data at the source where it is generated. In addition, the project will also assess whether the GIM MIS can be customized to also track ESIP progress. The project is also funding a national web-based reporting and monitoring platform on key indicators for land degradation and desertification. ESIP will support an M&E specialist for ensuring that regular monitoring and reporting on key parameters is being done.

70. Participatory self-monitoring by community institutions to assess their own organizational capacity and performance will be undertaken, which will be supported by the grassroots NGO and Technical/Resource Agency Partners. This monitoring will particularly focus on management of community reserves and implementation of the Sustainable NTFP Use Frameworks. Participatory identification and tracking of SMART (Specific, Measurable, Achievable, Relevant, Time-bound) indicators

to reflect performance on outcomes will be a key activity at the community institution level. Suitable mechanisms will be established in the community institutions to enable this. A monitoring sub-committee will be established which will be responsible for undertaking self-monitoring, sharing of the results through a public display board, and preparation of a plan for future action by the community institution, among others. All such monitoring reports will be compiled at the PMU, and a consolidated semi-annual progress report will include the findings.

71. The project will invest in hiring the services of an agency to undertake baseline, mid-term, and end-of-term evaluations of ESIP implementation in all the states. Impact evaluations will provide information on the achievement of outputs and outcomes based on indicators specified in the Project Results Framework (Annex 1) and the Tracking Tool. Evaluation studies will capture the impacts of each of the three strategic tracks separately by establishing appropriate counterfactuals. Since the impact of the project will be seen as additionality to the GIM, sufficient attention will be given in determining the appropriate counterfactuals. Therefore, for the purposes of the impact evaluation, the outcomes of interest will be compared over identical GIM landscapes in terms of baseline socioeconomic and ecosystem conditions across sets of randomly selected GIM landscapes belonging to three categories: (i) ESIP + GIM landscapes; (ii) GIM, non-ESIP landscapes and (iii) Non-ESIP, non-GIM landscapes. The evaluation studies will assess the outcomes and impacts of the interventions through a variety of indicators reflecting: (i) poverty and household impacts; (ii) productive change observed through application of SLEM best practices; (iii) adoption of SLEM best practices; (iv)increased capacity and services; (v) improvement in ecosystem services and forest quality; and (vi) institutional change. Some specific examples of outcomes of interest are household income and income variability, and area of farmland applying SLEM best practices. The tools and indicators for the evaluation will draw from guidance manuals and e-learning tools of the International Fund for Agricultural Development (IFAD), the World Bank, Food and Agriculture Organization (FAO), and the German Agency for International Cooperation (GIZ), which are applicable to ESIP funded components and sub-components.

**Role of Partners (if applicable)**

72. Successful activities and pilots financed under the project, including village-level Sustainable NTFP Use Frameworks and forest quality improvement activities, are expected to be replicated by GIM in other states.. This partnership will enable ESIP's potential impact to be much more significant and of a considerable scale.

## Annex 3: Implementation Support Plan

### Strategy and Approach

1. The primary focus of implementation support provided by the Bank is to support the State Forest Departments and the FDAs in learning and adopting the project processes and innovations for integrating in the GIM. The Bank team will work closely with the GIM Directorate, State Forest Departments, FDA and village communities and beneficiaries to support the ESIP implementation. The focus will be on risk mitigation, knowledge management, and capacity building. Towards this end, the Bank team will be maintaining regular dialogue with key stakeholders at the national and state levels, undertaking periodic joint reviews, undertaking field reviews on a sample basis, identifying and offering need-based technical advice, and supporting exchanges of experience and learning.

### The key roles of the Bank team

- Intensive support during early implementation stage: Close support needs to be provided for capacity building in the first year to ensure that the foundational project activities (staffing, and recruitment of key consultancies) are completed on time.
- Leadership: The Task Team Leader (TTL) will be stationed in Delhi and will provide support for the foundational activities that will determine the success of the project. The TTL will continue to work in close collaboration with the GIM Director and the GIM Cell core staff, in addition to the contract staff recruited through project funds. Most of the Bank specialists on the team (procurement, finance and safeguards) will be stationed in Delhi.
- Joint Missions: To the extent possible, joint missions will be held with the GIM Directorate to minimize internal and external transaction costs of supervising a small-sized project.
- Provision of technical expertise: The Bank team will need to maintain during the implementation phase a multidisciplinary expertise. Specialized expertise will be needed in the areas of forest restoration, carbon sequestration monitoring, management of productive non-farm lands, and value addition for sustainable use of NTFP resources in the context of rural livelihoods, natural resource management, and monitoring and evaluation. This expertise will be sought internally as well as through partnerships with specialists, reputed institutions, and individuals. Key members of the Neeranchal project team will be invited to participate in joint missions.

### Implementation Support Plan

2. Project implementation and supervision will be conducted through:

- A project launch to be conducted soon after the project approval to bring all project functionaries together and to ensure clear understanding of the project scope, design, process, and responsibilities
- At least two regular implementation support missions during the project duration
- Intermediate technical missions by specialists, as needed
- Semi-annual implementation progress reports prepared by the project PMU
- Independent Cost Review (ICR) conducted at the end of the project to assess achievement towards PDO and lessons.