Report Number: ICRR0023965

1. Project Data

Project ID P133803	**Project Name** IN: Biodiv Consv & Ecosys Serv
Country India	**Practice Area(Lead)** Environment, Natural Resources & the Blue Economy

L/C/TF Number(s)	Closing Date (Original)	Total Project Cost (USD)
TF-A3990	30-Jul-2022	22,469,733.43
Bank Approval Date	**Closing Date (Actual)**	
06-Jul-2017	30-Jul-2023	

	IBRD/IDA (USD)	Grants (USD)
Original Commitment	24,640,000.00	24,640,000.00
Revised Commitment	24,640,000.00	24,640,000.00
Actual	22,469,733.43	22,469,733.43

Prepared by	Reviewed by	ICR Review Coordinator	Group
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2. Project Objectives and Components

a. Objectives

According to the Project Appraisal Document (PAD) (p.6) and the Financing Agreement of August 16, 2017 (p.6) the objective of the project was “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.”

According to the World Bank team (February 26, 2024) the project defined “improved forest quality” as ”forests with improved ecosystem services, measured as increased carbon sequestration, which is the

primary ecosystem service focus of the project". Carbon sequestration was measured using the conventional methods of the five carbon pools as well as through innovative technology, the Eddy Covariance based carbon flux towers, which were financed through project grants.

For the analysis in this ICRR, the PDO will be parsed as follows:

i. to improve forest quality in selected landscapes in Madhya Pradesh and Chhattisgarh;
ii. to improve land management in selected landscapes in Madhya Pradesh and Chhattisgarh;
iii. to improve NTFP benefits for forest dependent communities in selected landscapes in Madhya Pradesh and Chhattisgarh.

b. Were the project objectives/key associated outcome targets revised during implementation?

No

c. Will a split evaluation be undertaken?

No

d. Components

The project included four components:

Component 1: Strengthen Capacity of Government Institutions in Forestry and Land Management Programs in Madhya Pradesh and Chhattisgarh (appraisal estimate US$4.0 million, actual US$2.15 million): This component was to finance technical assistance to: i) build institutional capacity and capability for planning and efficient delivery of forest ecosystem quality improvement and management programs; and ii) develop, test, and pilot systems for measuring and monitoring forest carbon stocks. This component was also to finance training activities to build human resource capacities for improved forest management. These training activities were to 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; and iv) generation of baselines for making realistic assessments of the dependencies on and livelihoods from Non-Timber Forest Produce (NTFP) and for developing local management plans.

Component 2: Investments for Improving Forest Quality in Selected Landscapes (appraisal estimate US$14.50 million, actual US$14.04 million): This component was to finance improving the quality and productivity of existing forests to ensure sustained flows of ecosystem services and carbon sequestration, and the sustainable harvesting and value addition of NTFP to provide economic benefits to forest dependent communities through: i) enhancing and restoring carbon stocks in forestlands through supporting interventions for improving, upgrading, and modernizing selected forest nurseries for raising high quality native species and planting material; ii) developing community based models for sustainable utilization of NTFP.

Component 3: Scaling-up Sustainable Land and Ecosystem Management in Selected Landscapes (appraisal estimate US$3.74 million, actual US$4.69 million): This component was to finance the prevention of land degradation and desertification and to increase above-ground forest carbon stock through a variety of activities to implement and scale-up tried-and-tested Sustainable Land and Ecosystem

Management (SLEM) best practices, to increase national capacity for monitoring and land degradation, and to track associated indicators and generate knowledge exchange on SLEM approaches.

Component 4: Project Management (appraisal estimate US$2.40 million, actual US$1.59 million): This component was to finance the establishment of a Project Management Unit (PMU) to coordinate and monitor project implementation.

e. Comments on Project Cost, Financing, Borrower Contribution, and Dates

Project cost: The project was estimated to cost US$24.64 million. Actual cost was US$22.47 million.

Financing: The project was financed by the Global Environment Facility (TF-A3990) in the amount of US$24.64 million of which US$22.47 million was disbursed. The ICR did not state the reason why actual disbursement was lower than planned.

Borrower contribution: It was not planned for the Borrower to make any contribution.

Dates: The project was approved on July 6, 2017, and became effective on February 7, 2018. On February 3, 2022, the project was restructured to extend the project's closing date by 12 months from July 30, 2022, to July 30, 2023, to allow for delays that had occurred as a result of the COVID-19 restrictions.

3. Relevance of Objectives

Rationale

Country and sector context. According to the PAD (para. 3), forests were an important safety net for the poor population in rural India. Despite the low availability of forest at 0.05 hectares per capita, about 23 percent of the population, mostly rural poor, were directly or indirectly dependent on forests. With little land and limited livelihood options, forests were the primary source for firewood, fodder, and non-timber forest products and served as a safety net in the lean agricultural season. In addition, forests were also a repository of significant biodiversity. The absence of a unified land use policy resulted in unplanned and unsustainable land use, which in many places increased the rate of land degradation. Despite a series of programs and schemes aimed at reversing land degradation (including watershed programs), soil erosion continued to severely impact land productivity. While it was plausible that declining forest quality and forest degradation were serious issues for the country, neither the PAD nor the ICR explicitly stated the rationale for improving forest quality.

According to the PAD (para 9) India had a variety of policy instruments for managing its forest and land resources. However, there continued to be barriers to improving forestry quality and land management including i) lack of skills and capacity of government agencies for ecosystem-based management of land and forest resources; ii) lack of strategic direction and knowledge for implementing sustainable land and ecosystem management approaches; iii) lack of modern technology and tools for understanding and measuring forest quality and ecosystem services; iv) lack of awareness and knowledge of design for sustainable resource utilization and benefit-sharing models for natural resources; and v) insufficient and

ineffective coordination at the landscape level among various line agencies to achieve harmonized approaches and improved return on investments.

The project documentation was not particularly clear as to why the states of Madhya Pradesh and Chhattisgarh were chosen as the focus of the project. It did articulate that forests in these areas were vulnerable to climate change, with nearly 73 percent of forested areas in Chhattisgarh expected to undergo vegetation change due to climate change.

Alignment with the government strategy. To address the issues stated above, the government launched the Green India Mission (GIM), which aims to protect, restore, and enhance India's diminishing forest cover and respond to climate change through a combination of adaptation and mitigation measures.

Furthermore, the objective of the project supported India's Nationally Determined Contributions (NDCs) targets of sequestering 2.3 to 3 billion tons of carbon through forestry. Also, the objective was in line with the government's National Action Plan on Climate Change that was launched in 2008 and aims to mitigate and adapt to the adverse impact of climate change.

Alignment with the World Bank strategy. The objective of the project was in line with all three pillars of the World Bank's most recent Country Partnership Framework (CPF) (FY18-22): i) promoting resource-efficient growth by increasing and diversifying income-generating opportunities while improving efficiency in the use of water and land resources in agriculture; ii) enhancing competitiveness and enabling job creation through value addition of NTFPs and market linkages creating economic opportunities for forest-dependent communities; and iii) investing in human capital by providing training to government staff and communities to improve land management. The project's objective is also aligned with the World Bank's Climate Change Action Plan (2021-2025), which aims to advance green, resilient, and inclusive development by enhancing support for WBG clients to integrate climate into their development strategies.

The World Bank has extensive experience in working with the Government of India to improve forest management, such as through the Andhra Pradesh Forestry Project (P010449), financing amount US$76 million), which aimed to i) introduce local participation in protecting and managing of public forests; ii) support forest regeneration and rehabilitation as well as biodiversity conservation; and iii) improve public forest management and development.

The objective of the project was pitched at an appropriate level to address a critical development problem. Piloting sustainable land and ecosystem approaches in the two states allowed to demonstrate the potential for the nationwide scaling up of GIM. However, it is not entirely clear why these two provinces were selected. Also, the project documentation did not sufficiently articulate the rationale for the need to improve forest quality. Overall, the relevance of objectives is rated as High.

Rating
High

4. Achievement of Objectives (Efficacy)

OBJECTIVE 1

Objective

Improve forest quality in selected landscapes in Madhya Pradesh and Chhattisgarh

Rationale

Theory of Change: The project's theory of change stated that project inputs/activities such as enhancing and restoring carbon stocks in forestlands and developing community based models for sustainable utilization of NTFP were to result in outputs including carbon stocks in forestlands being enhanced and restored as well as community based models for sustainable utilization of NTFP being developed. These outputs were to result in the outcome of forest quality for forest dependent communities being improved.

The theory of change was sound and logical.

Outputs:

- 25,748 hectares of forestlands and corridors (usually narrow areas connecting two habitats facilitating wildlife movement between them) were under biodiversity monitoring by the State Forest Department using a protocol that was developed by the project, achieving the target of 25,000 hectares.
- In both states, carbon assessment baselines were developed, carbon stock measurements were conducted, and equipment to measure carbon sequestration was installed and commissioned, achieving the targets of the two states using carbon measurement and monitoring systems.

- In Madhya Pradesh:
  - 3,624 hectares of forest area were restored by planting over 1.1 million tree saplings of indigenous species.
  - The project contributed to 11 forest nurseries being upgraded, resulting in an increase in area under natural regeneration from 852 hectares to 1,644 hectares in Madhya Pradesh.
- In Chhattisgarh:
  - 3,763 hectares of degraded forest and moderately dense forest were restored by planting over 1 million plants.
- STARMAP, a Geographic Information System (GIS) based monitoring platform, was developed, which allows for assessing the abundance of native species and making decisions for restoring degraded patches.
- 68 capacity-building programs with 3,107 participants were organized.

Outcomes:

- In areas supported by the project, the average annual carbon sequestered per hectare increased from 2.53 tons per year in 2015 to 2.78 tons per year in 2023, achieving the target of 2.78 tons per year.
- The project recorded an increase in average carbon density from 59.88 tons per hectare in 2019 to 66.59 tons per hectare in 2023 in Madhya Pradesh and from 74.11 tons per hectare in 2019 to 79.58 tons per hectare in 2023 in Chhattisgarh.

The project was able to increase forest quality as measured by carbon sequestration. Overall, achievement under this objective was Substantial.

Rating
Substantial

OBJECTIVE 2
Objective
Improve land management in selected landscapes in Madhya Pradesh and Chhattisgarh

Rationale
Theory of Change: The project's theory of change stated that project inputs/activities such as building capacity for forest and landscape planning, carbon monitoring and measuring, as well as conducting NTFP assessments were to result in several outputs such as forest and landscape planning methods being established, carbon monitoring methodology being developed and NTFP assessments being conducted. These outputs were to result in the outcome of land management being improved.

The theory of change was sound and logical.

Outputs:

- 66,655 hectares of new area outside protected areas were "managed as bio-diversity friendly", exceeding the target of 30,000 hectares. It was unclear how this indicator was measured, and it appears that it was merely the area where SLEM activities were carried out. According to the World Bank team (March 26, 2024) areas managed as bio-diversity friendly were areas that adopted best practices that led to improved soil quality, and construction of water storage structures that helped to improve vegetation cover and avian, amphibian and reptilian diversity.
- 50,538 hectares of landscape area were restored through the treatment of 10,000 hectares, achieving the target of 50,000 hectares. The project tried to demonstrate that by physically treating a smaller area within a landscape, the benefits of such treatments percolate wider in the landscape. For example, in Madhya Pradesh, as a result of the upstream restoration of forest area that increased the availability of irrigation water in the catchment during the dry summer months, cropping area in some villages increased.
- Five government agencies used the online land degradation and desertification indicator portal for reporting India's international commitments under the Bonn challenge, achieving the target of five agencies.
- 12 Sustainable Land and Ecosystem Management (SLEM) best practices were published on ICFRE knowledge platform exceeding the target of 10 SLEM best practices.
- The project conducted capacity building programs on scaling up SLEM practices including 18,133 participants.
- A web-based national system for monitoring land degradation and desertification was developed.
- A roadmap for institutional and policy mainstreaming of SLEM in India was developed.
- A SLEM knowledge sharing and reporting system was developed.
- A national database for SLEM was created.

- A total of 4,245 households in Madhya Pradesh and 8,810 households in Chhattisgarh received improved cookstoves in the project landscapes to reduce the use of firewood avoiding greenhouse gas emissions and improve indoor air quality.
- A total of 8,846 households in Madhya Pradesh and 18,575 households in Chhattisgarh received an improved variety of vegetable seeds to allow them to boost their productivity and build resilience despite being located in climate stressed regions.
- A traditional tree-based farming system (WADI) to promote agroforestry, horticulture, and forestry was introduced to 4,276 households in Madhya Pradesh and 11,795 households in Chhattisgarh.
- 1,672 units of gravity-based drip irrigation systems were introduced in Madhya Pradesh and 2,394 units in Chhattisgarh and 1,198 portable sprinkler irrigation systems were installed in Madhya Pradesh to improve water use efficiency.
- A total of 7,000 units with accessories and mother seeds were established for scaling up of Azolla cultivation for integrated farm development.
- Over 5,022 households benefitted from training and tools for promoting vermicomposting. The tools included vermicompost beds, shade net, earthworms for vermicomposting. Also, for biopesticides the project provided both training and tools, which included tank, mixers, and limited raw materials.
- A total of 2,612 households were supported in Lac Cultivation through training to beneficiaries/ farmers/ cultivators on methodologies for sustainably upscaling Lac Cultivation.

Outcomes:

- 25,316 hectares of land area were under sustainable landscape management practices, achieving the target of 25,000 hectares. According to the Bank team, these were areas where practices such as vermicomposting and biopesticides were adopted, as confirmed by a monitoring mechanism.
- 17,854 land users adopted sustainable land management practices as a result of the project, exceeding the target of 5,000 land users.
- During the project end-survey, about 99 percent in Madhya Pradesh, and 100 percent in Chhattisgarh reported a reduction in firewood use by about 40 percent from the daily per household baseline of 20 kg in Madhya Pradesh, and 17.5 kg in Chhattisgarh.
- As a result of being provide with improved variety of vegetable seeds, during the end-line survey, about 96 percent of households reported improvement in production/yield as well as crop diversification.
- As a result of the introduction of the WADI system, 54 percent of households reported improved incomes and nutrition intake during the end-line survey.

The project was able to make significant improvements in land management for forest dependent communities by land users adopting sustainable land management practices and achieving the target of land area being under sustainable landscape management practices. Achievement of this objective was Substantial.

Rating
Substantial

OBJECTIVE 3

Objective

Improve NTFP benefits for forest dependent communities in selected landscapes in Madhya Pradesh and Chhattisgarh

Rationale

Theory of Change: The project's theory of change stated that project inputs/activities such as developing community based models for NTFPs, rehabilitate forests, and improve soil, and water conservation techniques, as well as develop sustainable harvest protocols and conduct training on such protocols were to result in several outputs. These outputs were to include people (mostly women) living in forested areas being trained in techniques for improved production, harvesting, and entrepreneurship. These outputs were to result in the outcome of improved value addition for NTFPs for forest dependent communities.

The theory of change was sound and logical.

Outputs:

- 21 government institutions were provided with capacity building support to improve the management of forest resources, exceeding the target of eight government institutions.
- 18,834 people in forest and adjacent community benefitted from monetary/non-monetary benefits from forests, exceeding the target of 5,000 people. Of those people, 9,655 were female, exceeding the target of 2,500 being female. Also, out of the total number of people, 14,954 people were from forest-ethnic minority/indigenous groups, exceeding the target of 2,500 people. According to the World Bank team (March 26, 2024) those beneficiaries who received direct monetary gains (income increases attributed to the project) were considered as having received monetary benefits. Those beneficiaries whose gains could not be measured or attributed to the project but who benefited were counted as having non-monetary benefits. The non-monetary benefits included collection of fodder, increased availability of water in wells and for agriculture, land productivity enhancement through SLEM best practice adoption, efficiency in NTFPs collection and processing, skill development and alternate livelihood trainings etc. Estimation included comparing baseline incomes from the pre-project period (i.e., year 2016) against incomes measured at end line survey in 2023.

Outputs that were stated above such as tree planting and restoration were expected to contribute to NTFPs in the medium term.

- 25 sustainable harvesting protocols for NTFPs were developed for Madhya Pradesh and12 sustainable harvesting protocols were developed for Chhattisgarh.
- 745 beneficiaries in Madhya Pradesh and 4,161 beneficiaries in Chhattisgarh were trained on sustainable harvesting protocols.
- The growing stock of valuable NTFP (medical plants) was improved by 60 hectares.

Outcomes:

- 630 targeted beneficiary groups were engaged in participatory planning under the project, exceeding the target of 500 groups.
- A third-party impact evaluation conducted for the project used a difference in difference method to assess increases in average annual household income. Comparing the pre-project (2016) to post-

project (2022): in Madhya Pradesh, incomes increased by 12 percent more for households in project areas as compared to a control group, and similarly by 7 percent in Chhattisgarh.

- According to the World Bank team (March 26, 2024) evidence collected as part of the impact evaluation showed that beneficiaries experienced an increase in crop productivity through use of vermicompost, diversified livelihood through introduction of value addition, such as, NTFP based bakery and handicrafts.

The number of targeted beneficiary groups engaged in participatory planning under the project was not an adequate indicator to assess the objective of improved NTFP benefits for forest dependent communities. However, the project's impact evaluation demonstrated an increase in income for project beneficiaries. Therefore, achievement of this objective was Substantial.

Rating
Substantial

OVERALL EFFICACY
Rationale
The project's achievements under all objectives were Substantial resulting in an overall efficacy rating of Substantial.

Overall Efficacy Rating

Substantial

5. Efficiency
Economic efficiency:

Both, the PAD and the ICR included a cost-benefit analysis, covering benefits accruing from increased carbon sequestration.

The cost-benefit analysis included in the PAD (p. 14-16) estimated the economic value of additional carbon sequestered through project interventions because carbon sequestration was the primary ecosystem service targeted. The analysis assumed that the project would result in a 10 percent incremental gain in carbon sequestration over the baseline rates in the 50,000 hectares of forestlands where project investments were to result in forest quality improvement. This was estimated to lead to an estimated 5.4 million tons of additional carbon sequestered over a 10-year period, or 10.8 million tons over 20 years. Converting this value from tons of carbon into tons of CO2 equivalent using a conversion factor of 3.666, the project was expected to sequester an additional 40 million tons of CO2 equivalent over 20 years. Different scenarios were tested to adequately understand the uncertainty relating to the current and future value of carbon sequestration. Based on a

conservative assumption of $1.5 USD / metric tons of carbon sequestered, three different scenarios were tested: an increase of 3 percent, 5 percent and 10 percent of carbon credits within 10 years from the beginning of the project, resulting in benefit-cost ratios between 2.13 and 2.31 and an Internal Rate of Return (IRR) ranging from 28 and 32 percent. The analysis indicated that the project was a worthwhile investment.

The ICR (para 28) modified the PAD's cost-benefit analysis by using updated project disbursements, an economic value from carbon sequestration using a shadow price of carbon, and monetary benefits (such as income increases attributed to the project) due to sustainable land and ecosystem management.

The analysis examined three scenarios, using different carbon sequestration values ranging from US$3.37 to $20 per ton. Given that the project restored a total of 7,387 hectares and that it was assumed the project sequestered 11 tons of CO2 per hectare per year, the analysis estimated an IRR of 33 percent, 36 percent, and 41 percent for the three different scenarios. However, it is unclear why such large differences in the assumed value of carbon sequestration led to relatively small differences in the project rate of return. The ex-post returns are also not meaningfully comparable to the ex-ante returns because the methodologies use dramatically different estimated carbon sequestration values. The ex-post returns match the ex-ante returns only because of a dramatically higher estimated value of carbon sequestration.

As noted above, a project impact evaluation showed increased household income for project-affected households compared to control groups.

Overall, these analyses may indicate that the project was a worthwhile investment, but the transparency of the methodologies used could have been improved.

Operational efficiency:

From project approval until the Mid Term Review (MTR) in November 2020, the project experienced significant implementation delays due to a delay in the government meeting the effectiveness conditions, a lag in completely setting up the state-level implementation units, and finalizing annual plans. Furthermore, the project experienced delays related to weak fiduciary capacity and slow flow of funds. By the time of the MTR, the project had only disbursed 17 percent of its financing, leaving 83 percent to be disbursed during the following 29 months remaining for implementation. Therefore, the World Bank team restructured the project to extend the implementation period by 12 months to allow more time to complete project activities.

Overall, efficiency is rated Substantial.

In table below: point values here are the midpoint of estimated ranges.

Efficiency Rating

Substantial

a. If available, enter the Economic Rate of Return (ERR) and/or Financial Rate of Return (FRR) at appraisal and the re-estimated value at evaluation:

	Rate Available?	Point value (%)	*Coverage/Scope (%)

Appraisal	✓	30.00	100.00 ☐ Not Applicable
ICR Estimate	✓	37.00	100.00 ☐ Not Applicable

* Refers to percent of total project cost for which ERR/FRR was calculated.

6. Outcome

The relevance of the objective was rated High. Efficacy and Efficiency were rated Substantial. Therefore, the overall outcome rating is Satisfactory.

a. Outcome Rating

Satisfactory

7. Risk to Development Outcome

Government commitment: According to the World Bank team (February 26, 2024) the government remains committed to the objective of the project as demonstrated through the extension of the GIM and merging it with the National Afforestation Plan to achieve operational efficiency. Also, in the second NDC update of August 2022, the government retained the target of sequestering additional 2.5-3.0 billion tons of carbon.

Financing: While the project was able to diversify and increase incomes, the sustainability of these achievements will depend on financing and technical capacity. According to the World Bank team (February 26, 2024) there will be a follow-on project (financing amount US$400 million) to scale up the pilots initiated under this project.

Technical capacity: According to the ICR (para. 62) the project was able to strengthen institutional support capacity at different levels, which positively impacted local community organizations. However, State Forest Departments need to continue to provide handholding support to some of the community groups and beneficiaries who benefited through livelihood enhancement activities for some more time to ensure the sustainability of project activities.

8. Assessment of Bank Performance

a. Quality-at-Entry

The design of the project was simple and innovative. Also, according to the PAD (para. 29) the project design was based on previous World Bank projects in this area in India. Lessons learned integrated into this project's design included the importance of selecting biological corridor areas for ensuring

connectivity, building local stakeholder ownership, promoting participatory conservation management approaches, as well as creating systems for monitoring of carbon sequestration.

According to the PAD (para. 40) the World Bank team identified relevant risks as Substantial including: i) inadequate sector strategies and policies due to the novelty of the program; ii) low capacity of the State Forest Departments to take up new approaches for improving forest quality could mean the technical design may not be implemented; iii) inadequate institutional capacity due to low allocations and delays in fund releases; iv) state departments limited experience in implementing World Bank projects could result in fiduciary bottlenecks; and v) forest-dependent poor households might have little incentive to take part in project activities. The World Bank team identified mitigation measures, some of which were inadequate due to weak capacity and inadequate project management structures. As a result, the project experienced a low disbursement of funds until the MTR in November 2020. Also, the project experienced implementation delays due to fiduciary issues. Furthermore, according to the ICR (para. 39), despite the project's long preparation phase, the readiness of the implementing agencies was low, resulting in low disbursement. The project's Results Framework did not sufficiently measure benefits for forest-dependent communities (see section 9a for more details).

Quality-at-Entry Rating
Moderately Satisfactory

b. Quality of supervision
According to the ICR (para. 43) the World Bank team conducted 15 bi-annual supervision missions throughout implementation. The project benefitted from strong local World Bank country office support to provide timely assistance in key areas such as procurement, financial management, and safeguards.

During the MTR in November 2020, the World Bank team identified key implementation bottlenecks such as inadequate project management structures and technical assistance from the PMU as well as low absorption of funds. The World Bank team developed an action plan to address these issues. Also, the World Bank team conducted fiduciary and safeguard workshops to strengthen the capacity of the PMU. As a result of these measures, disbursement picked up and project performance improved.

Quality of Supervision Rating
Satisfactory

Overall Bank Performance Rating
Moderately Satisfactory

9. M&E Design, Implementation, & Utilization

a. M&E Design

The M&E was innovative to use advanced technology for monitoring carbon sequestration and demonstrating the feasibility of this for monitoring forest quality.

The objective of the project lacked clarity allowing for different possible ways to parse the PDO – it was unclear whether or not the project expected forest quality and land management benefits to be self-standing or explicitly linked to forest-dependent communities (which would have been more challenging to prove). A clearer way to articulate the PDO would have been, for example, to improve i) forest quality, ii) land management, and iii) Non-Timber Forest Produce (NTFP) benefits for forest-dependent communities in selected landscapes in Madhya Pradesh and Chhattisgarh. The project's theory of change and how key activities were to result in the intended outcome was sound. Indicators captured key outputs, though the Results Framework did not cover many other outputs. However, the project could have benefited from multiple PDO indicators that covered the three different aspects of the PDO (forest quality, land management, and benefits for forest-dependent communities) rather than trying to bundle these under a single measure, which would do so imperfectly. The Results Framework did not sufficiently capture benefits for forest-dependent communities and hectares of forest area that were restored. However, these benefits were captured by other evaluative methods.

According to the PAD (para. 38) the Project Management Unit (PMU) was responsible for the project's M&E activities. The project was to use 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 increased. Also, the PMU commissioned an impact evaluation to identify livelihoods and environmental impacts in project areas, which was completed.

b. M&E Implementation

According to the ICR (para. 19) the project collected data and conducted Geographic Information System (GIS) based plotting on a regular basis and conducted regular field monitoring missions to monitor the implementation progress of project activities.

The project's Results Framework was not modified during implementation. According to the World Bank team (February 26, 2024) M&E data were found to be reliable and of good quality. Also, the project did not encounter any significant M&E related issues. The state forest departments had been using remote sensing and were familiar with data capture, documentation and reporting, The World Bank team provided limited capacity support through a technical workshop on designing M&E processes in the initial stages of project implementation.

c. M&E Utilization

According to the ICR (para. 52) the project's M&E data were continuously used to inform project management and inform decision making such as budgetary allocations. Also, M&E data were used for reporting on the progress against annual targets for project activities. According to the Bank team (March 26, 2024) the project conducted beneficiary surveys, which provided key data. However, it is not clear to what extent this data was used to inform project implementation since the ICR did not adequately articulate the study findings or incorporate them into project indicators.

Overall, the M&E quality is rated as substantial with moderate shortcomings especially at design.

M&E Quality Rating
Substantial

10. Other Issues

a. Safeguards
The project was classified as category B and triggered the Bank's safeguard policies OP/BP 4.01 (Environmental Assessment), OP/BP 4.04 (Natural Habitats), OP/BP 4.36 (Forests), and OP/BP 4.10 (Indigenous People). The project developed several safeguard instruments such as an Environmental and Social Management Framework (ESMF), an environmental assessment, and a tribal development framework.

According to the ICR (para. 55) the project's safeguards rating was Satisfactory until November 2019 when it was downgraded to Moderately Satisfactory due to: i) beneficiary data on gender and social grouping being provided as aggregated data instead of format specified in ESMF; ii) delay in the appointment of the Social Specialist in Chhattisgarh; iii) delay in raising awareness for the Grievance Redress Mechanism (GRM), which had been in place since project effectiveness and delay in the operationalization of Grievance Redress Committees; iv) lack of participatory planning methods being available in printed format and resource plan was not available within community groups/Joint Forest Management Committees (JFMCs); and v) minor cases of motorable road access being cut off from main habitation due to the project's plantations in two hamlets. The project addressed these issues adequately. However, the safeguard rating remained Moderately Satisfactory until project closure due to procedural and documentation issues. According to the World Bank team, these included: i) reporting of aggregated data on beneficiary details on gender and social grouping, despite disaggregated data being available; ii) delay in the appointment of the Social Specialist in Madhya Pradesh and Chhattisgarh at the PIU level; iii) delay in the awareness of the GRM (already in place from effectiveness) and in the formation and operationalization of the Grievance Redress Councils; and iv) minor cases of motorable road access being cut off from main habitation due to the project's plantations in two hamlets. While these issues were resolved, the procedural delays and improper reporting caused the rating to be retained at Moderately Satisfactory.

b. Fiduciary Compliance
Financial Management:

According to the ICR (para. 57), during project preparation, the World Bank team conducted a fiduciary capacity assessment which rated the project's fiduciary risk Substantial due to the PIU's lack of experience with World Bank operations, limited fiduciary capacity, a decentralized flow of funds and weak reporting structures. Mitigation measures were not sufficient resulting in disbursement delays. By the time of the Mid-Term Review, the project had only disbursed 17 percent of its funds. The Bank addressed Financial Management issues through: i) creating provisions at PIU level for dedicated FM specialist staff; ii) conducting dedicated fiduciary training sessions; iii) providing support to identified fiduciary focal points

within each PIU: iv) conducting regular follow ups on Interim Unaudited Financial Reports and Audit Reports; and v) flagging Financial Management related issues. After the Mid-Term Review, the state capacity improved significantly, which resulted in better project performance and disbursements.

According to the World Bank team (February 26, 2024) the project complied with the World Bank's financial covenants. Not all of the external auditor's opinions were unqualified. The World Bank team addressed identified issues.

When the project closed, Financial Management was rated Satisfactory.

Procurement:

The World Bank team stated (February 26, 2024) that the project followed the World Bank's procurement guidelines. According to the ICR (para. 57), the procurement-related risks identified during the fiduciary assessment at appraisal were mitigated through conducting training sessions on World Bank procurement procedures, providing technical assistance to procurement focal points within each PIU, and establishing compliant handling mechanisms at all PIUs. However, according to the ICR (para. 39) mitigation measures were not sufficient resulting in initial implementation and disbursement challenges that lasted until the project's Mid-Term Review.

When the project closed, procurement was rated Moderately Satisfactory since the Procurement Post Review by the World Bank found, in some sample cases, delays in contract award or completion, payment execution delays, incomplete or missing information on the data sheet and missing documents on STEP.

c. Unintended impacts (Positive or Negative)

NA

d. Other

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11. Ratings

Ratings	ICR	IEG	Reason for Disagreements/Comment
Outcome	Satisfactory	Satisfactory	
Bank Performance	Satisfactory	Moderately Satisfactory	Inadequate mitigation measures for identified risks.
Quality of M&E	Substantial	Substantial	
Quality of ICR	---	Substantial	

12. Lessons

The ICR (para. 63-68) included several lessons learned which were adapted by IEG:

- **Using technology tools can be effective for planning, implementing, and monitoring forest management activities and improve the efficiency and effectiveness of such activities.** In this project, the State Forest Departments used GIS and mobile apps to identify flora and fauna. Using the app reduced the time and effort required for monitoring, allowing field staff to focus more on conservation and protection activities.
- **Combining investments on forest and non-forest lands can unlock greater economic and ecological benefits.** In this project, the integration of sustainable land and ecosystem management outside of forests as part of forest restoration, provided a wider range of economic and ecological benefits such as enhancing land productivity, diversifying livelihood opportunities, and increasing ecosystem services.
- **To make forestry financially attractive for rural communities and for attracting private sector financing, critical policy and institutional reforms are necessary.** In this project, strategic investments in NTFP value chains enhanced economic returns for the rural poor by setting up forestry-enterprises amongst forest-dependent communities and connecting them with economic opportunities.

13. Assessment Recommended?

No

14. Comments on Quality of ICR

The ICR provided an adequate overview of project preparation and implementation and included an appropriate economic analysis. Also, the lessons learned included in the ICR can be useful for future engagement in this area. However, the ICR would have benefitted from providing more information in key areas such as M&E, Financial Management and Procurement such as whether M&E data were found to be adequate and of good quality, the external auditor's opinions were unqualified, the project complied with the World Bank's financial covenants and procurement guidelines. Also, the ICR would have benefitted from better articulating the findings of the beneficiary studies conducted into its assessment of achievement of project objectives, rather than only project efficiency. Overall, the quality of the ICR is Substantial, but only marginally so.

a. Quality of ICR Rating

Substantial