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FINAL EVALUATION REPORT

PARTNERSHIP FOR LAND USE SCIENCE (FOREST-PLUS) PROGRAM

January 2018

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PARTNERSHIP FOR LAND USE SCIENCE (FOREST-PLUS) PROGRAM FINAL PERFORMANCE EVALUATION

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ACRONYMS

CFM	Community Forest Management
CFR	Corporate Forests Responsibility
CLEEO	Clean Energy and Environment Office
CSR	Corporate Social Responsibility
EAFM	Ecosystem Approach to Forest Management
ET	Evaluation Team
EQ	Evaluation Question
FD	Forest Department
FGD	Focus Group Discussion
FRI	Forest Research Institute, Dehradun
GHG	Greenhouse Gas
GIS	Geographic Information System
GOI	Government of India
HP	Himachal Pradesh
HPTM	Harvesting, Processing, Transporting and Marketing
IP	Implementing Partner
JFMC	Joint Forest Management Committee
KII	Key Informant Interviews
LMS	Learning Management System
LOP	Life of Project
MOEF&CC	Ministry of Environment, Forests, and Climate Change
MP	Madhya Pradesh
MRV	Monitoring, Reporting and Verification
MSU	Michigan State University
NGO	Nongovernmental Organization
NTFP	Non-Timber Forest Product
PCCF	Principal Chief Conservator of Forests
PDD	Project Design Document
PE	Performance Evaluation
PES	Payment for Ecosystem Services
PLUS	Partnership for Land Use Science
PMP	Performance Monitoring Plan
PPP	Public-Private Partnership
REDD+	Reducing Emissions from Deforestation and Forest Degradation and (Plus) the Role of Conservation, Sustainable Management of Forests and Enhancement of Forest Carbon Stocks in Developing Countries
SAR	Synthetic Aperture Radar
SI	Social Impact
TA	Technical Assistance
TTM	Tools, Techniques, and Methods
USAID	United States Agency for International Development
USG	United States Government
VFC	Village Forest Committee

EXECUTIVE SUMMARY

EVALUATION PURPOSE

The purpose of this assignment was to evaluate the performance of the United States Agency for International Development (USAID) Partnership for Land Use Science (Forest-PLUS) program in India, specifically, the program's relevance, effectiveness, efficiency, potential sustainability, and likelihood of impact. The primary audience of this final performance evaluation (PE) is USAID/India, particularly the Clean Energy and Environment Office and Mission management, to determine whether the Forest-PLUS met its goals, objectives, and outcomes. USAID will use evaluation findings to learn lessons that will guide the design of future conservation activities.

BACKGROUND

In September 2010, USAID and the Government of India (GOI) signed a five-year partnership agreement to promote scientific and technical collaboration and exchange, with a goal of conserving forests and improving sustainability to address climate change. In July 2012, USAID awarded Tetra Tech a five-year \$14,126,504 technical assistance (TA) contract for the Forest-PLUS program. This TA was to support GOI activities and strengthen capacity for Reducing Emissions from Deforestation and Forest Degradation (REDD+) implementation. Working in collaboration with the Ministry of Environment, Forest, and Climate Change (MOEF&CC), local governments, and local communities, the program: (1) developed and deployed scientific tools and methods for improved sustainable landscape or ecosystem management, forest carbon inventory, and monitoring; (2) designed modalities to provide better incentives to forest-dependent communities for forest management and conservation and (3) enhanced human and institutional capacity in the forestry sector. The focus districts of the Forest-PLUS program are located within the states of Madhya Pradesh (MP), Himachal Pradesh (HP), Karnataka, and Sikkim.

METHODOLOGY

This evaluation addressed six Evaluation Questions (EQs) on the following topics:

1. Improving forest management and carbon monitoring;
2. Building institutional capacity;
3. Identifying factors helping or hindering achievements;
4. Promoting long-term carbon sequestration and reduced Greenhouse Gas (GHG) emissions;
5. Addressing gender issues; and
6. Identifying key lessons and recommendations.

The evaluation used a mixed-methods, gender-oriented approach. Methods included (1) a systematic review of relevant literature and Forest-PLUS program documents, (2) 45 semi-structured key informant interviews (KIs), (3) 24 focus group discussions (FGDs), (4) direct observation of program-supported technologies and community activities, and (5) an online survey of 26 training participants.

FINDINGS AND CONCLUSIONS

 **EVALUATION QUESTION 1. IMPROVING FOREST MANAGEMENT AND FOREST CARBON MONITORING:** *To what extent has the Forest-PLUS program improved forest management and forest carbon monitoring in the four targeted states? a.) How effective was the program in developing and institutionalizing forest management and REDD+ tools and techniques?*

SUMMARY OF EQ 1 FINDINGS: Forest-PLUS interventions led to several actions, which, if fully implemented, will improve the management of forests including; the GOI submitting proposals to the Global Climate Change Fund and the World Bank to further improve the GOI's forest management; introducing a chapter on biodiversity in its Working Plan; revising the Forest Survey of India's manual on data collection protocols; and drafting a Project Design Document (PDD) for enhancing REDD+. The program introduced 64 climate mitigation and/or adaptation tools, technologies, and methodologies (TTMs). Many of the tools however, such as the synthetic aperture radar, are not currently in routine use by the GOI due, among other reasons, to the lack of change to government procedures to officially adopt

the new processes. At the community level, Forest-PLUS improved forest management by introducing harvesting and processing technologies for non-timber forest products (NTFP); silviculture techniques; and solar heaters. Challenges to TTM uptake at community level included language barriers and limited accessibility to the TTM. Both GOI and community respondents reported that they became more aware about climate change because of their involvement with Forest-PLUS.

SUMMARY OF EQ 1 CONCLUSIONS: Forest-PLUS succeeded in laying the groundwork for improved forest management in the four states by introducing an ecosystem approach to forest management (EAFM) and raising awareness of climate change among local forestry officials and communities. While the quality of the TTMs was high and relevant to the situations, the GOI has institutionalized few of the solutions. A longer, more sustained effort by USAID is necessary for the formal adoption of TTMs into policies and procedures.



EVALUATION QUESTION 2. BUILDING INSTITUTIONAL CAPACITY: *How have the Forest-PLUS trainings and demonstration activities affected capacity of Indian institutions in better forest/ecosystem management? a) To what extent has the program responded to the needs of MOEF&CC, MOEF&CC institutions and the four state forest departments?*

SUMMARY OF EQ 2 FINDINGS: From the Forest-PLUS list of training programs, between July 2014 and September 2017, the program conducted 169 separate training events for community members and GOI staff in the four targeted states. Based on needs assessments, Forest-PLUS organized capacity building programs, including classroom training, demonstrations, hands-on training, in-country exchanges, and overseas study tours to ensure relevant content. The Forest-PLUS training tracker shows a total of 1,642 GOI trainees. GOI officials interviewed said that Forest-PLUS helped them to do their jobs better and helped their government institution or department respond better to climate change. Forest-PLUS responded well to institutional needs by increasing program beneficiaries' understanding of complex issues, contributing to preparedness to address global requirements, and developing and deploying appropriate TTMs. When the implementing partner (IP), partner organizations, GOI, public private partnerships (PPPs), and other donors were asked in interviews about capacity gaps remaining within the MOEF&CC and state Forest Departments, the main individual capacity gaps mentioned were communications, field trials, and guidelines. Institutional capacity gaps noted by respondents were enabling environments, training, and funding.

SUMMARY OF EQ 2 CONCLUSIONS: Forest-PLUS effectively responded to the needs of MOEF&CC by targeting the relevant state institutions and individuals in its capacity building initiatives. Effort sustained over a longer period of time will be required to address the remaining capacity gaps—namely acculturation and an enabling environment mentioned most frequently as priorities by respondents.



EVALUATION QUESTION 3. IDENTIFYING FACTORS HELPING OR HINDERING ACHIEVEMENTS: *What factors (internal and external to the program) help or hinder achievements of the expected results (outcomes)?*

SUMMARY OF EQ3 FINDINGS: Many respondents including IP staff, partners, and GOI interviewees cited the strong relationships with senior GOI officials as a major factor that aided the success of Forest-PLUS. Stakeholders generally found the TTMs to be useful and relevant. The level of involvement of the communities in the field initiatives and policy planning was also a significant factor that supported strong project results. Where the program involved communities in planning and implementing activities, the adoption of TTMs was high; but where the program did not act upon community input, there were delays in the implementation of activities. Some GOI officials reported that there was not enough communication from Forest-PLUS about the program's goals and plans, which may be attributed to frequent internal transfers of government personnel.

SUMMARY OF EQ3 CONCLUSIONS: Cultivating strong relationships with GOI officials and involving the communities in planning and implementing activities led to stronger, more fully adopted project outcomes. While there was frequent and high-level communication from the project with GOI officials, the repetition of these messages was necessary due to frequent internal transfers and new actors participating in the project.



EVALUATION QUESTION 4. PROMOTING LONG-TERM CARBON SEQUESTRATION AND REDUCED GHG EMISSIONS: *If any, what aspect(s) of the program is most promising in paving the foundation for long term carbon sequestration and reduced GHG emissions from forests and landscapes?*

SUMMARY OF EQ4 FINDINGS: The majority of respondents said that capacity building established the foundation to improve forest management practices and thereby reduce greenhouse gas emissions. Respondents also mentioned that awareness campaigns on harmful impacts of deforestation and forest degradation were effective. Many respondents considered the many promising community programs as potential as models for scale. Project participants saw the extraction of firewood as one of the biggest drivers of forest degradation and thus cited the introduction of more efficient dryers and bio-briquettes as one of the most important community programs. The majority of respondents also considered private sector and donor support for awareness campaigns, forest protection, and restoration to be promising for reduced GHG emissions. They cited tree plantations and awareness campaigns as very useful initiatives conducted through PPPs. Male respondents specifically mentioned improved forest and carbon measurement TTM, with the Carbon Calculator tool as one of the most important to reducing GHG emissions.

SUMMARY OF EQ4 CONCLUSIONS: Among the elements of Forest-PLUS programming, capacity building and awareness raising held the most promise for long-term carbon sequestration and reduced GHG emissions from forest and landscapes. If intensified, they could have a tremendous influence and impact on the mindset and capabilities of decision-makers and management practitioners, from government staff to village farmers. The Forest-PLUS program facilitated communication and trust between state Forest Departments and target communities to produce cooperative livelihoods programs for the villagers aimed at local reductions in deforestation and forest degradation in support of long-term global carbon sequestration and reduced GHG emissions for climate change mitigation.



EVALUATION QUESTION 5. ADDRESSING GENDER ISSUES: *To what extent have the program interventions addressed gender issues in the forestry sector? What are the male and female roles and the intended and unintended positive and negative changes?*

SUMMARY OF EQ5 FINDINGS: The roles of men and women in the forestry sector differ depending upon the geographic region of the country where they live. The Forest-PLUS program carefully assessed the needs of men and women according to their role in interacting with the forest to design interventions that would have specific impact. The interventions were different in each state and addressed each gender's specific role where it differed. Forest-PLUS introduced animal husbandry techniques that reduced the extent to which women brought their livestock to forests to graze; smokeless cook stoves that reduced the pollution released into the air and the firewood taken out of forests by women to prepare food for their families; and mushroom cultivation, which women primarily adopted primarily in place of their harvesting of forest resources. In FGDs, women in all states reported great impact of Forest-PLUS on their daily lives from these interventions, including increased voice, understanding, and income. Men also reported positive impact on their lives such as increased knowledge. Respondents did not report any negative changes in gender roles or relations.

SUMMARY OF EQ5 CONCLUSIONS: Forest-PLUS made a strong effort to include women in its training and designed specific community initiatives to address the effects of both men and women on forests.

KEY LESSONS AND RECOMMENDATIONS

Select recommendations are presented here. For the full recommendations, please see the main report.

EVALUATION QUESTION 6. IDENTIFYING KEY LESSONS AND RECOMMENDATIONS: *What are the key lessons from the implementation of the activity as well as recommendations for future programming of USAID's forestry sector design?*



EQ1: IMPROVING FOREST MANAGEMENT AND CARBON MONITORING

SUMMARY OF EQ 1 LESSONS:

- Engaging the private sector to further climate change mitigation and environmental conservation was effective and could be used in other USAID/India programs.

SELECT EQ 1 RECOMMENDATIONS:

- Interventions that are linked to livelihoods showed great promise and uptake in communities. USAID should consider focusing future programming on interventions that have a positive economic impact on communities.
- The GOI should fully adopt ownership of and maintain the interventions started through Forest-PLUS and agreements on how this can be accomplished must be laid out at the beginning of any future project.



EQ2: BUILDING INSTITUTIONAL CAPACITY

SUMMARY OF EQ 2 LESSONS:

- Effectively responding to the needs of GOI institutions requires building the capacity in many forestry and climate change topics and addressing the importance of training a wide spectrum of stakeholders within the government (including upper-level, mid-level, and front-line field staff.)

SELECT EQ 2 RECOMMENDATIONS:

- USAID should plan to conduct a comprehensive training needs assessment with the GOI that includes an assessment of the need for training across sectors, at different levels and for training of trainers. While Forest-PLUS training was successful, ensuring a comprehensive approach that can address frequent staff transfers will be key.
- In future programs, USAID should pay particular and greater attention to appropriate and increased training of front-line field staff, who are more directly interacting with the environment and the communities.



EQ3: IDENTIFYING FACTORS HELPING OR HINDERING ACHIEVEMENTS

SUMMARY OF EQ 3 LESSONS:

- USAID programs, especially those intended to build capacity of government counterparts, should factor in the time and human resources necessary to build and maintain strong relationships over the life of the program.

SELECT EQ3 RECOMMENDATIONS:

- USAID should continue to emphasize frequent and repeated communication of project goals, activities, and approaches to GOI counterparts, especially as staff turnover occurs.
- USAID should continue to support the practice of consulting with and involving GOI counterparts in program planning to promote political will for adoption of TTM.
- USAID should also continue to support the practice of involving and consulting with the community and recognize the role of a broad range of community beneficiaries in order to create stronger, more sustainable local initiatives that could ultimately have larger nation-wide impacts.



EQ4: PROMOTING LONG-TERM CARBON SEQUESTRATION AND REDUCED GHG EMISSIONS

SUMMARY OF EQ 4 LESSONS:

- The program has shown that promoting long-term carbon sequestration and reduced GHG emissions is possible through an emphasis on capacity building for improved forest management practices; awareness campaigns on harmful impacts of deforestation and forest degradation; improved forest and carbon measurement TTMs; community programs with promise as models for scaling; and private sector and donor support for awareness campaigns, forest protection, and restoration.

SELECT EQ 4 RECOMMENDATIONS:

- USAID should consider scaling up and expanding focused, needs assessment-based, capacity building and awareness campaigns at all levels, targets and topics to include, for example, awareness of global carbon markets.
- USAID should consider scaling up the deployment of forest and carbon measurement TTMs introduced by Forest-PLUS if they are fully adopted within the state forest departments.
- A future USAID program should take advantage of private sector interest in environmental and forest conservation in rural and urban areas, while enabling the connection between the forestry and the corporate sector.



EQ5: ADDRESSING GENDER ISSUES

SUMMARY OF EQ 5 LESSONS:

- An environmental program can significantly impact the lives of women and men through TTMs that provide them with income generating opportunities. This is a win-win situation for both the environment and gender equity.

SUMMARY OF EQ 5 RECOMMENDATIONS:

- Future USAID programs should continue the highly successful practice demonstrated by Forest-PLUS to consider gender when designing activities based on the particular social conditions of the state or community where activities are to be implemented.
- Future USAID programs should ensure both men and women are involved in decision making about the distribution of program resources within the community.

INTRODUCTION

EVALUATION PURPOSE

The purpose of this final evaluation was to gain an independent performance assessment of the United States Agency for International Development's (USAID) Forest Partnership for Land Use Science (Forest-PLUS) program in India over the past five years and provide lessons learned and recommendations that will help guide the Mission on future program design. In October 2017, USAID/India contracted Social Impact, Inc. (SI) to conduct a final performance evaluation (PE) of its Forest-PLUS program. The evaluation Statement of Work (SOW) is found in Annex A.

The evaluation aimed to determine whether Forest-PLUS met its goals, objectives, and outcomes, establishing how effectively the program delivered interventions and assessing the extent to which it affected its beneficiaries. To achieve this, the evaluation assessed program performance, including its relevance, effectiveness, efficiency, potential sustainability of results, and likelihood of impact.

EVALUATION QUESTIONS

This evaluation addressed the following questions:

1. To what extent has the Forest-PLUS program improved forest management and forest carbon monitoring in the four targeted states?
 - a. How effective was the program in developing and institutionalizing forest management and REDD+ tools and techniques?
2. How have the Forest-PLUS trainings and demonstration activities affected capacity of Indian institutions in better forest/ecosystem management?
 - a. To what extent has the program responded to the needs of MOEF&CC, MOEF&CC institutions and the four state forest departments?
3. What factors (internal and external to the program) help or hinder achievements of the expected results (outcomes)?
4. If any, what aspect(s) of the program is most promising in paving the foundation for long term carbon sequestration and reduced GHG emissions from forests and landscapes?
5. To what extent have the program interventions addressed gender issues in the forestry sector? What are the male and female roles and the intended and unintended positive and negative changes?
6. What are the key lessons from the implementation of the activity as well as recommendations for future programming of USAID's forestry sector design?

EVALUATION USE

The primary audience of this PE is USAID/India, particularly the Clean Energy and Environment Office (CLEEO), the forestry team, and Mission management. USAID/India seeks to determine the extent to which the Forest-PLUS program met its goals, objectives, and outcomes and document the extent to which its interventions increased forest conservation and sustainability addressed climate change. USAID will use evaluation findings to learn lessons and consider recommendations that will guide the design of future conservation activities. Other intended users include the Ministry of Environment, Forests and Climate Change (MOEF&CC), the Government of India (GOI), and the premier institutions dealing with the forestry sector in India. The secondary audience will include local institutions, other donors, and other USAID Missions worldwide.

BACKGROUND

THE DEVELOPMENT PROBLEM

With about 70 million hectares of land classified as forests that cover about 24% of its total land area¹, and an estimated one in four people dependent on forests for some degree of subsistence², India values its forests as having significant environmental and economic value to the country. Forest governance has become increasingly focused on environmental and livelihoods benefits since the passage of the National Forest Policy in 1988, which prioritized forests' ecological value and the rights of tribal and forest-dependent peoples. The Forest Rights Act of 2006 further decentralized forest governance, and repositioned India to a more local, community-based forest management model³.

Despite gains in equitable forest management, the national, regional, and local capacity to manage forests remains relatively weak⁴ and more than 40% of India's total forest cover is at various stages of degradation. The resulting carbon emissions have contributed to climate change at a global scale and have continued to negatively affect local people.⁵ Further, climate change has disproportionate effects on women, particularly in regard to community forest management (CFM). Women have weaker land tenure rights and tend to rely more heavily on forests and are thus at risk of increased marginalization as forest policies change. Reducing Emissions from Deforestation and Forest Degradation (REDD+) will reinforce inequalities if it gears up in full scale without addressing these issues.

USAID'S RESPONSE

In September 2010, USAID and the GOI signed a five-year partnership agreement to promote scientific and technical collaboration and exchange. On July 31, 2012, USAID/India awarded Tetra Tech a technical assistance (TA) contract for the *Forest-PLUS* program in India valued at \$14,126,504.

This five-year program sought to “accelerate India’s transition to a low emissions economy” by scaling REDD+ actions through facilitation of scientific exchange/technical cooperation and piloting results.⁶ Working in collaboration with the GOI’s MOEF&CC, local governments, and local communities, the program: (1) developed and deployed scientific tools and methods for improved sustainable landscape or ecosystem management, forest carbon inventory, and monitoring; (2) designed modalities to provide better incentives to forest-dependent communities for forest management and conservation; and (3) enhanced human and institutional capacity in the forestry sector.

The focus districts of the Forest-PLUS program are within the states of Madhya Pradesh (MP), Himachal Pradesh (HP), Karnataka, and Sikkim. Program site maps for each state are included in Annex B.

The Forest-PLUS program’s Intermediate Result (IR) was to “reduce emissions and enhance carbon sequestration through landscapes”, and contained two key components to achieve this result; namely, (1) Sustainable Landscape Development (Scientific exchange/technical cooperation facilitated) and (2) Sustainable Landscape Deployment (Scientific and technical results piloted at scale).

¹ "Forest Area (% of land area)." Data.worldbank.org. 2017.

<https://data.worldbank.org/indicator/AG.LND.FRS%20T.ZS>.

² "Partnership for Sustainable Forests in India." USAID India. November 24, 2017.

<https://www.usaid.gov/India/partnership-sustainable-forests-india>.

³ Pachauri, R.K., Bibhu Prasad Navak, J.V. Sharma, et.al. "Sustainable Forest Management and REDD in India." Climate Change Activity 2(b) Publications. 2013. http://www.teriin.org/projects/nfa/2008-2013/pdf/REDD_plus-book.pdf.

⁴ Ibid.

⁵ "Partnership for Sustainable Forests in India." USAID India. November 24, 2017.

<https://www.usaid.gov/India/partnership-sustainable-forests-india>. <https://www.usaid.gov/India/partnership-sustainable-forests-india>. <https://www.usaid.gov/India/partnership-sustainable-forests-india>.

⁶ Kernan, Christopher, and Gina Green. "Partnership for Land Use Science (Forest-PLUS) Program Performance Monitoring Plan (PMP)." United States Agency for International Development / Tetra Tech ARD. December 2015.

Table 1: Forest-PLUS program goal, purpose, and outcomes

Development Objective (Goal): Accelerate India's transition to a low emissions economy by taking REDD+ actions to scale in sustainable forested landscapes		
Purpose: Indian forest policy makers and managers adopt tools, methods, and approaches enabling REDD+ in India		
Strategy approaches for REDD+ and sustainable forest management	Capacity the ability of stakeholders to implement the strategies	Support the desire of stakeholders to implement the strategy
Outcome 1 (Component I, Task 1): Develop and institutionalize an ecosystem approach to forest management (EAFM) to increase climate change, biodiversity, and livelihoods benefits	Outcome 2 (Component I, Task 2): Develop and institutionalize a Tier 3 Monitoring, Reporting and Verification (MRV) system for India that generates data for forest policy, forest management, and forest carbon monitoring	Outcome 4 (Component II, Task 1): Establish dialog with government and other stakeholders about an EAFM with climate change, biodiversity, and livelihoods benefits
Outcome 3 (Component I, Task 3): Analyze and recommend institutional structures for forest management with climate change benefits	Outcome 6 (Component II, Task 3): Develop human and institutional capacities to apply an EAFM with climate change, biodiversity, and livelihoods benefits	Outcome 5 (Component II, Task 2): Engage stakeholders in an EAFM with climate change, biodiversity, and livelihoods benefits
	Outcome 8 (Component III, Task 2): Build the capacity of Indian institutions to respond to climate change	
Outcome 7 (Component III, Task 1): Forest-PLUS program management		

(Source: Forest-PLUS logframe, Tetra Tech, n.d.)

METHODOLOGY

The evaluation methodology was designed to answer the six evaluation questions (EQs) using a mixed-methods, gender-oriented approach. Annex C contains a more detailed explanation of the methodology used for this evaluation. See Annex D for data collection tools and interview protocols used during this evaluation.

DATA COLLECTION

The team collected data using the methods described below.



DOCUMENT REVIEW: The evaluation team (ET) conducted a systematic review of relevant literature and program documents from Forest-PLUS start-up through the third quarter of fiscal year (FY) 2017. Annex E contains a list of these and other documents.



SEMI-STRUCTURED KEY INFORMANT INTERVIEWS (KIIS): The ET drew informants from a range of stakeholder types; namely, the implementing partner (IP) and its partners, GOI beneficiaries, Public Private Partnerships (PPPs), and other donors. The ET employed purposive sampling to select sites and respondents. The ET combined recommendations from USAID and the IP with information gleaned from the document review and strove to maximize representativeness while prioritizing sites where the volume of program interventions was greatest. The ET conducted a total of 45 (11 female, 34 male) KIIs in all four targeted states where Forest-PLUS implemented activities. A full list of key informants including their positions and locations is in Annex F.



FOCUS GROUP DISCUSSIONS (FGDS): The ET conducted FGDs in two locations in each of the four targeted states. The ET selected sites in conjunction with the KIIs, and site selection

informed the recruitment of participants. In each location, community members participated, with separate group discussions held for men and women. Village and Joint Forest Management Committees (JFMC) and other non-governmental organizations (NGOs) participated in mixed-gender FGDs in each location. The ET conducted a total of 24 FGDs with a total of 188 program beneficiaries (81 female, 107 male).



DIRECT OBSERVATION: The ET directly observed program-supported technologies and community activities initiated by the program for functionality and to understand how beneficiaries use them. The ET selected sites in conjunction with the KIs.



ONLINE SURVEY: the ET surveyed GOI capacity building trainees to better understand their utilization of skills in the workplace. Out of 412 training participants selected using convenience sampling, only 26 completed the survey (3 females, 23 males)—a six percent response rate.

DATA ANALYSIS

The evaluation used qualitative analytical techniques to code, collate, and interpret data captured through interviews, discussion groups, and direct observations. The ET used response themes and relational content analysis to identify response categories and patterns as well as to elucidate emergent themes, contextual factors, and trends. The ET analyzed quantitative data—including structured elements of the site observations and responses to Likert scale questions—with Microsoft Excel.

The ET compared data from the document review, KIs, FGDs, direct observation, and online survey against one another to determine whether findings were divergent or convergent. When multiple informational streams provided consistent information, these were included as findings. The ET drew conclusions by reflecting on the key findings for each evaluation question. Analysis accounted for gender and social dimensions, wherever relevant.

LIMITATIONS

The ET encountered several risks and limitations during data collection detailed below.

RECALL BIAS: Informants may have had difficulty accurately recalling changes, improvements, or sources of assistance, especially for those Forest-PLUS activities completed for some time, since the evaluation covered nearly a five-year period. Respondents possibly attributed results incorrectly to the Forest-PLUS program, confounding them with results from other interventions. Alternatively, respondents may have been unaware that Forest-PLUS conducted some interventions leading to results.

RESPONSE BIAS: Informants may have formed their responses based on personal motivation rather than the most accurate information. For example, informants may have given the ET positive remarks about the program because they would like to receive more assistance in the future. In some cases, informants may have thought that a negative evaluation could mean the end of future program opportunities.

SELECTION BIAS: The IP may have been more likely to guide the evaluators to those people who had positive experiences with the program. Other forms of selection bias may have occurred in that people available for interviews, focus groups, and the online survey may not necessarily have been representative of the population because they have had more free time, higher social status, or have been better connected.

ONLINE SURVEY RESPONDENTS: The response rate for the online survey was very low because most training participants provided phone numbers rather than email addresses to the program. Thus, the survey results are not representative of the GOI-trained population.

To mitigate these potential biases, the ET relied on multiple sources of data to triangulate information relevant to EQs. Combining information from multiple sources found in documents, interviews, focus groups, direct observations, and the survey reduced the risk that any one piece of biased data would significantly skew the analysis. Another approach that the ET used was to interview key informants from

organizations that did not directly benefit from Forest-PLUS and to ask respondents for specific examples to demonstrate knowledge of the Forest-PLUS interventions.

FINDINGS AND CONCLUSIONS

EVALUATION QUESTION 1



EQ1: To what extent has the Forest-PLUS project improved forest management and forest carbon monitoring in the four targeted states? a.) How effective was the project in developing and institutionalizing forest management and REDD+ tools and techniques?

As per the Forest-PLUS Performance Monitoring Plan (PMP)⁷, a total of 350,000 hectares of biological significance and/or natural resources in the four targeted states has been recorded as having improved natural resource management due to Forest-PLUS assistance. The PMP estimated a reduction, sequestration, and/or avoidance of 1,998,034 tons of CO₂ greenhouse gas (GHG) emissions due to United States Government (USG) assistance, which exceeded the target of 1,901,482 tons.

Project reports indicate that Forest-PLUS selected the four targeted states through a highly collaborative process with USAID and GOI institutions, including the Forest Survey of India (FSI), Indira Gandhi National Forest Academy, Indian Council of Forest Research and Education, and the MOEF&CC, which approved the sites. The program also consulted other stakeholders such as state level Forest Departments (FDs), Village Forest Committees (VFC), and Eco-Development Committees (EDCs), to jointly make decisions on landscapes representing different physiographic zones of India.

TOOLS, TECHNIQUES AND METHODS DEVELOPED AND APPLIED

According to the Forest-PLUS Quarterly Report covering April–June 2017, the program developed, tested, and/or adopted 64 climate mitigation and/or adaptation tools, techniques, and methods (TTMs) during the life of the program (LOP), which exceeded the target. Table 2 below details the LOP targets and compares them to what the program achieved.

Table 2: TTMs developed, tested, and/or adopted

Indicator	Program Actuals	Life of Program Targets
Number of climate mitigation and/or adaptation tools, technologies, and methodologies developed, tested and/or adopted due to USG assistance		
Integrated forest ecosystem strategy	1	1
Integrated forest ecosystem management planning tool and manual	2	1
REDD+ institutional and community governance guide	5	5
Sampling methodologies to conduct forest carbon inventories	3	3
Software models developed/adapted to convert remote sensing data to carbon estimates	7	5
Protocols to help predict, estimate, and document carbon stock changes	5	5
Community-level protocols for involvement in forest inventories	2	2
Cost-effective tools and data management systems to gather data at the community level	4	4
Data systems on GHG inventory	1	1

⁷ Caldwell, Benjamin and Gina Green. "Partnership for Land Use Science (Forest-PLUS) Program Performance Monitoring Plan (PMP)." United States Agency for International Development / Tetra Tech ARD. January 2017.

Indicator	Program Actuals	Life of Program Targets
Management strategies that increase carbon and other environmental services	4	7
Silvicultural techniques developed/adapted to Indian context	4	4
Sustainable harvest methodologies for non-timber forest products (NTFPs) adapted to Indian context	9	8
Improved animal husbandry techniques to reduce overgrazing developed/adapted to Indian context	10	4
Curricula and modules in integrated forest management	1	1
Number of multi-faceted programs designed and implemented to build local capacity in REDD+ and forest management	4	4
Document developed on potential opportunities for communities from CFM	2	2
Total	64	57

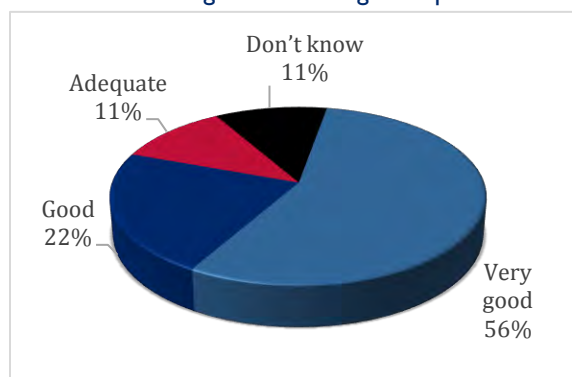
(Source: Forest-PLUS logframe, Tetra Tech, n.d.)

PRAISE FOR THE TTMS

When asked about the extent of the overall effectiveness of the TTMs for an ecosystem approach to achieving REDD+ goals, 56% of IP and partner respondents said that they are very good and a further 22% considered them as good (Figure 1). The respondents said that the tools helped to build capacity; support inter-departmental cooperation (in Sikkim); increase planting of local, mixed species trees in areas with degraded forests; and improve harvesting of NTFPs (in Karnataka).

The perception of GOI respondents was also very positive towards the Forest-PLUS tools and techniques. Specifically, one GOI interviewee stated that the biomass calculator for carbon assessment to measure weight and height of trees was new and useful. Another GOI respondent commented that the training for the field staff on how to use these tools was effective in enhancing the knowledge and practical skills of the government staff. Some GOI respondents said that the trainings and tools to measure canopy cover and forest carbon were relevant to their work.

Figure 1: Effectiveness of TTMs for the ecosystem and REDD+ goals according to IP/partners



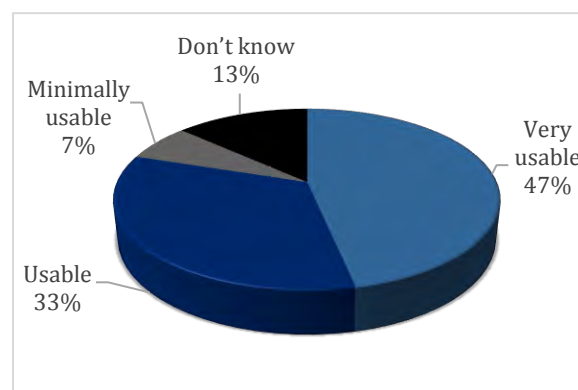
GOI interviewees mentioned several direct achievements from the introduction of TTMs by Forest-PLUS. As one example, the Prime Minister's National Action Plan on Climate Change includes the National Mission for Green India as one of its eight missions. The National Mission for Green India aims at protecting, restoring, and enhancing India's diminishing forest cover and responding to climate change by a combination of adaptation and mitigation measures. Synergies arose when the assessment of climate vulnerabilities conducted for the National Mission for Green India was also used to help determine the geographic areas of focus of Forest-PLUS. On the global front, Forest-PLUS initiatives to restore deforested and degraded land have contributed to achieving the GOI's commitment under the Bonn Challenge to restore 13 million hectares of deforested and degraded land in India by 2020 and 8 million more hectares by 2030. The states of MP and HP were also enabled to submit proposals to the Global Climate Change Fund.

Forest-PLUS support to develop management and policy documents was helpful. In a KII with an FSI official, the respondent said that the Institute revised its manual on data collection protocols for greater precision, and this has the potential to be reflected in the bi-annual Forest Cover Assessment of 2019. That same respondent added that Iora Ecological Solutions, a partner, performed carbon measurement and informed

FSI on the latest developments in global negotiations on REDD+ and GHG emissions, mitigation, adaptation, and financing for developing countries that took place at the United Nations Climate Change Conference - COP 21 held in Paris in 2015. An official from the HP FD mentioned in an interview that a chapter on biodiversity was introduced in the government Working Plan due to the capacity building initiative by Forest-PLUS. Another official from the HP FD, stated that integrated forest management tools were piloted and used to upgrade the Working Plan, but regulations pertaining to the National Working Plan Code have not yet been introduced to institutionalize them. Two officials from the Karnataka FD and one from the Sikkim FD reported in interviews that carbon measurement is now integrated into forest operational/work plans. However, Working Plans are updated every 10 years, so GOI capacity to use these tools will be reflected in the future.

Almost half (47%) of the respondents from the GOI said that the TTMs were very usable in their work and one third (33%) said they are usable (Figure 2). GOI officials specifically described the following TTM successes: (1) a GOI interviewee said that the situation and levels of forest degradation were effectively communicated in the last 2-3 years to subordinate officers, which “jolted them from slumber” about the issue; (2) The carbon stock taking tool was useful for drafting a proposal to the World Bank; (3) In Sikkim, Forest-PLUS supported the drafting of the Project Design Document (PDD) for enhancing REDD+, including building capacity to conduct field inventory and map drivers. Another GOI interviewee in Sikkim noted that staff are now knowledgeable about REDD+ and climate change due to the training. They are confident in laying a sampling plot and collecting a sample for carbon estimation. However, this is limited to 60 sample plots and does not cover the entire 200 plots in the state.

Figure 2: Usability of TTMs in the work of GOI interviewees



The ET asked respondents at the GOI if they or someone else at their agency was using any new TTMs that they were not using before the program. The majority of respondents said yes. One example was the Learning Management System (LMS), a technology newly introduced at the Indian Institute of Forest Management (IIFM), which was mentioned as being new to the Indian context. Another TTM in use at IIFM is the tool for assessing carbon stocks and monitoring through the mobile application. One GOI respondent noted that “*carbon assessment expertise is now in place on the team with the tools and techniques to prepare our work plan.*” One FD respondent noted that Gap Light Analysis Mobile Application was introduced in MP although they also stated that it needs to be field tested. Respondents from the Sikkim REDD+ Cell noted that for the first time, they instituted a tax on water usage, especially for pharmaceutical companies and other industrial users, which has created revenue for the state.

According to the IP and partners, some of the most effective TTMs are densitometers and the remote sensing and GIS mobile applications, such as mForest because the respondents said that they were universally adopted. Tools and techniques, including NTFP harvesting techniques and methods of producing high-protein silage from post-harvest maize stalks as a substitute for forest grazing developed by the Himalayan Research Group were also effective in overall forest management. Respondents considered the exposure to silvicultural techniques good, but they filled a niche rather than being broadly applicable. Likewise, they found NTFP collection and processing techniques effective, though at a small scale. Respondents felt that the fact that the program introduced small changes to communities increased the effectiveness of the TTMs because people are more willing to accept small changes than big ones.

When asked how useable the Forest-PLUS TTMs were as applied to remote sensed data to estimate carbon stocks, almost a quarter (22%) of IP and partner respondents said that they were very usable and almost half (45%) said that that they were usable (Figure 3).

One way in which respondents considered the TTMs effective was through the economic benefit to the people in local communities. IP respondents said that the application of harvesting and drying technologies in Karnataka resulted in a significant increase in the economic returns to villagers. As an example, in Kikkeri and Honnasgadde, Shivamogaa, Karnataka, soap nut (*Sapindus emarginatus*) now sells for 12-13 rupees per kilogram because of its increased quality compared to 2-3 rupees prior to the introduction of these TTMs. During the ET's direct observation, local people said that although the tools and technologies were only meant for small scale demonstration purposes, they have the viability to be used at the commercial level if scaled up.

AREAS TO STRENGTHEN FOR THE TTMS

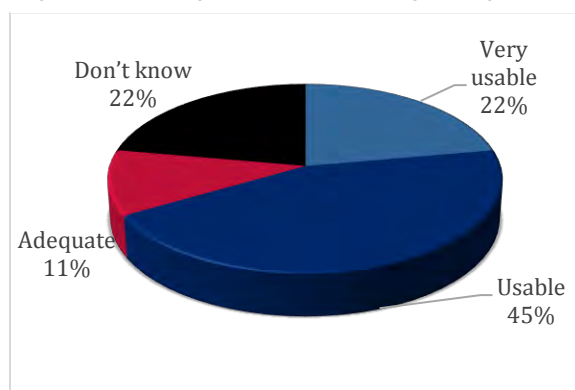
Some communities and the private sector struggled to fully integrate and scale the TTMs. For example, during site visits, the ET found operational dryers for processing of *Garcinia gummi-gutta* and cardamom provided to Andagadodur village of Dodur Grama Panchayat and to Dalapchan, Sikkim respectively. Community members using them noted that processing and marketing is still not adequate due to the limited number of dryers provided. While the original concept was for Forest-PLUS to demonstrate the dryers and for the communities and private sector to scale them up, this has not happened, despite a demonstrated volume of products that could be processed.

Another FD respondent said that at the community level in HP, locally made solar heaters and mushroom cultivation were previously either lacking or minimally used. Partner respondents said that Forest-PLUS helped them to understand natural and climatic changes, but that they still need more workshops, training, and tours to raise awareness about possible dangers and learn how to overcome them to protect nature.

The ET found that adoption of the Forest-PLUS TTMs was a challenge for the GOI in some cases. Respondents from the Forest Research Institute (FRI) of India said they are a century old institution and thus use their own approaches, methodologies, and TTMs rather than those introduced by Forest-PLUS. Another GOI interviewee commented, “There is a low level of acceptance of different tools and techniques which are not adapted into the mainstream forestry sector.” The ET found during a site visit to the Nagara Range Office that the forest inventory tools, procured by the state Chief Conservator of Forests and distributed by Forest-PLUS after the program had introduced them during training, were in their original packaging, intact, and unused a year after they had been received. When asked why the office had not even unwrapped the tools, the Range Officer said that the Department of Survey is responsible for carrying out the forestry inventory. One GOI respondent acknowledged that the database on tracking periodic changes to the carbon stock was developed, but it currently lacks a system of periodic updating. Other respondents from GOI said that the monitoring, reporting, and verification (MRV) training provided to frontline foresters was not applied in practice due to the lack of such a system within the regular government reporting system.

In interviews with two FSI staff members, they commented that through Forest-PLUS, the institute was exposed to fractional forest cover mapping with optical data. However, FSI officials found the integration of data sets from different time periods—which is an essential requirement for REDD+ documentation—challenging.

Figure 3: Usability of TTMs according to IP/partners



An example of a useful TTM that has not been fully adopted was the Geographic Information System and Remote Sensing (GIS) Lab of the Sikkim Forests, Environment, and Wildlife Management Department. The staff said that the GOI provided and trained them on GIS and remote sensing software. They also said that Forest-PLUS provided software for a carbon calculator developed by Michigan State University (MSU), but when the software caused their system to crash, they uninstalled it. Staff also noted that some who had been trained on using the carbon calculator were transferred to other departments where they will not use these tools. Forest-PLUS told them that the mForest software would be available in the Google Play store, but at the time of the ET's visit, it was not.

The ET asked respondents which TTMs they thought were least effective and why. Respondents said the densitometer was an effective tool for a surveyor, but not for ground staff as it is expensive and thus not regularly available to ground level staff. One GOI respondent noted that the usage of low resolution imagery is not a reliable way of doing inventory, and another said that a pilot was not done on synthetic aperture radar (SAR), which leaves it as a theoretical construct.

Overall, GOI respondents said that more training would have increased the effectiveness of TTMs such as the MRV system. Forest-PLUS introduced many advanced remote sensing-based TTMs that respondents used to collect forest data, which they then used to develop PDDs. However, two GOI respondents said that the use of the remote sensing TTMs introduced by Forest-PLUS are not mandatory and has not become part of departmental routine. On direct observation site visits, the ET did not find evidence, either, that these remote sensing TTMs are being used on a routine basis. One respondent noted that it is difficult for some people to accept new ways. Two GOI respondents noted that forestry techniques in India have been tested over decades, and the system is robust and stable, which makes it difficult to intervene and introduce changes. Limited dissemination of tools was another reason given for TTM ineffectiveness within the FDs.

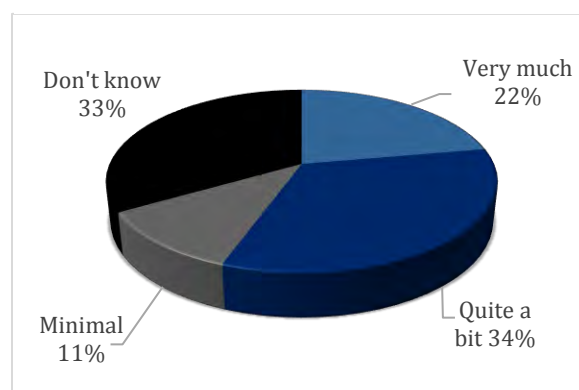
Regarding TTMs introduced on the community level, one respondent mentioned *ex situ* cultivation of NTFPs as being least effective as it requires a long gestation period and may not enrich populations of these species in the wild forest. Silvicultural techniques were also mentioned as less effective because they need a lot of resources. Respondents did not consider mobilization of JFMCs to market to be successful as the value chain is informal and a handful of people monopolize profits. Similarly, the initiative for drying *Garcinia gummi-gutta* was not considered as successful as other initiatives. Respondents cited language barriers as factors to the ineffectiveness of community level TTMs.

LAWS, POLICIES, AND REGULATIONS

One-third of interviewed IPs and partners thought that Forest-PLUS had affected changes in laws, policies, or regulations quite a bit, while the same percentage were unaware about efforts of the program in this area (Figure 4). Three interviewees from the GOI and one partner organization noted that the time needed to affect laws, policies, and regulations is long, so any changes instigated by Forest-PLUS may yet to come to fruition. Three other GOI interviewees noted that while discussions on national level policy matters have taken place at the local level with the support of Forest-PLUS, local officials are not decision makers.

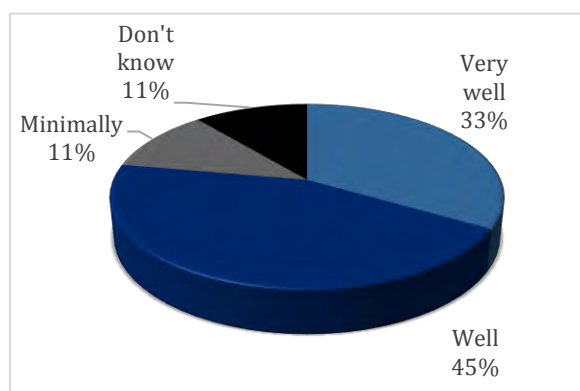
The ET also asked respondents if the TTMs introduced by Forest-PLUS to improve the regulations on harvesting, processing, transporting, and marketing (HPTM) of forest products improved forest management and forest carbon monitoring. The major contribution of Forest-PLUS in forest legislation and regulations mentioned by one GOI interviewee was its active contribution in deliberations and its

Figure 4: Forest-PLUS's impact on changes in laws, policies, or regulations to mitigate climate change



provision of recommendations through the sharing of its Strategy Paper on Sustainable Forest/Ecosystem Management. It is said that several recommendations made in this strategy paper have been incorporated in the draft policy document⁸ of the government. Both IP and GOI respondents stated that in FY 2015, Forest-PLUS suggested a change in the draft national policy on sustainable wood use. Likewise, in FY 2016, an IP respondent noted that Forest-PLUS actively contributed to the review and revision process of the National Forest Policy through participating in regional and national-level stakeholder consultations; organizing consultations with 20 villages; and providing expert input into the policy document development process. The ET did not find any evidence, however, that these interventions in draft policy have been approved or enacted into official policy, laws, or regulations.

Figure 5: Functionality of TTM to improve the regulations on HPTM for an ecosystem approach to achieve REDD+ goals according to IP/partners



Forest-PLUS introduced TTM to improve regulations on HPTM of forest products for an ecosystem approach to achieving REDD+ goals that IP and partner staff mentioned worked well (45%) or very well (33%) (Figure 5). However, state policy plays a pivotal role. For example, in Sikkim, forest policy prohibits the commercial exploitation and extraction of NTFPs and grazing, so Forest-PLUS did not pursue interventions in those areas. Forest-PLUS researched and trained VFC members on sustainable management of cinnamon leaves and ailanthus resin, but an IP respondent said that extraction of these NTFPs was already banned by the forest authority of Karnataka. A partner respondent noted that regulations on *Mahua* (*Madhuca latifoia*), soap nuts (soapberry) and *Garcinia*

gummi-gutta in MP rested with middlemen, but the program helped to eliminate them. On site visits to examine TTM in Karnataka, villagers told the ET that exposure visits to other program sites generated interest and promoted peer learning.

The GOI consulted Forest-PLUS during national-level discussions on forest policy review. A major achievement of the program can be seen in Sikkim, which institutionalized the REDD+ Cell in six departments of the state ministries. Forest-PLUS organized a campaign “Wood is good”, which led to increased understanding of sustainable forest management amongst stakeholders.

GOI respondents said that Forest-PLUS collected and collated data sets using the mForest app for the upgrading of the GOI Working Plans in program sites and was exploring the possibility of upgrading plans in other divisions where the current ten-year Working Plans will soon expire and the planning cycle for their next ten-year Working Plans are set to commence. For example, one FD respondent in HP said, “The forest authority is upgrading its Work Plan as per the National Working Plan Code, and the Work Plan is being modified.” Forest-PLUS also reported⁹ that it has provided some feedback for policy improvements regarding sustainable use of timber, biodiversity conservation, and forest management, which is currently under consideration by the GOI. No significant changes have yet been made though, and there have been no amendments to regulations to date in this regard, according to GOI respondents. The above-mentioned FD respondent from HP noted, however, that violations of the Indian Forest Act of 1927 have been reduced due to increased awareness among the public brought about by the program.

⁸ Caldwell, Benjamin, Gina Green, and Korinne Baccali. "Partnership for Land Use Science (Forest-PLUS) Report: Inputs for India's Forest Sector Policy Reforms to Promote Climate Change Mitigation." USAID/ Tetra Tech ARD, September 2016.

⁹ Ibid.

One GOI official in Karnataka noted that Forest-PLUS organized meetings and workshops for the amendment of the national policy on the extraction of three NTFPs (betel nut, cinnamon, and soap nuts) to reduce the amount of firewood used to process them. The official went on to explain that regulations on the issue of firewood extraction are complex and will be under discussion for a long time, as it requires a thorough understanding of the availability of alternative energy sources for the people who largely depend on firewood for their livelihoods. No single simple solution has yet been found to replace firewood extraction except for the improved dryers and bio-briquettes in some areas.

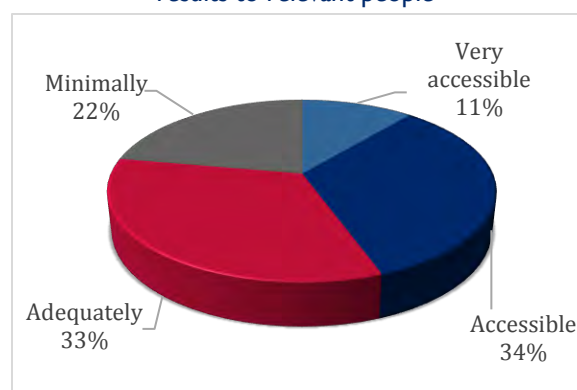
Another major contribution of Forest-PLUS observed through the interim reports was its recommendation for Forest Certification as a tool for Sustainable Forest Management in the Draft National Forest Policy¹⁰.

ACCESSIBILITY BY STAKEHOLDERS TO PROGRAM SCIENTIFIC AND TECHNICAL RESOURCES

Forest-PLUS programmatic reports stated that the program regularly updated its website and its presence on Facebook, Twitter, YouTube, SoundCloud, and Instagram to disseminate its scientific and technical results and used Google analytics to confirm use of these media.

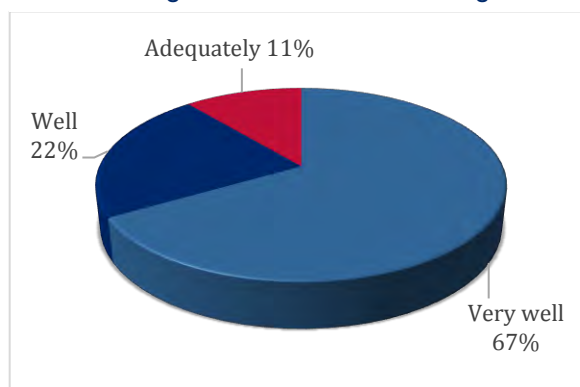
One-third of interviewed IP respondents said Forest-PLUS scientific and technical results were at least adequately accessible to the target group while another third thought it was accessible (Figure 6). At the community level, the practical demonstrations introduced by the program were highly valued. However, one IP respondent noted that the communities wanted program lessons given in their local vernacular. A regional staff member of the IP noted that language was considered a major barrier for reaching relevant people because many publications, materials, and the website are only in English. GOI respondents told the ET did not access any of the scientific and technical results of Forest-PLUS on social media.

Figure 6: Accessibility of scientific and technical results to relevant people



COMMUNICATIONS AND COMMUNITY INVOLVEMENT

Figure 7: Functionality of message dissemination on climate change, REDD+, and forest management



IP and partner respondents mentioned that Forest-PLUS was able to reach people in communities of the targeted states to disseminate messages on climate change, REDD+, and forest management through its initiatives on climate change, agroforestry, tree registration, grazing improvement, plantation of native varieties of trees, NTFP collection, and the introduction of improved dryers and bio-briquettes.

A total of 67% of the IP and partner respondents thought that Forest-PLUS was able to reach people in communities of the targeted states very well, and 22% considered that the program was able to reach communities well (Figure 7).

PRIVATE SECTOR SUPPORT

In an interview with one of the PPPs that Forest-PLUS arranged, respondents commented that the private sector and corporations have both money and the tools to reach people. “Why Forests Matter” was a

¹⁰ Ibid.

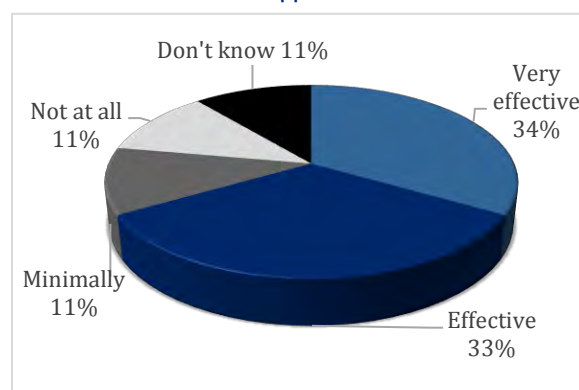
very effective outreach campaign, according to respondent, in which high profile political leadership and corporations participated and the media coverage and exhibits remained on display for a long time. This partner prepared a poster as a talking point for corporations and government. A special event like a film festival was chosen for delivery of the Forest-PLUS message “Tree Super Hero”, and a series of visual tools were used.

When asked in interviews if they were aware of any private sector support that Forest-PLUS had secured to benefit climate change, biodiversity, and livelihoods; the IP, partners, and GOI respondents gave multiple examples. For example, in MP and Sikkim, respondents reported that private partners such as Mahindra, Sanyo, and Pangaea provided saplings for plantations. A GOI respondent in Karnataka noted that the private sector provided support for handbills, posters, and so forth for outreach efforts regarding forest degradation. Two GOI officials in Sikkim and one in HP noted that Forest-PLUS also organized a meeting with industries and associations. As a follow on, these industries agreed to generate a list of activities to fund, and respondents said that this will be a good initiative to bring about change.

As stated by a respondent from a PPP, partners were engaged in mass media mobilization and national and regional campaigns which reached large audiences including those in the corporate and political sectors. PPPs were mobilized mostly as part of their legal obligations for corporate social responsibility (CSR). GOI and IP respondents in Sikkim also stated that small corporations were engaged for “Corporate Forest Responsibility” (CFR) at state and sub-state levels and many corporations diverted money towards forest management.

When asked how effectively Forest-PLUS had secured private sector support to benefit climate change, biodiversity, and livelihoods benefits, one-third of the IP respondents said that it did so very effectively, and an additional third said it did so effectively (Figure 8). As stated by a respondent from a PPP, “*The private sector can contribute to greening and should be motivated to undertake plantation work.*”

Figure 8: Effectiveness in securing private sector support



RESEARCH AND INTERNATIONAL CONTACTS

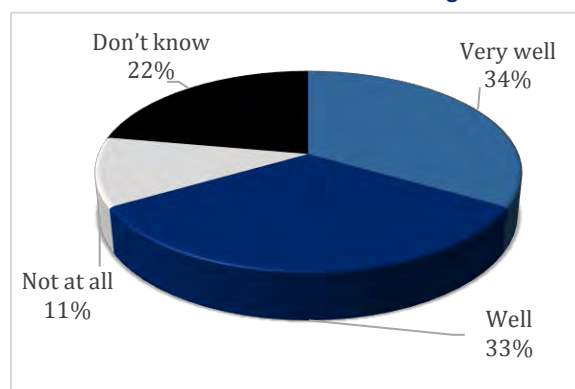
Respondents from forest management committees and NGOs on the other hand stated that information dissemination was not homogenous and did not follow any standard methodology. Sometimes trainings would share information with villagers informally rather than in official meetings. One IP respondent from the Delhi office said that a total of 30-35 researchers visited the US, and a partner organization in MP mentioned that some forest officials visited Bangkok. Another IP respondent from the Delhi office noted that the program established good relationships with MSU, the Nature Conservancy, and the University of Massachusetts at Amherst as partner organizations to implement the project activities. However, an IP staff member from the Karnataka regional office commented that the Tetra Tech senior staff were the only international contacts for people and institutions working in association with Forest-PLUS in that state. An IP respondent from the Sikkim regional office noted that Forest-PLUS utilized local rather than international resources such as forest institutions and academic scholars. Only one GOI official interviewed maintains contact with an expert abroad to whom Forest-PLUS had introduced them.

One-third of the IP respondents said that Forest-PLUS supported research and international contacts for an ecosystem approach to achieving REDD+ goals and forest management and forest carbon monitoring very effectively (Figure 9). They also said, however, that research institutions and universities benefited more than the other stakeholders through collaboration with US universities.

GOI respondents rated the research component of Forest-PLUS positively, considering the TA provided by Forest-PLUS and the research in the forestry sector to be a very important component of the assistance they received from Forest-PLUS. Eight out of 13 GOI officials, when asked if they had used any research from Forest-PLUS in their own work, said that they had. The ET recorded several individual successes among partnerships with GOI officials including:

- A GOI official from MP said, “*The contact with MSU was great, and there is potential for further cooperation.*” He added that he had referred to Forest-PLUS publications while preparing a chapter in a book on REDD+.
- Another GOI official from HP said that they received support from MSU to prepare their Climate Vulnerability Index and write a proposal for the Green Climate Fund under the United Nations Framework Convention on Climate Change. Some respondents from the GOI said that the carbon inventory databases (such as on carbon measurement and sample inventory plots) developed during the program period were not shared with them.
- An FSI respondent noted that Forest-PLUS introduced mutual learning opportunities to keep pace with technology. For instance, circular sampling plot design is practiced in the United States while this is new for India. This respondent emphasized, “*We can get better output and higher precision using these technologies.*”

Figure 9: Effectiveness of research and international contacts to achieve the REDD+ goals



CONCLUSIONS

The Forest-PLUS program seems to have greatly improved the overall forest management and forest carbon monitoring in the four targeted states.

TTMS DEVELOPED

Since the inception of the program, Forest-PLUS engaged with the relevant national institutions and state agencies involved with monitoring of forest resources. While national level institutions, like FSI, helped the program focus on key areas where the country needed to scale up its efforts and enhance its capacities with new and emerging techniques, the state level institutions, such as state FDs with their respective GIS cells provided the necessary local support.

Forest-PLUS efforts led to integration of the state Working Plan inventory data with the National Forest Inventory. Forest-PLUS, therefore, provided a platform for vertical integration of the national and state level institutions. Forest-PLUS also effectively supported State FDs' work planning for climate change adaptation, thereby contributing to reduced deforestation and forest degradation and improved biodiversity conservation. Forest-PLUS also showed success in preparing state-level PDDs.

Forest-PLUS trainings were good in quality, but insufficient in quantity for these tools to be used by ground level personnel in their routine work. The tools were found to be limited to a kind of exposure rather than immediately applicable to the day-to-day work within the system.

Forest-PLUS TTM pilots in the four targeted states were instrumental in improving the monitoring system through integration in the regular work planning of the government, capacity building as a first step towards institutionalization, and enhancing knowledge of the issues by policy makers, implementers, and the community at large. Overall, the introduction of various TTMs for an ecosystem approach to achieving REDD+ goals by Forest-PLUS to improve forest management and forest carbon monitoring was effective in strengthening the monitoring of forest cover and carbon stock as a precursor to a good forest management system.

The TTMs were effective for research and at the institutional training level and less effective at the operational level. Few solutions were adopted and continued to be used in practice. However, considering the period of performance of Forest-PLUS, this is not so much a reflection of poor performance, but rather a reality of the scale of the task, which requires a longer, more sustained effort for the TTMs to be institutionalized.

TTMs introduced at the community level, such as mushroom farming, solar heaters, bio-briquettes, seed viability techniques, NTFP dryers, human wildlife mitigation measures, and firewood reduction, were well accepted and positively regarded by the communities. Forest-PLUS achieved good reach with these activities, and they were technically sound. However, while bio-briquettes and the use of more efficient dryers are effective in reducing the pressure on forests, their use is not in full swing.

LAWS, POLICIES, AND REGULATIONS

Issues of biodiversity conservation; REDD+; and climate change have received recognition and are now on the agenda for discussion. Also, the program's environmental initiatives that also improved livelihoods facilitated greater involvement and better understanding of the concepts of carbon sequestration at the community level, which laid the foundation for changes to the policy process.

However, the ET did not find any evidence that these interventions have resulted in changes to official policy currently in effect. The ET did not find evidence of the adoption of significant changes to forest policy or increased preparedness to address global requirements of REDD+. Quick gains in policy and regulatory reform are not possible through limited consultations, as they require a huge investment and effort. Thus, changes to laws, policies, or regulations is likely in process, but not yet complete.

ACCESSIBILITY BY STAKEHOLDERS TO PROGRAM SCIENTIFIC AND TECHNICAL RESOURCES

Social media was effective in spreading general information about the project (as evidenced by the Google Analytics data) and for communicating with communities, though not with the GOI.

COMMUNITY INVOLVEMENT

The communications programs in the landscapes reached many people and outreach was very strong. Posters, meetings, and trainings were adequately organized and received good responses and support from the people. The exposure visits to other program sites put successful Forest-PLUS activities in the limelight and promoted peer learning. The program linked environmental initiatives to improved livelihoods. This facilitated greater involvement and better understanding of the concepts of carbon sequestration at the community level. Forest-PLUS reached people in the communities very well.

PRIVATE SECTOR SUPPORT

Forest-PLUS helped to fill a need by facilitating CSR through leveraging private funding for certain activities not funded by the FD. Forest-PLUS mobilized private corporations for CFR, and they coordinated with the local authorities for the provision of saplings for plantations and contributed to media campaigns. The mass media efforts of the private sector were crucial in reaching a huge population beyond what Forest-PLUS could have done with its own resources. By mobilizing PPPs for CFR, Forest-PLUS contributed towards the achievement of REDD+ goals in the program's target states.

RESEARCH AND INTERNATIONAL CONTACTS

A significant number of GOI officials said that they had made use of research provided by Forest-PLUS. IP and partner organizations, mainly those in Delhi, were able to mention international contacts that the project had introduced beneficiaries to, just as many in the states stated that the project had not facilitated long-term international relationships with beneficiaries.

EVALUATION QUESTION 2



EQ2: How have the Forest-PLUS trainings and demonstration activities affected capacity of Indian institutions in better forest/ecosystem management? a.) To what extent has the program responded to the needs of MOEF&CC, MOEF&CC institutions and the four state forest departments?

FINDINGS

Building capacity among a variety of stakeholders, including GOI staff at various levels, was an important aspect and major focus of Forest-PLUS implementation that was scattered across two program components and three discrete activities. Each activity had indicators pertaining to the types of training to be done and the target number of trainees.

Forest-PLUS developed training modules on several themes in consultation with experts and key stakeholders. The Forest-PLUS training program tracker indicates that between July 2014 and September 2017, the program conducted 169 separate trainings for GOI staff and community members in four states, as well as in-country exchanges and overseas study tours. Forest-PLUS organized the capacity building programs, including class room training, demonstrations and hands-on training at the field level. Training included topics such as Global Climate Change (GCC), MRV, and EAFM and included a mix of village-level and GOI state FD site-specific Hands-on Trainings (e.g., bio-briquette making, NTFP management, forest mensuration, forest inventory tools, agroforestry). GOI trainees included front line FD staff (e.g., forest guards, fire watchers); senior and mid-level state FD officials, and Indian Forest Service officials.

The primary aim of the trainings was to create awareness among GOI/FD officials on carbon inventory, sustainable forest management, social issues, institutional strengthening, and climate change issues. As stated in the Forest-PLUS PMP, the focus of capacity building was on strengthening the knowledge base and enhancing capacity primarily of GOI/FD officials in the four target states to work on climate change-related issues, including (1) carbon inventory and MRV; (2) EAFM ecosystems management; (3) GCC and GHG effects, mitigation and adaptation and (4) social sciences and community involvement in forest resource management.

To gather information on the impact of Forest PLUS trainings on GOI staff, the ET's KII guide included the following questions, *"To what extent has Forest-PLUS helped you to do your job better?"* –and– *"To what extent has Forest-PLUS supported your government agency to respond better to climate change?"* For respondents for whom these questions were relevant, replies were largely split between "very much" and "adequately". The following quote illustrates the types of changes:

"Without the Forest-PLUS project, we would still be working the way we traditionally had been. Now the mental framework is in place. The knowledge and skills are there."

~FD Respondent

The PMP also includes PIRS for four performance indicators of relevance to capacity building, namely;

- I. Number of people receiving training in GCC due to USG assistance

2. Number of institutions with improved capacity to address climate change issues due to USG assistance
3. Percentage of Forest-PLUS trained state-level forest department staff demonstrating increased capacity in REDD+ due to USG assistance through Forest-PLUS
4. Number of individuals trained in some technical aspect of REDD+ due to USG assistance through Forest-PLUS.

From the ET's review of Forest-PLUS training report documents, the program clearly targeted the relevant GOI institutions and individuals for training although several FD respondents indicated there was an issue of trained staff continuity, transfers, and knowledge dissemination that led to limited gains from capacity building within some state FDs. This was particularly prevalent in Karnataka, for example, where the key decision-makers and influencers in the state FD were the strongest, but when several key staff were transferred away, the program had to start over with informing and working with a new set of people. However, for purposes of identifying concrete improvements for the program in the future, it is more important to look toward the remaining capacity gaps and priorities identified by individuals interviewed for their institutions.

The Indian institutions that participated in Forest-PLUS also benefited from the visit to the US Forest Service, MSU, and the University of Massachusetts through the Forest-PLUS sponsored study tour. This learning trip provided knowledge to the participants and exposure to the United States' most advanced practices in these fields as possible models for applying REDD+ and forest management in India.¹¹

REMAINING CAPACITY GAPS

To gather information on remaining capacity gaps, the KIs for GOI respondents included questions on both personal and institutional level skills and TTM needed to adequately respond to climate change. Respondents gave a wide variety of responses and listed additional capacity needs (Figure 10).

Figure 10: Remaining capacity gaps



¹¹ Kernan, Christopher, Gina Green, and Erica Goldberg. "Partnership for Land Use Science (Forest-Plus), Annual Report October 1, 2013 – September 30, 2014." Tetra Tech ARD, October 2014.

The two most frequent topic responses among the GOI KIs for both questions were (1) enabling environment and acculturation and (2) training or capacity building in general. However, these limited responses were not particularly useful for specific follow up; namely, creating a conducive environment and changing mind-sets as well as “general training”. One respondent said, “We need the right mind-set and an enabling atmosphere that leads to improved coordination,” but this can be viewed as a training outcome rather than a topic in and of itself.

One FD respondent pointed to the need for more training on climate change adaptation, “I need to know how my forests will respond to climate change, which will get more rain, etc. I don’t know if a tool already exists for this, but it would be really useful to adapt our strategy accordingly, that is, a tool to forecast how climate change will affect the forests I am responsible for” . . . “the government must convey to people that the threat is real” . . . “the science of climate change continues to evolve, and our department will have to keep up.”

Several respondents noted that the target group for the next phase of the program should be forest officers. Forest-PLUS trained a core group of FD staff, and now this training needs to be extended to the entire department. One respondent explained, “Most are never trained, and they have no one above them who is knowledgeable, either. A bottom-up approach is needed.” Several respondents pointed to the need for a greater emphasis on training of front-line field staff (e.g., forest guards).

The TTMs were well received by GOI respondents, who mentioned the need to for upscaling and institutionalizing, but that additional training will be needed to do this. One FD respondent said, “Refresher programs are needed. One to two trainings aren’t enough to transform somebody. The GOI should implement a phase II of this project.”

Two GOI/FD respondents also noted as a capacity gap that many new officers are lacking skills in silviculture and that the FD’s program of reforestation tends to go for monoculture plantations of pine and eucalyptus. The general opinion was that this needs to be changed to mixed native species.

As part of data collection, the ET sent an online survey to more than 400 former GOI/FD trainees of Forest-Plus courses via Survey Monkey. The online survey questionnaire is in Annex D. However, it is impossible to extrapolate data from only 26 respondents and a response rate of .07%. The Methodology section of this report includes a discussion on limitations related to the survey respondents and possible reasons why the response rate was so low.

CONCLUSIONS

Forest-PLUS effectively responded to the needs of MOEF&CC and targeted relevant state institutions and individuals in its capacity building initiatives. The program responded to institutional needs by promoting awareness and understanding of complex issues, contributing to preparedness to address global requirements, and developing and deploying appropriate TTMs. However, a five-year program can certainly not be expected to fill all individual capacity gaps (e.g., communications, field trials, and guidelines) or institutional gaps (e.g., enabling environments, training, and funding.) Considering the length of Forest-PLUS program duration as compared with the scale of the tasks, much more effort will be required to address remaining institutional capacity gaps (Figure 10) in any future program intended to mitigate climate change, implement REDD+, and better manage forest ecosystems.

EVALUATION QUESTION 3



EQ3: What factors (internal and external to the program) help or hinder achievements of the expected results (outcomes)?

FINDINGS

During interviews, the IP, partner organizations, and GOI officials mentioned several factors that affected the program’s achievement of results. The most often cited factor was relationships with the GOI, which was mentioned by three interviewees as a factor facilitating the success of the program and by five

interviewees as hindering the success of the program. Three other factors mentioned with equal frequency were the relevance of the TTMs, which was considered by three interviewees to have facilitated the success of Forest-PLUS and by one interviewee to have hindered success; involvement of the community, which was considered by two interviewees to have facilitated success and by two interviewees to have been an obstacle; and accessibility of stakeholders to program interventions, which was considered by one interviewee to have facilitated success and by three interviewees to have hindered achievement of program goals.

RELATIONSHIPS WITH THE GOVERNMENT: The most often cited factor affecting the achievement of results from Forest-PLUS interventions was its relationship with the GOI. This was spoken of in terms of factors both external and internal to the program's control. Two staff members of the IP's Delhi office who were interviewed felt that it had established a strong relationship with the Ministry. One respondent considered that the program could have achieved better results had USAID gained greater levels of commitment from senior GOI officials. At the state level, this respondent generally considered support from the GOI to be an external factor, noting that high-level GOI support at the state level was a critical factor in the program's ability to achieve results. As examples, the respondent reported the Sikkim's Principal Chief Conservator of Forests (PCCF) as being central to Forest-PLUS' ongoing success in that state, and similarly the program achieved much in Karnataka with the high-level support it received for program implementation from the program inception through 2015, when the point of contact there was transferred.

Three partners and two government officials, however, noted the program could have achieved more had it paid greater attention to building relationships, communicating more regularly, and involving the GOI in planning. While these respondents acknowledged the challenge introduced by internal transfers of government personnel, they all noted that insufficient effort had been paid to mobilizing governmental bodies and bringing them to a common understanding around the program goals. A representative of a partner organization noted that the IP staff in Delhi did not spend enough time in the state. Nevertheless, USAID staff reported frequent efforts—including by Forest-PLUS program staff—to reach out to GOI stakeholders to communicate the Forest-PLUS goals, activities, and approaches.

Language also obstructed the program effectiveness where many of the written communications, research, and documents were provided in English but not in the relevant local languages. One GOI official noted that, although he was a decision-maker and had been closely and consistently involved with Forest-PLUS since the very outset of program activities, the state Department of Forests was not involved at program inception or at its closeout. He noted that the program did not give GOI a say in program planning, and that the technology transfer necessary to hand over the program activities to the GOI at closeout had not occurred.

On a positive note, stakeholders found the jurisdictional REDD+ approach in Sikkim to have provided a platform that led to excellent cooperation among the relevant departments. This was an unanticipated positive outcome of the program, and the GOI found that this successful activity has the potential to be replicated for other large-scale initiatives requiring inter-departmental cooperation.

RELEVANCE OF TTMS: The findings section for EQ1, on improving forest management and carbon monitoring, discussed in more detail the effectiveness of the program in developing and institutionalizing forest management and REDD+ tools and techniques. Tools and techniques were relevant to the degree they were effective. Four interviewees, three of whom were from HP, mentioned the relevance of the TTM introduced by Forest-PLUS as a factor affecting the achievement of results. While one partner organization mentioned this as an obstacle to the program's achievement of results, noting the challenge of translating technology related to REDD+ into a usable form, three GOI officials noted the relevance of the TTM as a strong point of the program. They each named specific achievements of their governmental agencies that had directly or indirectly resulted from Forest-PLUS. For example, the HP Department of

Forests noted that Forest-PLUS supported the formulation of both a Climate Vulnerability Assessment and a Biodiversity Assessment in connection with developing its Working Plan.

COMMUNITY INVOLVEMENT: Four IP and partner staff, one from each of the four states, mentioned involvement of the community as a factor, which at times either helped or at times hindered the program's achievement of results. One respondent noted some of the TTMs introduced initially for use by the government evolved to be more widely used by communities. One respondent commented that the involvement of communities in field initiatives and policy planning was high, while conversely another respondent noted that early in the program, a community in Sikkim expressed the need for an intervention to reduce the amount of wood used to dry cardamom, which is a high-volume product. Yet this input from the community was not accepted until very late in the program because of a strict schedule for deliverables that left little room for changes or additions to the original work plan. Two respondents noted the challenges of working at the community level, where conditions are dynamic, change over time, and where people's mindsets in general are difficult to change.

ACCESSIBILITY BY STAKEHOLDERS TO PROGRAM INTERVENTIONS: Four interviewees, all of whom had long-term involvement throughout the life of the program, noted the challenges of operating a forestry program in a country as large as India, where time to travel from place to place, even within a state, is significant. A Delhi-based IP staff member noted that the program rightly focused its efforts on a limited number of locations, which facilitated its achievement of results; trying to increase its geographic coverage would have spread the program resources too thinly. However, a partner outside of Delhi felt the program shared insufficient consulting expertise with the states and instead was more centered at program headquarters. For example, from the perspective of the GOI, REDD+ cell members in Sikkim who were located outside of the state capital mentioned that other REDD+ cell members in the capital had more opportunities to be involved in Forest-PLUS interventions.

CONCLUSIONS

RELATIONSHIP WITH THE GOVERNMENT: Forest-PLUS generally enjoyed good relations with the GOI, and both the project staff and USAID reportedly made considerable efforts to engage the high-level officials, who frequently changed. Nevertheless, stakeholders perceived communications to be inadequate. Thus, more and regular communication about Forest-PLUS goals, activities, and approaches would likely have increased the depth of involvement of the GOI and the speed at which its interventions had been adopted.

RELEVANCE OF TTMS: The TTMs introduced by Forest-PLUS were largely found to be relevant and suitable for the FDs' work, which facilitated their adoption. It also spawned other results within the GOI and use of some TTM initially introduced for use by the GOI even spread to use at the community level.

COMMUNITY INVOLVEMENT: Forest-PLUS involved the community in planning and implementing activities but could have done so to a greater extent.

ACCESSIBILITY BY STAKEHOLDERS TO PROGRAM INTERVENTIONS: The geographic size of India and modes of transportation limited the achievement of results to some extent and the level to which stakeholders could participate. However, this is largely an external factor. The program managed the distances by delegating to its regional offices.

EVALUATION QUESTION 4



EQ4: *If any, what aspect(s) of the program is most promising in paving the foundation for long term carbon sequestration and reduced GHG emissions from forests and landscapes?*

FINDINGS

Forest-PLUS evaluation respondents identified some of the more promising aspects of the program in paving the foundation for long-term carbon sequestration and reduced GHG emissions from forests and landscapes, discussed below.

CAPACITY BUILDING AND AWARENESS: Respondents across all groups identified capacity building and awareness campaigns as two of the most promising aspects of the program for establishing the foundation to improve forest management practices and for publicizing the harmful impacts of deforestation and forest degradation. Among the GOI and IP KII respondents, the majority identified capacity building as the greatest long-term promoter of climate change mitigation and bio fire season, were considered very useful by several FD respondents. Several IP respondents stressed the importance of raising people’s awareness of the harmful impacts of deforestation and that television, rather than social media, is the best medium to expose people to environmental issues. The value of continuing the awareness initiative with Buddhist monks, who are influential in Sikkim communities, was emphasized as having an appropriate and beneficial impact on the communities.

TTMS: GOI respondents identified improved forest and carbon measurement TTM as among the more promising aspects of the program for climate change adaptation and mitigation. One GOI respondent felt the Forest-PLUS tools and activities for long-term carbon sequestration and reduced GHG emissions from forests had not yet “come to fruition” or been realized and that it is important to first collect data from other departments and study carbon stocks. This respondent maintained they would get a better understanding of how much GHG is being released and how much is being sequestered by doing that. Several GOI respondents noted the importance of the Forest-PLUS introduced Carbon Calculator tool. One respondent stated, “*Earlier the data collection was cumbersome. Tools made data collection and analysis easy.*” In HP, this tool is being used to collect data to prepare the Ani Forest District Working Plan, which will take about six months to complete.

COMMUNITY PROGRAMS: IP respondents, more than those from GOI, as well as participants of FGDs identified some of the more promising aspects coming from community programs that could be models for scaling up. Community activities of particular importance they identified were clean technology (e.g., smokeless cookstoves), biogas, and bio-briquettes, using solar energy water and space heaters, support to “Trees Outside Forests” (e.g., teak registration and resource ownership legitimization,) and NTFP and grazing management, including sustainable harvesting.

Fuel wood collection and usage is very high in India. Due to this widespread practice in poor rural areas, several GOI and IP respondents saw extraction of firewood as one of the greatest threats to increasing long term carbon sequestration and reducing GHG emissions from forests and landscapes. According to several FD respondents, the biggest driver of forest degradation in Sikkim is firewood collection. Forest-PLUS introduced improved dryers for cardamom in Sikkim, which is a major cash crop there. A huge amount of fuel wood is needed to dry the cardamom fruit, so more efficient dryers requiring less wood are an important step to reduce forest degradation as well as to increase the quality of the final cardamom product. Forest-PLUS also introduced dryers for *Garcinia gummi-gutta* in Karnataka, and in Sikkim the program introduced bio-briquettes for heating water. According to both IP and GOI respondents, the pilot program for making bio-briquettes from weeds to replace the use of wood for fuel creates an economically feasible wood substitute. Forest-PLUS introduced solar panels in HP and more efficient cooking stoves in MP.

One issue raised by some program beneficiaries during the village FGDs was that they did not know what to do or how to sustain program initiatives, even if seen as being to their own benefit, once program support withdrew; they wanted program staff to return. This may have been an indication of a program ending too early, beneficiaries not given adequate training or self-reliance, or both.

PRIVATE SECTOR AND DONOR SUPPORT: Both IP and GOI respondents identified increased private sector and donor support as two promising aspects of the program for establishing the foundation to

improve forest management practices and for publicizing the harmful impacts of deforestation and forest degradation. One PPP respondent stressed the need to understand the relationship between human value chains that affect forest conservation and therefore climate change. Tree plantations and awareness campaigns in particular were cited by several FD respondents as very useful initiatives through PPP. Private companies in partnership with the program introduced the CFR concept described earlier.

Several respondents identified a gap that is likely to emerge due to lack of donor support after the closeout of Forest-PLUS; namely, the continuation of awareness raising campaigns. One respondent said, *“While some people have fully absorbed the message and have become vocal, even after extensive awareness raising events, there are still some people who weren’t yet reached or who haven’t yet absorbed the messages. Donor funds would help to make the funding larger and synergize the effort.”* One GOI respondent noted that another important outcome from donor support was the design of a program to identify carbon credits and noted, *“We have identified discrete projects that companies can fund.”*

CONCLUSIONS

CAPACITY BUILDING AND AWARENESS: Capacity building and awareness initiatives, if intensified, could have a tremendous influence and impact on the mindset and capabilities of decision-makers and management practitioners, from government staff to village farmers, that would strengthen the foundation for long term carbon sequestration and reduced GHG emissions from forests and landscapes. The value of continuing the climate awareness initiative with Buddhist monks, who are influential in Sikkim communities, had an appropriate and beneficial impact on religious communities. This could be expanded to other areas and other influential religious leaders.

TTMS: The forest and carbon measurement TTM introduced by Forest-PLUS have the potential for being scaled up if they are internalized within the forest departments. Addressing forest encroachment, illegal forest resources extraction, and restoration of degraded lands, was not part of the program’s mandate due to the need to have tangible results and set priorities for a limited five-year program. However, several respondents did note this could be an important issue for any follow-up program.

COMMUNITY PROGRAMS: Forest-PLUS introduced innovative technologies in the target villages for improved long-term ecosystem-based forest management that paved the foundation for their adoption through community livelihoods initiatives. The program facilitated communication and trust between state forest departments and target communities to produce cooperative livelihoods programs. These programs were aimed at local reductions in deforestation and forest degradation in support of long-term global carbon sequestration and reduced GHG emissions for climate change mitigation.

It is essential to build sustainability into community program design and implementation so that a useful initiative does not end when the program does. For example, much greater attention should be directed toward recognizing the role of a broader range of community beneficiaries (i.e. not just men and village elites) in participatory needs assessment and early program identification and design. This attention prior to and not just during implementation should create stronger, more sustainable local initiatives that could ultimately have larger, nation-wide impacts.

PRIVATE SECTOR AND DONOR SUPPORT: Engagement and support from the private sector and donors were shown to be particularly effective, and their potential long-term impacts regarding activities were in designing and mobilizing awareness campaigns and for programs that address large-scale forest restoration of degraded lands.

EVALUATION QUESTION 5

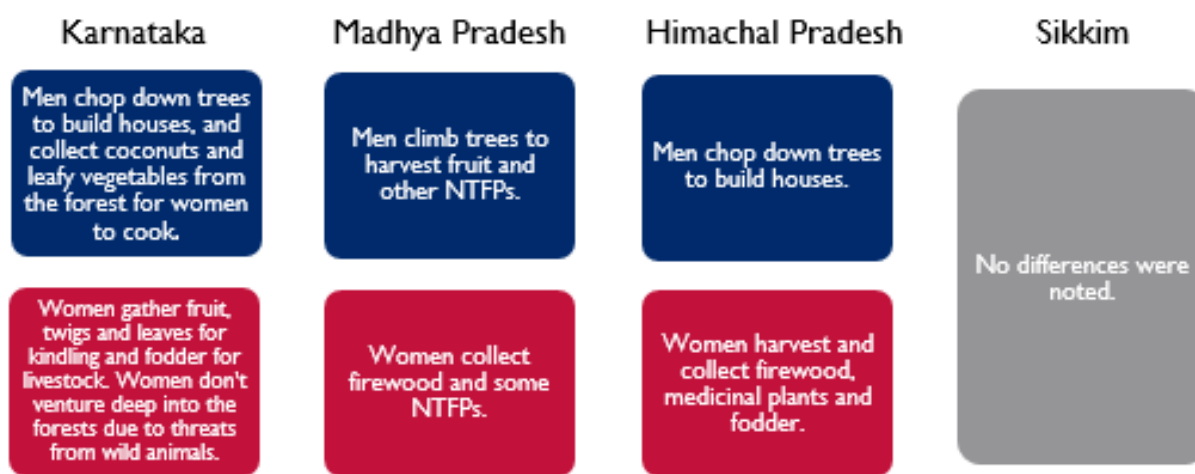


EQ5: *To what extent have the program interventions addressed gender issues in the forestry sector? What are the male and female roles and the intended and unintended positive and negative changes?*

FINDINGS

MALE AND FEMALE ROLES IN THE FORESTRY SECTOR: The January 2017 PMP states for the Rationale/Critical Assumptions in the PIRS for the indicator “Percentage of females who have participated in Forest-PLUS activities and report a personal benefit from any aspect of the REDD+ approach to climate change mitigation as a result of USG assistance through Forest-PLUS” that “Women have a close association with forest as they are involved in collection of fuel wood, NTFPs [sic]...” IP staff reiterated this in interviews, noting that women depend upon the collection of wood and NTFPs for their livelihoods. In focus groups held separately with men and women from communities, participants described some specific differences between their gender roles related to forests which are detailed in the figure below.

Figure 11: Gender roles in forestry sector



FOREST-PLUS INTERVENTIONS TO ADDRESS GENDER ISSUES IN THE FORESTRY SECTOR:

The most recent Forest-PLUS Quarterly Report (April–June 2017) shows that for the indicator “Number of climate mitigation and/or adaptation tools, technologies, and methodologies specifically targeted to benefit women developed, tested and/or adopted as a result of USG assistance through Forest-PLUS”, two were achieved during the life of the program, which is less than the program’s target of five. However, while this is a sub-indicator of a broader indicator, “Number of climate mitigation and/or adaptation tools, technologies, and methodologies developed, tested, and/or adopted as a result of USG assistance”, the program’s PMP does not define how this sub-indicator was defined and measured as opposed to the broader indicator. The ET did not have access to the raw data reported against the indicator in order to examine which two TTM’s were reported as achievements under this indicator. This same Quarterly Report shows that for the indicator “Number of women stakeholder consultations”, none were achieved during the life of the program, while the target was two.

The Forest-PLUS training tracker shows that out of 9,854 total trainees, 4,532 (46%) were female. Looking at FD staff trained by Forest-PLUS, out of a total of 1,642 GOI trainees, 223 were females (14%). The ET does not have GOI human resource records to determine what overall percentage of its staff are female. In the communities, however, where it can be assumed that the population is split roughly equally between females and males, 4,309 (or 52%) out of the 8,212 community members trained were females. The exception was in the area of MRV training, where only 16% of community members trained were women.

The PIRS in the PMP for three indicators, “Number of people receiving training in global climate change as a result of USG assistance”, “Number of person hours of training completed in climate change as a result of USG assistance”, and “Number of individuals trained in some technical aspect of REDD+ as a result of USG assistance

through Forest-PLUS”, all showed a target of 25% women. The program exceeded those targets according to the figures reported in the Quarterly Report for the period covering April-June 2017.

The PIRS for the indicator “Number of Indian researchers studying some aspects of REDD+ as a result of USG assistance” showed a target of 35% women. Referring to the Forest-PLUS Quarterly Report (April– June 2017), 16 out of 51 researchers, or 31%, were women, which is slightly below the target of 35%.

Forest-PLUS’s deliverable #30 “Six + PPPs leverage more than \$1M from private sector and \$2M from GOI initiatives benefitting over 500 people, of which 40% are women” states a target for benefits accrued to women. However, the ET was unable to find evidence in the background documentation provided of how benefits to people in general were tracked and recorded.

The PIRS for the indicator “Percentage of females who have participated in Forest-PLUS activities and report a personal benefit from any aspect of the REDD+ approach to climate change mitigation as a result of USG assistance through Forest-PLUS” included a target for participation of women in community level training of 30% and for FD staff training of 20% as part of the Rationale/Critical Assumptions. The program exceeded the former target, but not the latter. The PIRS noted, on this front, that any shortages in reaching female FD staff participation would be offset by female community members.

For the indicators mentioned above, the table below details the LOP targets and compares them with what the program achieved according to the Forest-PLUS Quarterly Report covering the period April-June 2017.

Table 3: Indicators with targets for female participation

Indicator	Cumulative Achievement	LOP Target
Number of climate mitigation and/or adaptation tools, technologies, and methodologies specifically targeted to benefit women developed, tested, and/or adopted as a result of USG assistance through Forest-PLUS	2	5
Number of women stakeholder consultations	0	2
Number of females receiving training in global climate change as a result of USG assistance	4,510	1,040
Number of person hours of training completed by females in climate change as a result of USG assistance	42,128	20,648
Number of females trained in some technical aspect of REDD+ as a result of USG assistance through Forest-PLUS	4,510	1,040
Number of female Indian researchers studying some aspects of REDD+ as a result of USG assistance	16	9
Percentage of females who have participated in Forest-PLUS activities and report a personal benefit from any aspect of the REDD+ approach to climate change mitigation as a result of USG assistance through Forest-PLUS	50%	80%

(Source: Tetra Tech)

In KILs, one partner organization noted it attempted a participation rate of 30% at each of its events, while another partner organization mentioned Forest-PLUS had stressed the importance of including women but had not specified any targets. All IP and partner staff interviewed stated that Forest-PLUS endeavored to address gender issues at least adequately, and four out of eight stated it addressed them very well.

In KILs with partner organizations, specific interventions mentioned that were planned to target women in Karnataka were related to grazing and drinking water. In MP, FGDs mentioned stove manufacturing as an intervention targeted for women. In HP, specific interventions aimed at women mentioned in KILs were related to demonstrations on cultivation of mushrooms in order to reduce depletion of forest resources. In Sikkim, where men’s and women’s roles were not considered to be different, the program did not plan

activities specifically to target women. In FGDs, however, women in Sikkim expressed appreciation that the program held trainings separate from men.

ET members noted during direct observation of tools launched in communities that some local authorities made decisions as to whom in the community the tools would be given and whether or not those tools would be kept for use by one person/family or offered for general use by the community. Since men hold these positions of authority, the ET noted some women's exclusion from these decisions on the distribution of resources with monetary value.

INTENDED AND UNINTENDED POSITIVE AND NEGATIVE CHANGES: Forest-PLUS had an indicator that measured the *"Percentage of females who have participated in Forest-PLUS activities and report a personal benefit from any aspect of the REDD+ approach to climate change mitigation as a result of USG assistance through Forest-PLUS"*. The Quarterly Report (April – June 2017) shows an achievement of 50% against a target of 80%. The PMP states Forest-PLUS will interview a random sample of individual women, stratified by landscape, intervention area, and what Forest-PLUS intervention they participated in, to record the percentage that report a personal benefit they attribute to Forest-PLUS. These data were to be collected as part of the Training Outcome Assessment. The ET did not have the raw data collected against this indicator in order to study the ways in which women reported they benefitted from Forest-PLUS, and this information was not included in the "Training (GCC) Outcome Assessment Report" dated April 2016 or the "Outcome Assessment of Training on Forest Carbon and TTMs to Prepare Forest Carbon Inventory" dated February 2017.

In a KII in HP and in an FGD in Karnataka, participants mentioned that daily labor paid to implement Forest-PLUS initiatives, such as that paid by a JFMC to plant trees, was so low (200 rupees per day) that "only women were willing to take these jobs".

Men in HP mentioned in an FGD that women were more involved than men with Forest-PLUS activities because men were "busier with work" than women and could not take as much time out for training and other events. The training tracker of Forest-PLUS does corroborate the fact that more women participated than men in HP, with 688 out of 1038 (66%) women trainees.

In FGDs, when asked how Forest-PLUS benefited their lives, answers given by men and women were similar for the most part, but there were some notable distinctions. Women in Karnataka reported the greatest impact on their lives. They noted that before Forest-PLUS, they largely stayed indoors and did not play a role in generating income for their families. With the TTMs introduced by Forest-PLUS, however, they now collect NTFPs and process them for sale in the marketplace. They are now directly involved in income generation. Thus, they feel that they can now take a greater part in decisions within the family and can stand shoulder to shoulder with the men in the village.

One other notable difference reported by women in MP was that they now have added responsibilities to look after tree saplings that were planted and to clean their fields to prevent pest outbreaks. This leaves them with less free time. This was an exception to many other TTMs that both men and women from the communities in all four states said are saving them time and labor. The women in MP, however, did not consider the extra time needed for the agroforestry activities to be negative because they appreciated the value they are able to add by doing so.

CONCLUSIONS

MALE AND FEMALE ROLES IN THE FORESTRY SECTOR: The differences between men's and women's roles in the forestry sector appear to differ by state. These differences were most pronounced in Karnataka, where the division of duties is clearer. In HP, men's and women's roles largely overlapped. There was even less of a difference between the roles in MP. No differences were acknowledged in Sikkim.

FOREST-PLUS INTERVENTIONS TO ADDRESS GENDER ISSUES IN THE FORESTRY SECTOR:

Forest-PLUS set clear targets in much of its work for inclusion of women. For some indicators where it is easy to measure the involvement of women, such as participation in training and research, the program seemed to adequately communicate to partners the importance of including women and generally exceeded its targets. However, in other areas where measuring the indicator is more complex, such as TTM specifically developed to benefit women and number of women benefiting from PPPs, the ET lacked information as to how these indicators were defined and measured. As well, the ET did not have access to the raw data in order to research them more deeply to understand the results reported. Overall, Forest-PLUS made a robust effort and succeeded in including women from the GOI and communities in its activities.

Both IP and partner staff as well as beneficiaries cited specific interventions that Forest-PLUS targeted for women; namely, grazing and drinking water in Karnataka, stove manufacturing in MP and mushroom cultivation in HP. Although activities in Sikkim did not target women separately from men since their roles related to the forestry sector were considered to overlap, women expressed appreciation for the opportunity to attend training separately from men.

Forest-PLUS appropriately targeted specific activities in order to benefit women as called for by the situation in each state. While these decisions were accurate for the situations, women were not included in decisions about the use and distribution of program resources. These decisions were made by the traditional male power structures in the communities.

INTENDED AND UNINTENDED POSITIVE AND NEGATIVE CHANGES:

While Forest-PLUS succeeded in attracting women specifically for day labor, it did so by paying wages too low to attract men, thus maintaining the status quo of lower wages for women.

While both men and women reported that Forest-PLUS provided opportunities to increase their livelihoods and incomes, women in Karnataka reported a significant change to their lives in that they are now able for the first time to contribute significantly to the household income. This has given them some decision-making authority within their families and has raised their stature in the community.

Many of the TTMs introduced by Forest-PLUS have resulted in time, cost, and labor savings to beneficiaries with a few exceptions (i.e. where they are instead requiring additional time and labor to maintain.) In both cases, beneficiaries value the changes brought to their lives because they are finding both social and financial benefits.

EVALUATION QUESTION 6



EQ6: What are the key lessons from the implementation of the activity as well as recommendations for future programming of USAID's forestry sector design?

KEY LESSONS



EQ 1 LESSONS. IMPROVING FOREST MANAGEMENT AND CARBON MONITORING

- Engaging the private sector to further climate change mitigation and environmental conservation was effective and could be used in other USAID/India projects as well as other environmental projects in the region.
- Involvement of respected leaders in the community, monks for example, was an effective way to communicate climate change awareness with the larger masses of people. This could be a lesson for other projects where partnerships can be made with local religious or other community leaders, who share USAID's goals.



EQ 2 LESSONS. BUILDING INSTITUTIONAL CAPACITY

- Effectively responding to the needs of GOI institutions requires building their capacity in many forestry and climate change topics and training a wide spectrum of stakeholders within the government, from upper-level decision-makers to mid-level staff to front-line field staff.



EQ 3 LESSONS. IDENTIFYING FACTORS HELPING OR HINDERING ACHIEVEMENTS

- USAID projects, especially those intended to build capacity of government counterparts, should factor in the time and human resources necessary to build and maintain strong relationships over the life of the project.



EQ 4 LESSONS. PROMOTING LONG-TERM CARBON SEQUESTRATION AND REDUCED GHG EMISSIONS

- The project has shown that promoting long-term carbon sequestration and reduced GHG emissions can be done through an emphasis on the following.
 - Capacity building for improved forest management practices;
 - Awareness campaigns on the harmful impacts of deforestation and forest degradation;
 - Improved forest and carbon measurement TTMs;
 - Community programs with promise as models for scaling; and
 - Private sector and donor support for awareness campaigns, forest protection and restoration.



EQ 5 LESSONS. ADDRESSING GENDER ISSUES

- An environmental program can significantly impact the lives of women and empower them when TTMs are introduced that provide income generating opportunities targeted towards them. This is a win-win situation for both the environment and gender equity.

RECOMMENDATIONS

The recommendations represent a set of specific actions to be considered by program management when designing similar programs in the future.

Depending on funding, USAID/India should continue, strengthen and scale-up Forest-PLUS activities that were successful, but will require sustained efforts to achieve greater intended positive impacts on climate change adaptation, biodiversity conservation, and reducing deforestation and forest degradation.

Specific recommendations for future program design and implementation include:

EVALUATION QUESTION 1



IMPROVING FOREST MANAGEMENT AND CARBON MONITORING

- Interventions that are linked to livelihoods showed great promise and uptake in communities. USAID should consider focusing future programming on interventions that have a positive economic impact on communities.
- The GOI should fully adopt ownership of and maintain the interventions started through Forest-PLUS and agreements on how this can be accomplished must be laid out at the beginning of any future project.
- USAID should consider whether there are sufficient funds for future programming to achieve policy reform. While policy reform is critical to sustainable change, it is lengthy and involves multiple institutional and political bottlenecks.
- USAID should consider replicating the Forest-PLUS methodology used to develop state FD Working Plans, which was successful and yielded stronger working plans and coordination.
- Before undertaking another REDD+ program in India, USAID should examine the experiences of REDD+ implementation in other countries and note global concerns on the negative impacts of REDD+ in order to ensure any future programs maximize success.
- USAID should commit additional long-term funding for research and collaboration. These endeavors take time to bear direct results, but are useful.

EVALUATION QUESTION 2



BUILDING INSTITUTIONAL CAPACITY

- USAID should plan to conduct a comprehensive training needs assessment with the GOI that includes an assessment of the need for training across sectors, at different levels and for training of trainers. While Forest-PLUS training was successful, ensuring a comprehensive approach that can address frequent staff transfers will be key.
- In future programs, USAID should pay particular and greater attention to appropriate and increased training of front-line field staff, who are more directly interacting with the environment and the communities.

EVALUATION QUESTION 3



IDENTIFYING FACTORS HELPING OR HINDERING ACHIEVEMENTS

- USAID and their partners should continue to emphasize frequent and repeated communication of project goals, activities, and approaches to GOI counterparts, especially as staff turnover occurs.
- USAID should continue to support the practice of consulting with and involving GOI counterparts in program planning to promote political will for adoption of TTMs.

- USAID should also continue to support the practice of involving and consulting with the community and recognize the role of a broad range of community beneficiaries in order to create stronger, more sustainable local initiatives that could ultimately have larger nation-wide impacts.

EVALUATION QUESTION 4



PROMOTING LONG-TERM CARBON SEQUESTRATION AND REDUCED GHG EMISSIONS

- USAID should consider scaling up and expanding focused, needs assessment-based, capacity building and awareness campaigns at all levels. Topics might include for example, awareness of global carbon markets within communities.
- USAID should consider replicating the very successful climate awareness initiative with Buddhist monks with other religious leaders (e.g., Hindu, Muslim) in other states.
- USAID should consider scaling up the deployment of forest and carbon measurement TTMs introduced by Forest-PLUS if they are fully adopted within the state forest departments.
- USAID should support the restoration of degraded lands largely with mixed, native tree species
- A future USAID program should take advantage of private sector interest in environmental and forest conservation in rural and urban areas, while enabling the connection between the forestry and the corporate sector.

EVALUATION QUESTION 5



ADDRESSING GENDER ISSUES

- Future USAID programs should continue the highly successful practice demonstrated by Forest-PLUS to consider gender when designing activities based on the particular social conditions of the state or community where activities are to be implemented.
- Future USAID programs should ensure both men and women are involved in decision making about the distribution of program resources within the community.

ANNEXES

ANNEX A: EVALUATION STATEMENT OF WORK

From: Section C – Description / Specifications/Statement of Work in “Request for Task Order Proposal (RFTOP) No. SOL-386-17-000006 for Final Performance Evaluation of Partnership for Land Use Science (Forest-PLUS) Technical Assistance Program under IDIQ # AID-486-I-14-00001”

a) Evaluation Purpose

The objective of this final performance evaluation is to conduct a full and independent review of Forest-plus program activities and results from July 2012 to May 2017. The overriding purpose of this end-term evaluation is to gain an independent assessment of the program performance in order to provide lessons learned and help guide the Mission on future program design. The evaluation will aim to determine whether the goals, objectives and outcomes of Forest-PLUS program were met; establish how effectively the interventions were delivered; assess the extent to which the program affected its beneficiaries; determine whether the USG investment in the program received the greatest possible return; and learn lessons that will guide the design of future activities. To this end, the evaluation will assess program performance, including the relevance, effectiveness, efficiency, potential sustainability of results and the likelihood of impact.

b) Evaluation Questions:

This evaluation will answer the following questions:

1. To what extent has the Forest-PLUS program improved forest management and forest carbon monitoring in the four targeted states?

a) How effective was the program in developing and institutionalizing forest management and REDD+ tools and techniques?

2. How have the Forest-PLUS trainings and demonstration activities affected capacity of Indian institutions in better forest/ecosystem management?

a) To what extent has the program responded to the needs of MOEF&CC, MOEF&CC institutions and the four state forest departments?

3. What factors (internal and external to the program) help or hinder achievements of the expected results (outcomes)?

4. If any, what aspect(s) of the program is most promising in paving the foundation for long term carbon sequestration and reduced GHG emissions from forests and landscapes?

5. To what extent (have) the program interventions addressed gender issues in the forestry sector? What are the male and female roles and the intended and unintended positive and negative changes?

6. What are the key lessons from the implementation of the activity as well as recommendations for future programming of USAID's forestry sector design?

Intended Uses or Other Audiences for the Evaluation:

The primary intended user of this evaluation is USAID/India, particularly the Clean Energy and Environment Office (CLEEO) and Mission management. CLEEO, particularly the forestry team, will be particularly interested in the findings and recommendations concerning the performance of this program. USAID/Washington will use these findings to review the program performance and inform other state department agencies involved with other larger initiatives.

The secondary audience would be local institutions, other donors, and other USAID Missions worldwide. The next intended users are the MOEF&CC, Government of India, the premier institutions dealing with forestry sector in India.

II. EVALUATION DESIGN AND METHODOLOGY

The evaluation will cover all the initiatives in Forest-PLUS since 2012. Evaluation methods, including information on evaluation design and data collection, are presented below. The selected evaluation team will need to present a well-thought methodology for answering the evaluation questions while keeping in mind USAID's evaluation policy and guidance.

a) Evaluation Design

This performance evaluation will, to the extent possible, adhere to the USAID Evaluation Policy (<http://www.usaid.gov/evaluation>) guidelines for more rigorous evaluation, using mixed methods that incorporate both quantitative and qualitative methods. The offeror will be required to propose a detailed design that includes the data collection methods.

Evaluation Question	Data Source	Data collection method (including sampling methodology, where applicable)	Data Analysis Method
1. To what extent has the Forest-PLUS improved forest management and forest carbon monitoring in the four targeted states?			
2. How have the Forest-PLUS trainings and demonstration activities affected capacity of Indian institutions in better forest/ecosystem management?			
3. What factors (internal and external to the program) help or hinder achievements of the expected results (outcomes)?			
4. To what extent (have) the program interventions addressed gender issues in the forestry sector?			
5. What are the key lessons from the implementation of			

the activity as well as recommendations for future programming of USAID's forestry sector design?			
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Gender Compliance

In compliance with Revised ADS 205 released in 2016 on Integrating Gender Equality and Female Empowerment in USAID's Program Cycle, ADS 201 on program Cycle Operational Policy (2016), Gender Equality and Female Empowerment Policy (2012), and Gender Sensitive Evaluation (2014) – best and promising Practices in engendering evaluation; the evaluation will be gender responsive. The evaluation will address/ respond to gender-sensitive indicators, sex-dis-aggregated data and attention to gender inter-relations are required elements of USAID evaluations; therefore, gender must be integrated into the design and implementation of the Activity/SOW as highlighted in the web site.¹²

The Evaluation team must: 1) clearly identify the range of evaluation stakeholders (including men and women) and the range of program participants (the respondents, identify all subgroups, attending to gender); 2) clarify who should be included in the evaluation (as respondents) and the composition (in terms of positions and competencies) of the evaluation team; 3) specify if there is a need for a mixed method evaluation, if appropriate, that includes quantitative and qualitative data to enhance the ability to triangulate data sources, enhance the credibility of the evaluation, and to examine complex and changing gender realities; 4) identify the resources that the evaluation team will have at its disposal to complete a gender-sensitive evaluation; and 5) specify and provide access to any gender analysis, gender action plan, theory of change description, and/or stakeholder analyses that were completed.

The contractor is required to complete the following table and submit it as part of their technical proposal.

Should the evaluation team deem it necessary to collect quantitative data using a sample survey, the evaluation team will need to include a section in the evaluation plan that clearly depicts how the survey will be conducted, the sample frame to be used, sample size, quality assurance, data analysis plan, etc.

The evaluation team will review documentation provided by USAID and the Forest-PLUS IPs, and any relevant secondary research they collect (especially on REDD+, forest management and forest carbon monitoring in India). An instrument will be developed to codify and organize data from the document review for analysis according to the evaluation questions. The team is also expected to begin constructing the overall Theory of Change (TOC) during the desk review period. The evaluation team will be accountable for ensuring data analysis methods are in line with best practices. For both quantitative and qualitative data, the evaluation team will need to articulate methodologies for analyzing collected information, including any statistical software programs to be used. For qualitative data specifically, the evaluation team will need to ensure key informant interviews and/or focus groups are recorded and transcribed. The evaluation team will explore whether it can use any qualitative data analysis software like DeDoose or NVivo.

It is expected that the evaluation team will present initial findings from the document review against the evaluation questions as part of the Team Planning Meeting at the beginning of the evaluation.

Desk review of documents: USAID/India will provide the team with all relevant country and program specific documents including proposals, Project Monitoring & Evaluation plan (PMEP), progress reports, monitoring indicators data and other relevant documents for conducting this desk review. The

¹² Brisolara, Shannon. "Gender-Sensitive Evaluation Best and Promising Practices in Engendering Evaluation." USAID/JBS International Inc. September 2014. http://pdf.usaid.gov/pdf_docs/PA00K43P.pdf

evaluation team is expected to collect and collate relevant documents, reports, and data, and all team members are expected to review these documents in preparation of the evaluation design and for the team planning meeting.

Specific Tasks

Specific tasks to be undertaken by the evaluation team in carrying out the evaluation include, but not limited to:

- Review of the program's Contract documents.
- Review of all program reports and annual work plans.
- Review of baseline data, Program Monitoring & Evaluation Plan (PMEP), targets and performance reports as provided in the quarterly reports.
- Review of USAID/India's Country Development Cooperation Strategy, the relevant Development Objective and Forestry-PLUS's role therein.
- An in brief and out brief with USAID/India's Mission Director, CLEEO, Program Office, and USAID's Contracting Officer's Representative (COR) of the Forest-PLUS TA Contract and other related USG representatives.
- Meetings and interviews with Tetra Tech staff (the contactor) and the sub-contractors.
- Meetings and interviews with the GOI and private-sector counterparts and partners.
- Meetings and interviews with associated institutions and other relevant stakeholders associated in the program in each region of the country.

b) Reporting Requirements and Deliverables

The following are deliverables required of the Contractor under this Task Order:

- Initial meeting of USAID/India's Program office staff and COR of the Evaluation contract and USAID/India's technical offices COR who manages the Forest-PLUS program and discuss about the evaluation questions. In addition, logistical details such as number and location of data collection and meeting scheduling, etc. will be discussed.
- Team Planning Meeting (TPM): A one-day team planning meeting will be held by the evaluation team at a convenient place in New Delhi before the evaluation begins. This will be facilitated by the evaluation team leader, and will provide USAID/India with an opportunity to present the purpose, expectations and agenda of the assignment. The evaluation team will provide to USAID/India's technical and Program Offices, an evaluation design Plan which will include a detailed work plan, a projected timeline, a detailed description of the evaluation methodology and data collection and analysis methods which will be used (including draft data collection instruments). This evaluation design will be reviewed and approved by the COR within 5 business days. In addition, the TPM will also:
 - o Clarify team members' roles and responsibilities
 - o Establish the timeline, share experiences and firm up the evaluation methodology
 - o Finalize the methodology guidelines including tools and questionnaires to be used by the team.
 - o Site Visits for Interviews and other types of data collections as appropriate: The evaluation team will conduct a thorough review of the Program through site visits and collect data as planned and approved by the evaluation COR. Site visits will be planned

taking into consideration factors like geographical diversity, representation of various implementation agencies, and the scale of the interventions.

- **Mid-term Briefings.** The Evaluation Team Leader will meet with the COR and representatives from the technical offices and Program Offices to provide an update on status, key issues affecting program implementation, and any initial findings/tentative conclusions. In addition, the team will provide to the COR bi-weekly email updates on status and key issues.
- **Debrief Presentation:** The evaluation team will make a PowerPoint presentation of preliminary findings and conclusions to USAID/India and key stakeholders on the main findings of the evaluation prior to departing from India.
- **Draft Report:** The contractor will submit a draft written report in English within seven days of the Presentation. The report should clearly describe findings, conclusions, and recommendations, and should incorporate comments and questions raised during the Presentation.

An electronic version of the report will be provided to the COR for dissemination among relevant Mission staff, IPs and stakeholders for review and comment. USAID will provide comments on the draft report within two weeks of submission.

- Submission of all raw and processed data, which becomes the property of USAID/India.
- **Final Report** (due within seven working days after receiving written comments from USAID). The team will submit a Final Report in English that appropriately incorporates and/or addresses all Mission comments and feedback. See below for an outline of the final report.
- Both an electronic version and five copies of a written version will be provided to the COR for dissemination among relevant Mission staff and stakeholders. The evaluation COR will submit one electronic copy of the Final Report to the Development Experience Clearinghouse at <http://dec.usaid.gov> after final approval.
- The contractor will submit all raw data sets (quantitative and coded qualitative data) to Development Data Library as per the requirements and guidance provided in ADS 579. The Final Report will have the following contents:
- Table of Contents (1 page);
- **Executive Summary** – concisely state the most salient findings and recommendations (2 pages);
- **Introduction** – Purpose, audience, and synopsis of task (1 page);
- **Background** – Brief overview of development context and problem, USAID strategy and activities implemented in response to the problem, purpose of the evaluation (2-3 pages);
- **Methodology** – Describe evaluation methods, including constraints and gaps (1 page);
- **Findings/Conclusions/Recommendations** – For each IR level (8-10 pages);
- **Issues** – Provide a list of key technical and/or administrative issues, if any (1-2 pages);
- **Success Stories** – Individual success stories which illustrate how USAID program activities have improved lives of people at the bottom of the pyramid.

- **Annexes** – Document the evaluation methods; schedules; bibliography of documents reviewed; list of respondents, and SOW - all materials should be succinct, relevant and readable.

c) Criteria to ensure the quality of the evaluation report (Please refer USAID

Evaluation Policy & How to Note - Preparing Evaluation Reports)

- The evaluation report should represent a thoughtful, well-researched and well-organized effort to objectively evaluate what worked in the program, what did not, and why.
- Evaluation reports shall address all evaluation questions included in the scope of work.
- The evaluation report should include the scope of work as an annex. All modifications to the scope of work, whether in technical requirements, evaluation questions, evaluation COR.
- Evaluation methodology shall be explained in detail, and all tools used in conducting the evaluation such as questionnaires, checklists and discussion guides will be included in an Annex in the final report.
- Evaluation findings will assess outcomes and impact on males and females.
- Limitations to the evaluation shall be disclosed in the report, with particular attention to the limitations associated with the evaluation methodology (selection bias, recall bias, unobservable differences between comparator groups, etc.).
- Evaluation findings should be presented as analyzed facts, evidence, and data and not based on anecdotes, hearsay or the compilation of people's opinions. Findings should be specific, concise and supported by strong quantitative or qualitative evidence.
- Sources of information need to be properly identified and listed in an annex.
- Recommendations need to be supported by a specific set of findings.
- Recommendations should be action-oriented, practical, and specific, with defined responsibility for the action

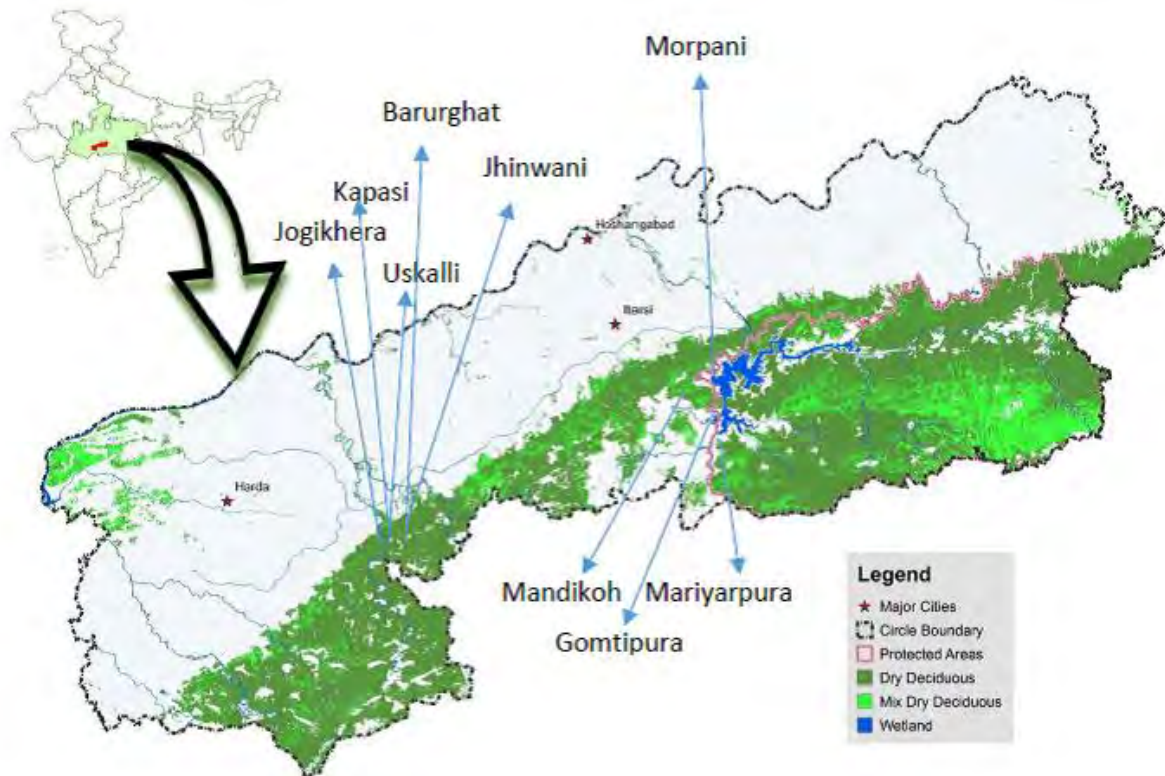
d) Delivery Schedule:

CLIN	DELIVERABLES	DUE DATE
1	Work Plan and In-briefing: The work plan will be submitted to the Evaluation COR at USAID for approval after the team is confirmed prior to departure for the field. The team will meet with USAID/India Program Support and the Forestry team after arrival in Delhi and prior to starting consultation with the Implementing Partner and field data collection process.	15 DAYS
2	Field work completion and submission of status report: The team leader will provide weekly status reports to USAID on work plan implementation via email by OOB Monday (beginning of the next week). The evaluation team will provide a mid-point briefing to the USAID/India team, including evaluation and technical members, to clarify any outstanding queries that may have emerged since the initiation of the evaluation process by phone and e-mail. -Debriefing with USAID: The evaluation team will be required to debrief the Mission Director and Deputy Mission Director on the observations and recommendations after the field visit and draft analysis is over.	35 DAYS
3	Debriefings with other stakeholders/implementing partner: The team will independently present the major findings of the evaluation to the USAID partner (as appropriate and as defined by USAID) and /or GOI in New Delhi and state government officials. The debriefing will include a discussion of findings, conclusions and recommendations. The evaluation team will consider partner comments and draft report accordingly, as appropriate.	42 DAYS
4	Draft Evaluation Report: The evaluation team will present a draft report not to exceed 30 pages of its findings and recommendations to the USAID/India's Evaluation COR.	60 DAYS
5	Final Evaluation Report: The final report, with the Executive Summary must be received by the Evaluation COR, within seven working days after receiving the final comments on the draft evaluation report from the USAID/India team. The final report should include an executive summary of no more than three pages, a main report with findings, conclusions and recommendations not to exceed 30 pages, a copy of this statement of work, evaluation tools used to collect information to answer the evaluation questions, and a list of persons and organizations contacted.	91 DAYS

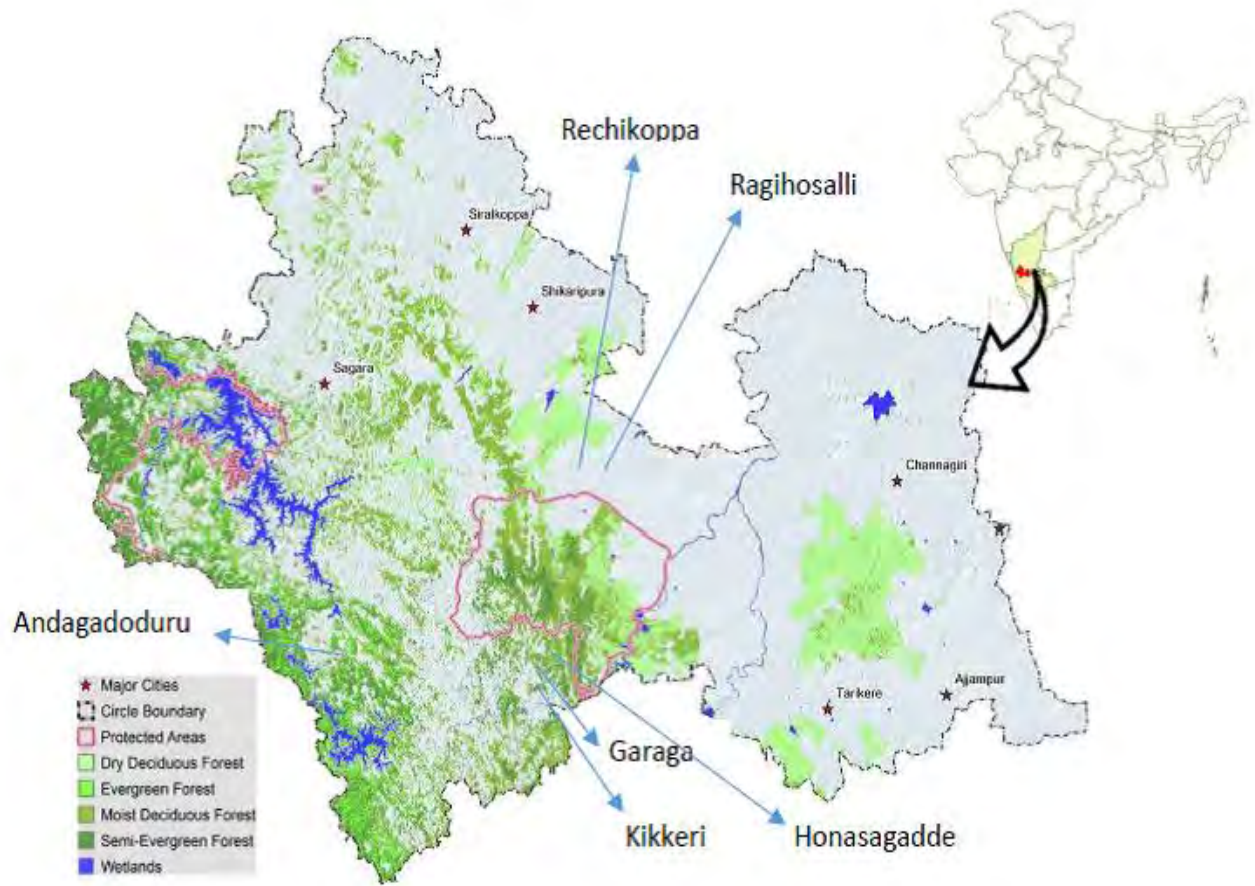
ANNEX B: MAPS OF PROGRAM SITES

The following four state maps show Forest-PLUS program sites at the village level and were provided by USAID/India's Forest-PLUS Program in October 2017.

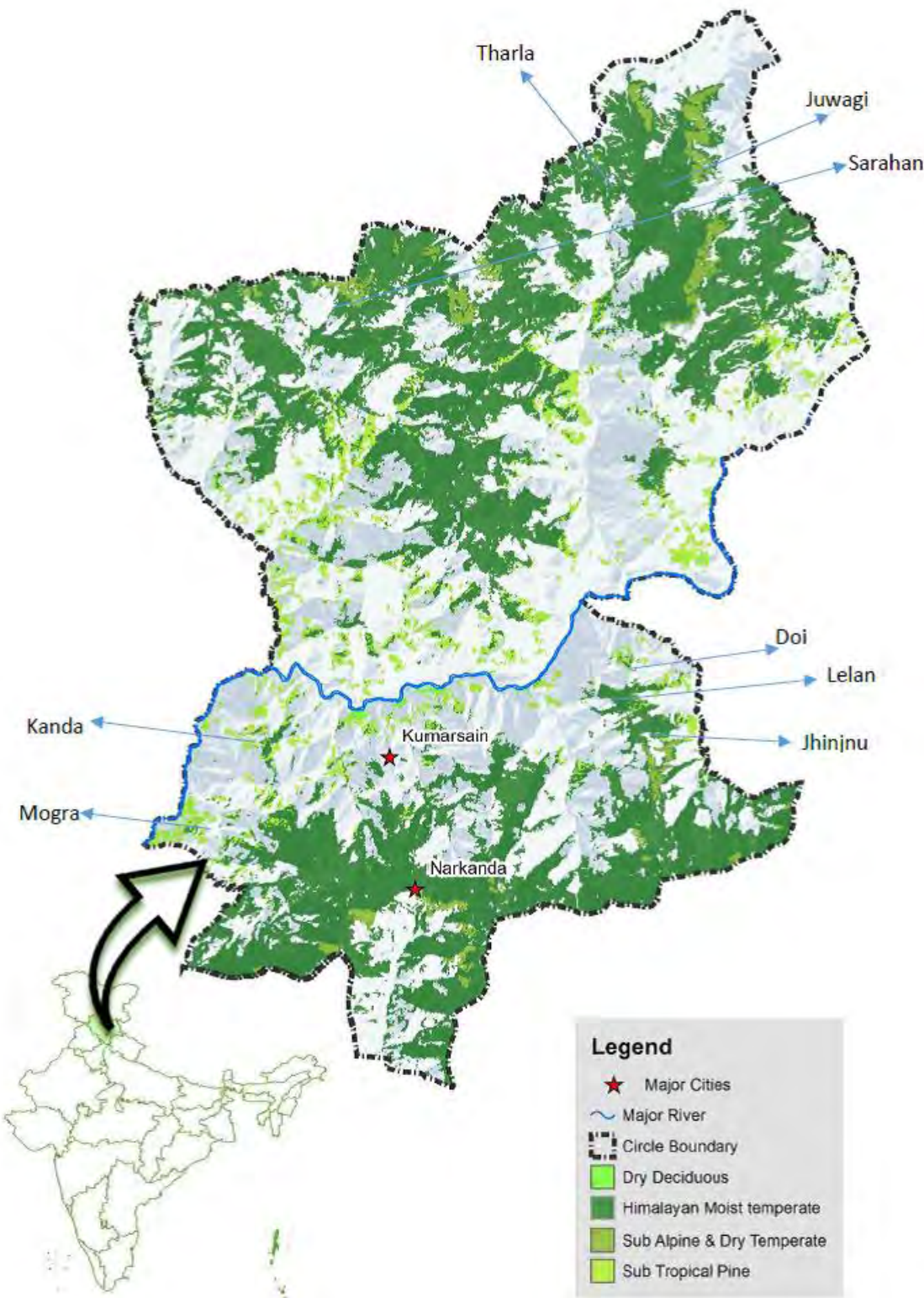
Map of Hoshangabad, Madhya Pradesh



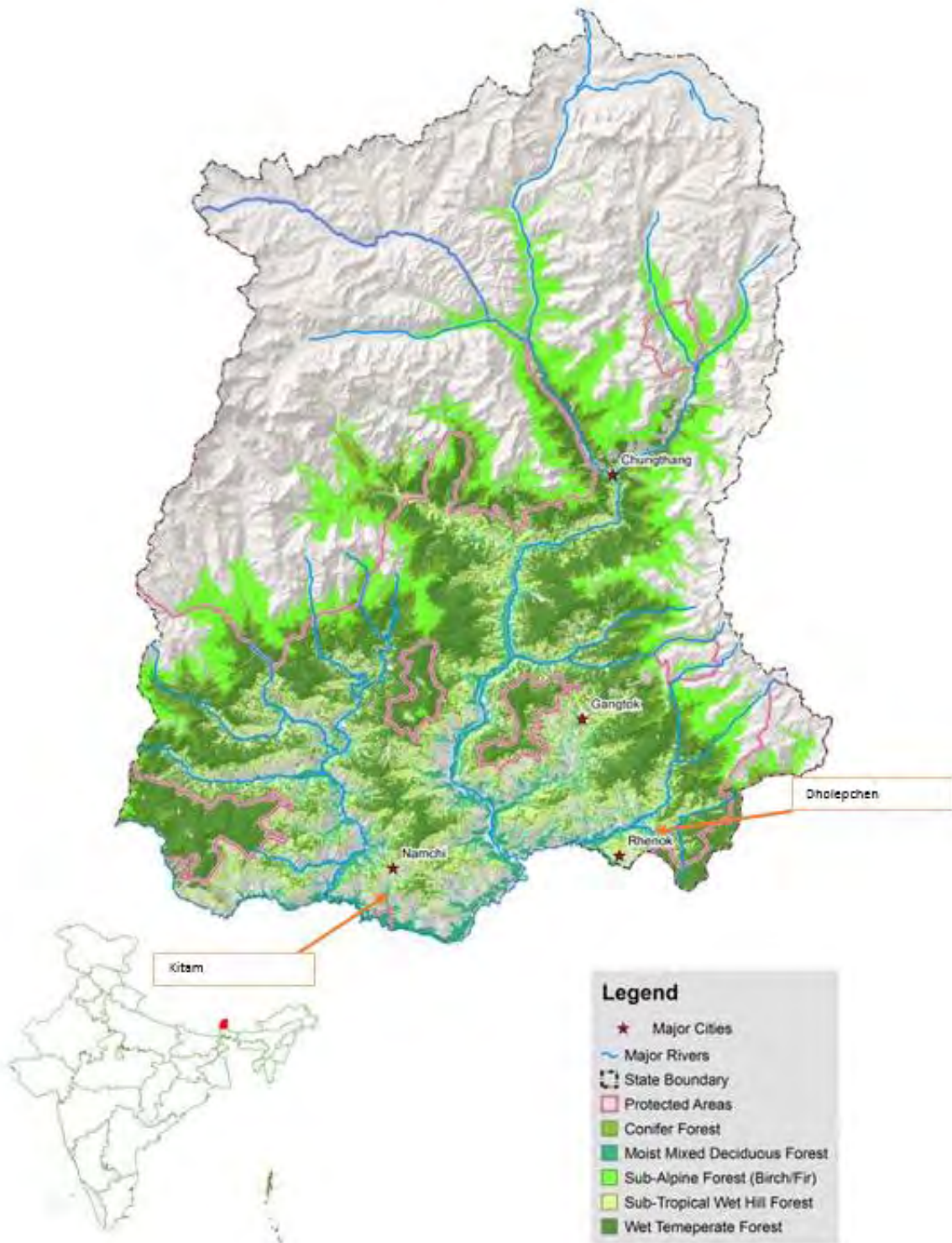
Map of Karnataka



Map of Rampur, Himachal Pradesh



Map of Sikkim



ANNEX C: METHODOLOGY SUPPLEMENT

EVALUATION DESIGN

The evaluation team (ET) designed the evaluation methodology to both answer the six evaluation questions and be inclusive of data collection methods, instrumentation, sampling, and analytical approaches. The ET employed the data collection and analysis methods described below primarily to understand whether USAID/India's Forest-PLUS program has helped to improve sustainability to adapt to climate change. The ET collected data to identify evidence of progress toward intended outcomes, opportunities, and corrective or adaptive actions needed to improve outcomes and programming.

To overcome the biases inherent in any one data collection approach and to leverage the strengths of various methodologies, the ET designed a **mixed-methods** design that incorporated both qualitative and quantitative data collection and analysis. The design followed a mixed method model that is concurrent (i.e. the ET collected both quantitative and qualitative data at the same time.) Due to the small sample size, the ET prioritized qualitative data, but quantitative data was important for triangulation.

The ET used a **gender-oriented approach**. Qualitative interview guides for key informants and focus group discussions included questions designed to elicit information on perceptions of women particularly with respect to factors that facilitated or hindered change and any positive or negative consequences brought about by the program. Interview and focus group sampling was gender inclusive. The team was composed of male and female evaluators, and interviews and focus groups with respondents of the same sex were conducted where feasible. To the extent possible, the ET collected, analyzed, and presented sex-disaggregated data in accordance with USAID Evaluation Policy.

While in the field, the ET used a **flexible approach** to applying its original design methodologies, based on availability of the sources of data and in order to leverage newly identified sources of data.

The evaluation design includes:

- A detailed evaluation design matrix (including the key questions, methods, data sources to be used to address each question, and the data analysis plan for each question),
- Draft key informant interview (KII), focus group discussion (FGD), an online survey questionnaire, and direct observation protocols,
- Proposed respondent groups with selection criteria and sampling plan,
- List of data collection sites with selection criteria and sampling plan,
- Known limitations to the evaluation design and mitigation strategies, and
- A dissemination and utilization plan.

The relationship between the evaluation questions, data sources, and methods used for data collection and analysis are shown in Table C-1.

Table C-1: Forest-PLUS Evaluation Design Matrix

11. Evaluation question	12. Data source	13. Data collection method	14. Data analysis method
EQ 1. To what extent has the Forest-PLUS program improved forest management and forest carbon monitoring in the four targeted states? a) How effective was the program in developing and institutionalizing forest management and REDD+ tools and techniques?	Program documents from IP and partners; GOI - national, state, and district; Forest Department staff, forest officials, public-private partners, other donors, community members involved in the use of forest data management constellation of tools, and community member targets of awareness raising activities	KIIs and FGDs Case study approach combining data from KIIs and direct observation of the use of a range and variety of tools	1. Comparison of program indicators and targets against achievements 2. Qualitative data analysis emphasizing contextual analysis of program activities such as content analysis, comparison and pattern analysis; and tally sheet.
EQ 2. How have the Forest -PLUS trainings and demonstration activities affected capacity of Indian institutions in better forest/ecosystem management? a) To what extent has the program responded to the needs of MOEF&CC, MOEF&CC institutions and the four state forest departments?	IP and partners; GOI – national, state, and district; GOI CB trainees, study tour participants, program documents, public-private partners, other donors	KII Direct observation of the ability of GOI to use the tools, techniques, and methods introduced by Forest-PLUS Online survey of trainees. Convenience sample based on availability of contact information.	Skill competency and utilization in the workplace analysis. Disaggregated by state, gender, and organizational affiliation.
EQ 3. What factors (internal and external to the program) help or hinder achievements of the expected results (outcomes)?	Program documents from IP and partners; GOI – national, state, and district; community leaders and members	KII, community FGDs	Qualitative content analysis, comparison and pattern analysis, and tally sheet. Disaggregated by gender.
EQ 4. If any, what aspect(s) of the program is most promising in paving the foundation for long-term carbon sequestration and reduced GHG	IP and partners; GOI – national, state, and district; community leaders and members; public-private partners, program documents, other donors	KII, community FGDs	Qualitative content analysis, comparison and pattern analysis. Disaggregated by gender.

I 1. Evaluation question	I 2. Data source	I 3. Data collection method	I 4. Data analysis method
emissions from forests and landscapes?			
EQ 5. To what extent have the program interventions addressed gender issues in the forestry sector? What are the male and female roles and the intended and unintended positive and negative changes?	IP and partners; other donors, community beneficiaries, program documents	KIIs, community FGDs (separated by gender)	Gender analysis relying on qualitative content analysis, comparison and pattern analysis; and tally sheet
EQ 6. What are the key lessons from the implementation of the activity as well as recommendations for future programming of USAID's forestry sector design?	Same key stakeholder interview to answer EQ1-5	Information collected in answering EQ1-5	Re-analysis of key findings and conclusions from the perspective of identifying lessons learned and recommendations

DATA COLLECTION

The team collected data using the methods described below. Each method has strengths and weaknesses, including time and resource requirements as well as varying degrees and types of bias. Therefore, similar data were collected across various methods and informants to facilitate triangulation.

Document Review

As a first step toward answering the six evaluation questions, over a half-week period of time, the ET conducted a systematic review of relevant literature and program documents acquired through USAID, program implementers, government, researchers, and other sources. These documents included program monitoring data, program design documents, quarterly/annual reports, assessments, evaluations, and contextual data from Forest-PLUS start-up through the third quarter of fiscal year 2017. A full list of documents can be found in Annex E. The team used the documents to inform the data collection tools, sampling, and site selection as well as to identify emergent findings and hypotheses.

After completion of the document review, the ET collected data in India over a two-week period, including field visits to Forest-PLUS activity sites. For workload and travel considerations, the evaluation team split into two sub-teams of two. Data was collected in each of the four target states for approximately one week, and on-site activities in each state were similar. The ET scheduled evaluation activities in close coordination with the Forest-PLUS implementing partner (IP). The Forest-PLUS Chief of Party assigned a point of contact in each state to facilitate coordination with respondents.

Semi-structured Key Informant Interviews

The ET organized and conducted interviews to address the evaluation questions. The team drew informants from a range of stakeholder types: the IP in the central office in New Delhi as well as former

staff from the regional offices; sub-partners; GOI beneficiaries; public-private partners that had been mobilized by Forest-PLUS; and other donors in the forestry sector to help determine attribution. A four-stage sampling process determined site and respondent selection. The team:

- b. Asked USAID and the IP to make recommendations of individuals and offices to be interviewed.
 1. Identified additional informants from the document review.
 2. Combined the lists and purposively sampled respondents with the aim of maximizing representativeness across a number of key dimensions, including type of program activity, gender, length of time involved in the program, and geography. Representativeness regarding positions of authority within the GOI was also sought, to include both high level officials with decision making authority as well as rank and file staff likely to utilize in their daily work the tools, techniques, and methods introduced by Forest-PLUS. Due to time and budget constraints, priority was given to sites where the volume of program interventions was higher.
 3. Identified additional respondents through snowball sampling (i.e. soliciting recommendations from informants over the course of conducting interviews.)

The ET conducted KII's in all four states where Forest-PLUS implemented activities. The final site selection informed the sampling of beneficiaries. The team interviewed six key informants in Karnataka, seven in Madhya Pradesh, 13 in Himachal Pradesh, nine in Sikkim, and ten in other locations for a total of 45 (11 female, 34 male). The team conducted KII's with individual key informants or in small groups as appropriate. A full list of key informants and their corresponding positions, institutions, and locations can be found in Annex F.

Focus Group Discussions

The evaluation questions drove the design of the FGD guides. A subcontractor conducted all FGDs with a range of program beneficiaries. Community members participated, with separate group discussions held for men and women. As well, Village and Joint Forest Management Committees and other NGOs, which had been involved in Forest-PLUS activities, participated in mixed-gender focus group discussions. A four-stage sampling process determined site and participant selection. The subcontractor conducted FGDs in two locations in each of the four states where Forest-PLUS implemented activities. The final site selection informed the recruitment of beneficiaries. With three FGDs in each location, a total of 24 FGDs were conducted with a total of 188 program beneficiaries (81 female, 107 male).

Table C-2: Schedule of Focus Group Discussions

State	Division	Location	Date	FGDs conducted in each location
Karnataka	Shivamogga	Kikkeri	07.11.17	1. Committee/NGO members
		Anadagadodur	08.11.17	2. Male community members 3. Female community members
Madhya Pradesh	Hoshangabad	Maryarpura	07.11.17	

State	Division	Location	Date	FGDs conducted in each location
		Morpani	08.11.17	1. Committee/NGO members 2. Male community members 3. Female community members
Himachal Pradesh	Rampur	Doi	10.11.17	1. Committee/NGO members 2. Male community members 3. Female community members
		Sarahan	11.11.17	
Sikkim	Dalapchand	Dalapchand	10.11.17	1. Committee/NGO members 2. Male community members 3. Female community members
		Mankhim	11.11.17	

Each FGD had between six and 11 participants. The subcontractor's experienced moderators led the FGDs, and its note takers recorded the information. ET members attended where scheduling permitted. The subcontractor's core research team conducted centralized training in New Delhi for the moderators and staff heading the offices in the four states. Its recruiters and quality control supervisors received training in the field offices on:

- Respect for persons, recognizing their capacity and rights to make their own choices and decisions;
- Provision of necessary information to all respondents and ensuring it is adequately understood, thereby empowering respondents to make a voluntary decision about whether or not to participate in the study;
- Clarifying any issues the respondents might have with the nature of the data requirement in order to establish a level of comfort;
- Obtaining voluntary informed consent from the respondents, without coercion, undue influence or inducement, or intimidation of any kind;
- Acknowledgement of participants' dignity and freedom by being sensitive while administering personal questions and avoiding the presence of any other persons, while conducting the focus groups;
- Non-judgmental attitude; and
- Confidentiality of information.

Every member of the research and field team involved in the study signed a confidentiality statement in order to ensure the confidentiality of the respondents and information. Informed consent forms were obtained from respondents who agreed to participate.

Direct Observation

In conjunction with KIs, the ET conducted direct observations of program-supported technologies and community activities affected by the program. During KIs with District Forest Department Officials and other GOI officials, the team observed the functionality of the integrated system of tools that included, among others (i) the remote sensing tools used by Forest Officers to support the management and monitoring of forest activities; (ii) the mFOREST tool, which collects inventory data and uses it to calculate forest stocking and density; (iii) the Data Management System used by the Forest Department to manage ground-based inventory and remote sensing data, and (iv) the tool for planning, design, collection, analysis, and reporting of forest stocks. The team also observed tools, techniques, or methods (TTMs) deployed in communities. The team scored each TTM against a rubric to assess, among other things, its utility, usability, and knowledge management capabilities. In total, the team directly observed 35 TTMs. The team also used participatory unstructured discussion during direct observations.

Online Survey

The ET administered an online survey of GOI capacity building trainees over a two-week period, employing the tool Survey Monkey¹³, to gather data from training participants to answer evaluation questions related specifically to Forest-PLUS capacity building and utilization of skills in the workplace (as relates to the second evaluation question). The survey asked trainees who participated in the program's learning management platform (for both online and classroom curriculum delivery) to provide feedback on issues related the training quality, relevance, appropriateness, comprehensiveness, accessibility, as well as user-friendliness. The team designed the survey to elicit quantitative Likert-scale responses, which were relatively quick to complete (approximately five minutes) and thus would encourage higher response rates compared to open-ended questions.

While the training records of Forest-PLUS indicate a total of 1,642 GOI training participants, this figure is comprised of a sum of the number of GOI participants at each training event and thus counts individuals more than once if they attended multiple training events. The ET did not have information to determine the number of unique GOI training participants.

While the evaluation team was aware that many GOI officials do not typically rely on e-mail for routine business, time and budget constraints prevented the ET from conducting a survey by telephone or SMS. Instead, the team gathered all the available e-mail addresses of GOI training participants from the participant sign-in sheets retained by Forest-PLUS and sent these participants an invitation to complete the survey with the link to access the online survey. Out of 412 invitations sent, the team received 26 responses (3 female, 23 male), a six percent response rate. While the survey results are not statistically significant, the quantitative data produced were used to triangulate qualitative data obtained through KIs and data obtained through direct observation.

The data collection tools used for the online survey are found in Annex D. Table C-3 shows the number of respondents per state for each data collection method.

¹³ "India Forest-PLUS." SurveyMonkey. November 1, 2017. <https://www.surveymonkey.com/r/XLWDX5K>.

Table C-3: Respondent Statistics by Data Collection Method

State	Sex	KII	FGD	Survey	Totals	
Karnataka	Female	2	19	0	21	52
	Male	4	24	3	31	
Madhya Pradesh	Female	0	19	0	19	64
	Male	7	33	5	45	
Himachal Pradesh	Female	2	27	3	32	75
	Male	11	20	12	43	
Sikkim	Female	3	16	0	19	55
	Male	6	30	0	36	
Other Locations	Female	4	0	0	4	13
	Male	6	0	3	9	
Total		45	188	26		258
Females		11	81	3		95
Males		34	107	23		163

Data Collection Schedule

Field activities (Table C-4) for both Teams A (Mitchell and Chatterjee) and B (Paudya and Glenski) began on 29 October and ended on 10 November for Team A and 11 November for Team B.

Table C-4. Field Data Collection Schedule

Date	Time	Team A		Team B	
		Location	Activity	Location	Activity
29.10.17	am	Delhi	Field preparation	Delhi	Field preparation
	pm	Bhopal, MP	Travel Delhi to Bhopal	Bengaluru	Travel Delhi to Bengaluru, Karnataka
30.10.17	am	Bhopal	KIIs	Bengaluru	KIIs
	pm	Hoshangabad	KIIs & travel to Hoshangabad	Bengaluru	KIIs
31.10.17	am	Morpani, Mandikhoh & Maryarpura villages	Direct Observation of multi-species agroforestry (Teak, Bamboo, Aonla, Papaya, Kalmegh,) NTFP interventions (e.g. <i>Mahua</i> flowers & value-added sweets,) and tree nursery (indigenous spp.)	Tumkur	Travel to Tumkur; Direct observation of community radio station and KIIs.

Date	Time	Team A		Team B	
		Location	Activity	Location	Activity
			Mahua (<i>Madhuca latifoia</i>)		
	pm	Hoshangabad	Klls	Shivamogga	Travel to Shivamogga
1.11.17	am	Hoshangabad	Travel to Bhopal	Kikkeri village	Travel to Kikkeri. Direct observation of beehive, <i>Sapindus emarginatus</i> (soap nuts) and collection tools, and NTFP storage containers
	pm	Bhopal & Delhi	Klls & travel to Delhi	Kikkeri village	Direct observation of Ochlandra plantation and forest-based enterprise, powder making machine from sheet of areca nut tree, permanent plot for forests inventory. Travel to Shivamogga
2.11.17	am	Delhi	Report & field preparation	Andagadodur village	Travel Shivamogga to Andagadodur. Direct observation of Multi-purpose NTFP drying machine for <i>Garcinia gummi-gutta</i> .
	pm	Dehradun, UK	Travel Delhi to Dehradun	Andagadodur village	Direct observation of tools and equipment in Range Forest Office provided by Forest-Plus. Travel Andagadodur to Shivamogga
3.11.17	am	Dehradun	Klls	Shivamogga	Travel to Bengaluru (ca. 6 hours)
	pm	Dehradun & Nahan, HP	Klls and travel to Nahan & Sirmour	Bengaluru & Delhi	Travel to Delhi
4.11.17	am	Sirmour, HP	Report & field preparation	Delhi	Report & field preparation
	pm				

Date	Time	Team A		Team B	
		Location	Activity	Location	Activity
5.11.17	am	Sirmour	Travel Sirmour to Rampur (ca. 8 hours)	Delhi	Report & field preparation
	pm	Rampur, HP			
6.11.17	am	Sarahan, HP	Direct Observation of button mushroom (<i>Agaricus bisporus</i>) cultivation, solar water and room heaters; NTFP nursery	Delhi & Bagdogra	Travel from Delhi to Bagdogra
	pm	Sarahan & Rampur		Gangtok, Sikkim	Travel to from Bagdogra to Gangtok (ca. 6 hours)
7.11.17	am	Rampur & Doi	KIIs FD and Direct Observation of direct sowing of seeds of Oak, <i>Bauhinia</i> , and other tree species (Assisted Natural Regeneration) at Doi village	Gangtok	KII with Secretary, Government of Sikkim, Forests, Environment & Wildlife Management Department KII with REDD+ Cell team Forests, Environment & Wildlife Management Department Government of Sikkim Direct observation of DMS and remote sensing tools
	pm	Shimla, HP	Travel Rampur to Shimla	Rumtek	Travel to Rumtek (ca. 1 hour) Direct observation of outreach program with monks and planting of saplings. Travel to Gangtok (ca. 1 hour)
8.11.17	am	Shimla	Visit to Shimla watershed and wildlife sanctuary with FD HP	Kitam	Travel from Gangtok to Kitam (ca. 4 hours). Direct observation of watering hole/pond for wild animals
	pm	Shimla	KIIs FD HP and Direct Observation of GIS Cell and tools, FD HP	Gangtok.	Travel from Kitam to Gangtok (ca. 4 hours). KII.
9.11.17	am	Shimla	Meeting with GIZ project	Dalapchand	Travel from Gangtok to Dalapchand (ca. 4 hours). Direct observation of salt licks and wall to keep wild

Date	Time	Team A		Team B	
		Location	Activity	Location	Activity
					animals away from human settlements; bio-briquette maker; and cardamom dryer.
	pm		Data entry and writing		Direct observation of planting of saplings. Travel from Dalapchand to Gangtok (ca. 4 hours)
10.11.17	am	Shimla	Travel to Chandigarh	Dalapchand	Travel from Gangtok to Dalapchand (ca. 4 hours). Observation of two FGDs for
	pm	Chandigarh and Delhi	Travel Chandigarh to Delhi		(1) Male community members and (2) Female community members. Travel from Dalapchand to Gangtok (ca. 4 hours)
11.11.17	am	Delhi	Data entry and report preparation	Bagdogra	Travel from Gangtok to Bagdogra (ca. 6 hours)
	pm			Delhi	Travel from Bagdogra to Delhi
12.11.17	am	Delhi	Evaluation Team Planning Meeting: Data entry, analysis and report preparation		
	pm				

DATA ANALYSIS

The ET conducted a debriefing upon completion of the field work to review together the evidence collected. The team used a variety of data analysis techniques to support the development of evaluation findings, conclusions, and recommendations. The team compared and contrasted data from the background review, KIs, FGDs, direct observation, and survey against one another to determine whether findings were divergent or convergent. The extent to which multiple informational streams provided consistent findings informed the certitude and internal validity of evaluation conclusions. Where the different sources diverged, the team undertook additional analysis, and drew conclusions in a way that is reflective of the nuanced data.

The ET's analysis accounted for gender and social dimensions, wherever relevant. The team worked across all evaluation questions to capture and compare results of Forest-PLUS as it specifically benefitted (or did not benefit) females in GOI and in the target communities.

Qualitative Analysis

The ET used qualitative analytical techniques to code, collate, and interpret data captured through interviews, discussion groups, and direct observations. Team members identified response themes and key points to code data and used relational content analysis to identify response categories and patterns as well as to elucidate emergent themes, contextual factors, and trends. The team disaggregated the

interview and discussion group data by sex, length of involvement in the program, and geographic location to capture differential outcomes among groups. The team also used frequency, trend, theme, and pattern analysis to compare results across respondent groups.

Quantitative Analysis

The ET analyzed data that is intrinsically quantitative, including structured elements of the site observations and responses to Likert scale questions, using Microsoft Excel to generate percentages of respondents in graphical and tabular formats.

ANNEX D: DATA COLLECTION PROTOCOLS
KEY INFORMANT INTERVIEW (KII) QUESTIONNAIRES

(I) KII QUESTIONNAIRE for USAID, IP, and Other Partner Staff

DATE OF INTERVIEW:

NAME OF INTERVIEWER:

NAME OF RESPONDENT(S):

TITLE/POSITION:

TELEPHONE/EMAIL:

STATE:

MALE: ☐

FEMALE: ☐

1. How long have you been involved with the Forest-PLUS project?

2. *(For IP partner staff)* What were your main duties?

(For partners) What activities of Forest-PLUS did your company/organization implement?

3. Overall, would you say that the tools, techniques, and methods for an ecosystem approach to achieving REDD+ goals that Forest-PLUS introduced to improve forest management and forest carbon monitoring were:

Very good ☐

Good ☐

Adequate ☐

Minimally effective ☐

Not effective at all ☐

Don't know ☐

4. How usable would you say the Forest-PLUS tools, techniques, and methods are to use remote sensed data to estimate carbon stocks?

Very usable ☐

Usable ☐

Adequate ☐

Minimally usable ☐

Not at all ☐

Don't know ☐

5. Overall, would you say that the tools, techniques, and methods to improve the regulations on harvesting, processing, transporting, and marketing forest products for an ecosystem approach to achieving REDD+ goals that Forest-PLUS introduced improved forest management and forest carbon monitoring:

Very well ☐
Well ☐
Adequately ☐
Minimally ☐
Not at all ☐
Don't know ☐

6. Can you think of any tools, techniques, or methods that were particularly effective? Why?

7. Which tools, techniques, or methods do you think were least effective? Why?

8. How effectively would you say that Forest-PLUS supported research and international contacts for an ecosystem approach to achieving REDD+ goals and improve forest management and forest carbon monitoring?

Very well ☐
Well ☐
Adequately ☐
Minimally ☐
Not at all ☐
Don't know ☐

9. How effectively do you think that Forest-PLUS reached people in communities of the targeted states to disseminate messages on climate change, REDD+, and forest management?

Very well ☐
Well ☐
Adequately ☐
Minimally ☐
Not at all ☐
Don't know ☐

10. How accessible do you think that Forest-PLUS made its scientific and technical results to relevant people?

Very accessible ☐

- Accessible ☐
- Adequately ☐
- Minimally ☐
- Not at all ☐
- Don't know ☐

11. How effective do you think Forest-PLUS was in securing private sector support to benefit climate change, biodiversity, and livelihoods benefits?

- Very effective. These companies definitely would not have otherwise supported those initiatives ☐
- Effective. These companies might not have otherwise supported those initiatives ☐
- Adequately. Some of these companies might have supported those initiatives anyway. ☐
- Minimally. These companies probably would have supported those initiatives anyway. ☐
- Not at all. These companies would have supported those initiatives anyway. ☐
- Don't know ☐

12. To what extent has Forest-PLUS affected changes in laws, policies, or regulations to mitigate climate change?

- Very much ☐
- Quite a bit ☐
- Adequately ☐
- Minimally ☐
- Not at all ☐
- Don't know ☐

13. To what extent has Forest-PLUS built the capacity of individuals in local communities and in GOI to mitigate climate change, implement REDD+, and better manage forests?

- Very much ☐
- Quite a bit ☐
- Adequately ☐
- Minimally ☐
- Not at all ☐
- Don't know ☐

14. To what extent has Forest-PLUS built the capacity of Indian institutions to respond to climate change?

- Very much ☐

- Quite a bit ☐
- Adequately ☐
- Minimally ☐
- Not at all ☐
- Don't know ☐

15. What are the remaining capacity gaps for Indian individuals and institutions responding to climate change?

16. Which Forest-PLUS activities do you think are most important for long-term carbon sequestration and reduced GHG emissions from forests and landscapes?

17. What factor(s) do you think was most important in Forest-PLUS achieving success?

18. What do you think was the greatest challenge to Forest-PLUS in achieving success?

19. How did Forest-PLUS address gender issues in the forestry sector?

How well did it do so?

- Very well ☐
- Well ☐
- Adequately ☐
- Minimally ☐
- Not at all ☐
- Don't know ☐

20. What lessons do you think USAID, Tetra Tech, and the GOI learned from implementation of Forest-PLUS?

21. If there were one change you would have liked to have made to the project, what would it be?

22. What was Forest-PLUS's biggest achievement?

23. Can you think of anyone else who might be able to provide information that would be useful for this evaluation?

(2) KII QUESTIONNAIRE for GOI Staff

DATE OF INTERVIEW:

NAME OF INTERVIEWER:

STATE:

NAME OF RESPONDENT(S):

SECTION/INSTITUTE/DEPARTMENT/DIVISION:

TITLE/POSITION:

TELEPHONE/EMAIL:

MALE: ☐

FEMALE: ☐

1. How long have you been involved with the Forest-PLUS project?
2. How has Forest-PLUS supported your government agency?
3. Has Forest-PLUS introduced any tools, techniques, or methods for an ecosystem approach to achieving REDD+ goals?
4. Has Forest-PLUS introduced any tools, techniques, and methods to use remote sensed data to estimate carbon stocks?
5. Has Forest-PLUS introduced any tools, techniques, and methods to improve the regulations on harvesting, processing, transporting, and marketing forest products for an ecosystem approach to achieving REDD+ goals?

6. Overall, how usable were those tools, techniques, or methods in your work?

Very usable ☐

Usable ☐

Adequate ☐

Minimally usable ☐

Not at all ☐

Don't know ☐

Why?

5. Can you think of any tools, techniques, or methods that were particularly effective? Why?

6. Which tools, techniques, or methods do you think were least effective? Why?

7. Are you or someone else at your agency using those new techniques, tools, or methods that they weren't using before Forest-PLUS introduced them?
8. Have you been able to use any research from Forest-PLUS in your work?
9. Have you been able to take advantage of any international contacts from Forest-PLUS in your work?
9. Have you been able to access scientific and technical results of Forest-PLUS on social media? If so, was it useful and how?
10. Are you aware of any private sector support for your government agency that was arranged by Forest-PLUS?
11. To what extent has Forest-PLUS affected changes in laws, policies, or regulations to mitigate climate change?

Very much ☐

Quite a bit ☐

Adequately ☐

Minimally ☐

Not at all ☐

Don't know ☐

12. To what extent has Forest-PLUS helped you to do your job better?

Very much ☐

Quite a bit ☐

Adequately ☐

Minimally ☐

Not at all ☐

Don't know ☐

13. To what extent has Forest-PLUS supported your government agency to respond better to climate change?

Very much ☐

Quite a bit ☐

Adequately ☐

Minimally ☐

Not at all ☐

Don't know ☐

14. What skills, tools, techniques, or methods do you still need in order to respond to climate change?

15. What skills, tools, techniques, or methods does your government agency still need in order to respond to climate change?

16. Which Forest-PLUS activities do you think were most important for long-term carbon sequestration and reduced GHG emissions from forests and landscapes?

17. What unanticipated factors positively or negatively affected your government agency's participation with Forest-PLUS?

18. What are some positive or negative unexpected results of your government agency's involvement with Forest-PLUS?

19. If there were one change you could have made to Forest-PLUS, what would it have been?

20. Can you think of anyone else who might be able to provide information that would be useful for this evaluation?

DIRECT OBSERVATION CHECKLIST for GOI Staff KII (2)

Based on the answers to questions #3 – 5, ask the respondent to demonstrate or allow you to demonstrate one or more tools techniques, or methods. The respondent may refer you to another person in that government entity who works more regularly with the tool, technique, or method.

1) Tool, technique, method:		
2) Who demonstrated the tool, technique, or method?	Interviewer ☐ Respondent ☐	
3) Describe tool, technique, method.		
4) Respondent understands how to properly use:	Very much ☐ Quite a bit ☐ Adequately ☐ Minimally ☐	
5) Tool, technique, method is appropriate for intended purpose	Very much ☐ Quite a bit ☐ Adequately ☐ Minimally ☐	
Explanation or reasons for scores:		

(3) KII QUESTIONNAIRE for Other Donors

DATE OF INTERVIEW:

NAME OF INTERVIEWER:

NAME OF RESPONDENT(S):

ORGANIZATION:

TITLE/POSITION:

TELEPHONE/EMAIL:

1. Can you provide an overview of your organization's program in India for forest/ecosystem management, forest carbon monitoring, and REDD+?
2. In what ways did your organization cooperate with the USAID Forest-PLUS project?
3. Are you aware of any areas in which your organization's program overlapped with the Forest-PLUS project?
4. What would you say are the remaining capacity gaps for Indian individuals and institutions in responding to climate change?
5. What gaps in donor assistance are there currently or will there be after the close out of Forest-PLUS to support long-term carbon sequestration and reduced GHG emissions from forests and landscapes?
6. How does your organization address gender issues in the forestry sector?
7. Can you think of anyone else who might be able to provide information that would be useful for this evaluation?

(4) KII QUESTIONNAIRE for Public-Private Partnership (PPP) Staff

DATE OF INTERVIEW:

NAME OF INTERVIEWER:

STATE:

NAME OF RESPONDENT(S):

COMPANY/ORGANIZATION:

TITLE/POSITION:

TELEPHONE/EMAIL:

MALE: ☐

FEMALE: ☐

1. What good/services does your company/organization provide?
2. How long have you been involved with the Forest-PLUS project?
3. Why did you first get involved with Forest-PLUS?
4. What activities of Forest-PLUS did your company/organization implement or fund?
5. Overall, how well would you say that those efforts contributed to improving forest management REDD+ goals?

Very well ☐

Well ☐

Adequately ☐

Minimally ☐

Not at all ☐

Don't know ☐

How?

6. Which activities were particularly effective? Why?
7. Which activities do you think were least effective? Why?
8. If Forest-PLUS hadn't contacted you, would you have supported activities some other way to benefit climate change, biodiversity, and livelihoods benefits?

Definitely ☐

- Most likely ☐
- Possibly ☐
- Possibly but to a lesser extent. ☐
- Not at all ☐
- Don't know ☐

9. Do you plan to continue your partnership after Forest-PLUS ends?

- Definitely ☐
- Most likely ☐
- Possibly ☐
- Possibly but to a lesser extent. ☐
- Not at all ☐
- Don't know ☐

10. What are the remaining capacity gaps for Indian individuals and institutions responding to climate change?

11. Which activities do you think are most important for the private sector to support for long-term carbon sequestration and reduced GHG emissions from forests and landscapes?

12. If there were one change you would have liked to have made to the Forest-PLUS project, what would it be?

13. What was Forest-PLUS's biggest achievement?

14. Can you think of anyone else who might be able to provide information that would be useful for this evaluation?

(FGD-1) FOCUS GROUP DISCUSSION GUIDE for Committee and NGO Staff

DATE OF FGD:

NAME OF FACILITATOR:

NAME OF NOTE TAKER:

STATE:

DISTRICT:

NAMES OF PARTICIPANTS: **(Attach sign-in sheet to notes).**

NUMBER OF WOMEN:

INTRODUCTION FOR FOCUS GROUP: Hello. My name is _____. I am part of a research team that is talking to people about the work of USAID's Forest-PLUS project. Our team is conducting an evaluation of this project. Thank you for meeting with me to talk about your experience with Forest-PLUS.

CONFIDENTIALITY: Everything we discuss is confidential. We do not share your name or anything that can be used to identify you with anyone outside of our evaluation team. We do not share information you provide with other people we are talking to for this evaluation. Although our internal report to USAID will include a list of everyone that we interviewed, the public version of the report does not include this list. Whatever you share with us will not have any impact at all on the level of support you receive now or are eligible to receive in the future.

STRUCTURE: As part of this discussion, I will ask you about seven questions about your committee's work/ organization's program and my co-worker will take notes. It is important to give everyone an opportunity to speak about her/his experience, so I will do my best to be sure everyone has a chance to participate.

Do you have any questions before we begin?

1. Let's all introduce ourselves. Tell us what your committee/organization does and what Forest-PLUS activities you participated in.

2. What were the tools & techniques that Forest-PLUS introduced? What methods were taught and trainings done under Forest Plus?

STATE	PROBE
Sikkim	# Bio- Briquette Promotion - Village level training and demonstrations # Communication Campaign - Monks for Climate # Support for mitigation of Human Wildlife conflict - Insurance - Measures to mitigate crop damage from wildlife # Creation of State level wise REL/ REL
Himachal Pradesh	# Direct Sowing of Oak Acorns - Collection and grading OR Plantation of Oak or Bauhinia - Demonstration plots in three forest divisions under different geo-climatic conditions (Change due to this). # Pilot Testing of agro-Silviculture Models: - Increasing cover of native species of grasses - Live fencing and grass cutting - Social Fencing # Promotion of Stall feeding using Silage # Promotion of Solar Heating structures # Sustainable Management, Value addition and marketing of five NTFPs, namely, Nagchatri, Karoo, Chora, Patish, Satuwa # Mushroom Cultivation # Integrated Forest Management Tool
Karnataka	Sustainable Harvesting Techniques for NTFPs - Techniques for sustainable harvesting of three major NTFPs (Cinnamon, Sapindus, and Ailanthus) - Existing value chains, Alternative Value Chain, nursery propagation technique Landscape Pilot Demonstrations: - Consultation on driers with the different stakeholders - Demonstration driers? Exposure to communication material on improved driers?

STATE	PROBE
	▪ Reduce fuel wood consumption for the processing of <i>Garcinia</i>? ▪ Demo on alternative sources of fodder (adapting areca palm leaves as alternative sources of fodder)
Madhya Pradesh	– Tools a. Forest Data Management System b. mForest (mobile application) – Technique a. Multi species' [Teak, Bamboo, Aonla, Papaya, Kalmegh] plantation b. River-side plantation – Training a. Training on Climate change awareness, Forest Carbon Inventory, Ecosystem Approach to Forest Management (EAFM) b. Sustainable harvesting techniques for Non-timber forest products c. Van Doots Orientation Workshop (May, 2016)
PROBE IN ALL STATES	
– How were you identified and selected by Forest plus? – Can you share with us how these trainings were conducted? Was every participant trained on the same methods or techniques? Why/Why not? – Were any tools shared with you for implementing these techniques/methods/trainings? If yes – which ones and why? – Were there any sessions/details shared with you by the Forest plus team on how to disseminate trainings to community members? If yes, what was covered during the same?	

3. How has your committee/organization used the tool, technique, method, training that Forest-PLUS introduced?

Probes:

- Same table as Q2
 - Were there any follow-ups conducted by the Forest plus team regarding your application of and trainings to community members on the tools/techniques/methods and trainings introduced by Forest plus? If yes, how was this done and what was the frequency of these follow-ups?
4. How did you share this information (pertaining to tools/techniques/methods and trainings you were introduced to by Forest plus) with your community members?

- *How did you select the beneficiaries to train/share this information with? Was this selection criteria defined by Forest plus or you?*
- *Did you train/share this information with the same set of community members for different methods or techniques? Why/Why not?*
- *Were you able to share any tools with the community members for them to be able to implement these techniques/methods/trainings? If yes – which ones and why? If no – why not?*
- *Did you conduct any follow-ups with community members regarding their application of the tools/techniques/methods and trainings introduced by you? If yes, how was this done and what was the frequency of these follow-ups?*

5. What tools, techniques, or methods were particularly effective? Why?

Probe for all tools/techniques/methods mentioned as a response to Q3

6. What tools, techniques, or methods were least effective? Why?

Probe for all tools/techniques/methods mentioned as a response to Q3

7. What skills, tools, techniques, or methods do you still need in order to respond to climate change?

Probe for all tools/techniques/methods discussed mentioned as a response to Q3 well as new skills, tools, techniques and methods if any

8. **(For NGOs only)**

Have the Forest-PLUS materials, events and trainings affected your awareness of and perceptions towards climate change and deforestation? How and why/why not?

Ask them to visualize the implementation without the help of Forest-PLUS and then with the help of Forest-PLUS. Is there any difference?

9. Have you added or changed any of the support/services you provide to your members as a result of your participation in Forest-PLUS activities?
10. What would your recommendations be and if there was one change you could have made to the Forest-PLUS project, what would it be?
11. If this project was extended, what would you especially like to see as an activity? Why?
12. Do you have any additional recommendations for future activities that are in line with improving the environment or livelihoods of the village communities?

(FGD-2) FOCUS GROUP DISCUSSION GUIDE for Community Beneficiaries

DATE OF FGD:

NAME OF FACILITATOR:

NAME OF NOTE TAKER:

STATE:

DISTRICT:

NAMES OF PARTICIPANTS: **(Attach sign-in sheet to notes).**

MALE: ☐

FEMALE: ☐

INTRODUCTION FOR FOCUS GROUP: Hello. My name is _____. I am part of a research team that is talking to people about the work of USAID's Forest-PLUS project. Our team is conducting an evaluation of this project. Thank you for meeting with me to talk about your experience with Forest-PLUS.

CONFIDENTIALITY: Everything we discuss is confidential. We do not share your name or anything that can be used to identify you with anyone outside of our evaluation team. We do not share information you provide with other people we are talking to for this evaluation. Although our internal report to USAID will include a list of everyone that we interviewed, the public version of the report does not include this list. Whatever you share with us will not have any impact at all on the level of support you receive now or are eligible to receive in the future.

STRUCTURE: As part of this discussion, I will ask you about eight questions, about your experience with the Forest-PLUS project, and my co-worker will take notes. It is important to give everyone an opportunity to speak about her/his experience, so I will do my best to be sure everyone has a chance to participate.

Do you have any questions before we begin?

1. Let's all introduce ourselves. Tell us what the forest means to your family and your livelihood.

2. **(Female groups only)** Do men utilize the forest differently than you? How?

(Male groups only) Do women utilize the forest differently than you? How?

3. How did you hear about Forest-PLUS? Have you attended an event that they hosted? **What was it about? According to you, how has it benefitted your life? How has your home and land benefitted?**

STATE	PROBE
Sikkim	# Bio- Briquette Promotion - Village level training and demonstrations # Communication Campaign - Monks for Climate

STATE	PROBE
	# Support for mitigation of Human Wildlife conflict - Insurance - Measures to mitigate crop damage from wildlife # Creation of State level wise REL/ REL
Himachal Pradesh	# Direct Sowing of Oak Acorns - Collection and grading OR Plantation of Oak or Bauhinia - Demonstration plots in three forest divisions under different geo-climatic conditions (Change due to this). # Pilot Testing of agro-Silviculture Models: - Increasing cover of native species of grasses - Live fencing and grass cutting - Social Fencing # Promotion of Stall feeding using Silage # Promotion of Solar Heating structures # Sustainable Management, Value addition and marketing of five NTFPs, namely, Nagchatri, Karoo, Chora, Patish, Satuwa # Mushroom Cultivation # Integrated Forest Management Tool
Karnataka	Sustainable Harvesting Techniques for NTFPs - Techniques for sustainable harvesting of three major NTFPs (Cinnamon, Sapindus, and Ailanthus) - Existing value chains, Alternative Value Chain, nursery propagation technique Landscape Pilot Demonstrations: - Consultation on driers with the different stakeholders - Demonstration driers? Exposure to communication material on improved driers? - Reduce fuel wood consumption for the processing of Garcinia? - Demo on alternative sources of fodder (adapting areca palm leaves as alternative sources of fodder)

STATE	PROBE
Madhya Pradesh	Tools - Forest Data Management System - mForest (mobile application) Technique - Multi species' [Teak, Bamboo, Aonla, Papaya, Kalmegh] plantation - River-side plantation Training - Training on Climate change awareness, Forest Carbon Inventory, Ecosystem Approach to Forest Management (EAFM) - Sustainable harvesting techniques for Non-timber forest products - Van Doots Orientation Workshop (May, 2016)
PROBE IN ALL STATES	
- How were you selected to receive this training/information? - What topics/tools/methods did you receive training/information on? - How often were these sessions conducted? Did you attend all of these sessions? Why/Why not? - Were they on different methods or techniques? If yes, can you tell us about the sessions you attended? - Were any tools pertaining to the implementation of these techniques/methods/trainings shared with you? If yes – which ones and why? - Were any follow-ups conducted regarding the application of these tools/techniques/methods and trainings by you and your community members? If yes, how was this done and what was the frequency of these follow-ups?	

4. Did both men and women participate in the Forest-PLUS event you attended? Did you feel comfortable enough during the event to contribute?

PROBE

- Why do think more men/women attended the event?
- Who do you personally think it was more relevant for and why?
- According to you, who has gained more due to Forest Plus Programs: - Men or Women?

5. Are you more aware about climate change and deforestation because of the Forest-PLUS materials, events, and training?

Or

Has the Forest-PLUS materials, events and trainings affected your awareness of and perceptions towards climate change and deforestation? How and why/why not?

6. Do you do anything differently in your daily life or work because of what you learned or received from the Forest-PLUS project? Why or why not?

(ASK them to visualize the implementation without the help of Forest-PLUS and then with the help of Forest-PLUS. Is there any difference?)

7. What skills, tools, techniques, or methods do you still need in order to respond to climate change?
8. What could have been done better to suit your needs?
9. If this project was extended, what would you especially like to see as an activity? Why?
10. Do you have any additional recommendations for future activities that are in line with improving your environment or your livelihoods?

ONLINE SURVEY for GOI Training Beneficiaries

Thank you for participating in this online survey as part of the USAID evaluation of the Forest-PLUS project. The results of this survey will assist USAID to better support programs working with forestry sector.

1. Are you male or female? Choose 1.

Male: ☐

Female: ☐

2. What state do you live in? Choose 1.

Himachal Pradesh ☐

Karnataka ☐

Madhya Pradesh ☐

Sikkim ☐

Other ☐ Specify which: _____

3. About how long have you been involved with the Forest-PLUS project? Please choose the answer that is closest to your length of involvement.

5 years ☐

4 years ☐

3 years ☐

2 years ☐

1 year ☐

Never ☐

4. How many Forest-PLUS training courses have you taken?

5. Which institutes provided the courses? Please check all applicable boxes.

Indian Council of Forestry Research and Education (ICFRE) ☐

Indian Institute of Forest Management ☐

Directorate of Forest Education ☐

Kuvempu University ☐

Indian Institute of Science ☐

Forestry Training Institute ☐

State Institute for Rural Development ☐

Other ☐

Specify which: _____

6. Overall, how good were the course materials?

- Very well explained ☐
- Well explained ☐
- Adequate ☐
- Some sections not explained well ☐
- Not explained at all ☐
- Don't know ☐

7. Do you think that the course(s) is/are relevant to your job? Please choose the answer that best describes your feeling of all the courses together.

- Very relevant ☐
- Relevant ☐
- Adequately ☐
- Minimally ☐
- Not at all ☐
- Don't know ☐

8. How effective was/were the instructor(s) in presenting the materials and answering questions? Please choose the response that best describes your general feeling of all the instructors.

- Very effective ☐
- Effective ☐
- Adequate ☐
- Minimally ☐
- Not at all ☐

Course was provided online with no instructor ☐

9. Are you doing anything differently in your job based on what you learned in the course?

- Completely differently ☐
- Many tasks differently ☐
- A few tasks differently ☐
- Little change ☐
- Not at all ☐
- Don't know ☐

10. Do you think these courses are an important step towards long-term carbon sequestration and reduced GHG emissions from forests and landscapes in India?

- Very important ☐
- Important ☐
- Somewhat important ☐
- Minimally important ☐
- Not at all ☐
- Don't know ☐

DIRECT OBSERVATION CHECKLIST of Tools, Techniques or Methods Deployed in a Community

DATE OF INTERVIEW:

NAME OF INTERVIEWER:

STATE:

SITE OBSERVED:

1) Tool, technique, method:		
2) Who demonstrated the tool, technique, or method?		Interviewer ☐ Respondent ☐
3) Describe tool, technique, method.		
4) Respondent understands how to properly use:		Very much ☐ Quite a bit ☐ Adequately ☐ Minimally ☐ Not at all ☐
5) Tool, technique, method is appropriate for intended purpose		Very much ☐ Quite a bit ☐ Adequately ☐ Minimally ☐ Not at all ☐
Explanation or reasons for scores:		

ANNEX E: DOCUMENTS REVIEWED

No.	Title	Date
Forest-PLUS Technical and Policy		
1.	Strengthening Community Institutions for Sustainable Forests and Livelihoods: Action-learning Pilot Program in Rampur Landscape	Oct 2017
2.	Community-based Institutional Arrangements for Human-Wildlife Conflict Mitigation: Action-learning Pilot Program in Sikkim Landscape	Oct 2017
3.	Promoting Trees Outside Forests: Action-learning Pilot Program in Hoshangabad Landscape	Oct 2017
4.	Under-planting Native Tree Species in Karnataka's <i>Acacia auriculiformis</i> Stands	Oct 2017
5.	Techniques for Grazing Management: A Demonstration in Shivamogga Landscape, Karnataka	Sept 2017
6.	Technique for Grazing Management: A Pilot Demonstration in Hoshangabad Landscape, Madhya Pradesh	Sept 2017
7.	Structure and Composition as Targets for Uneven-aged Restoration Silviculture	Sept 2017
8.	Community-based Institutional Arrangements for Human-Wildlife Conflict Mitigation: A Management Strategy based on Lessons Learned from Sikkim Landscape	Sept 2017
9.	Sustainable Management of Non-Timber Forest Products Through Community Institutions: Action-learning Pilot Program in Shivamogga Landscape	Sept 2017
10.	Sustainable Management of Non-Timber Forest Products Through Community Institutions: A Management Strategy based on Lessons Learned from Shivamogga Landscape, Karnataka	Sept 2017
11.	Community-based Low-cost Assisted Natural Regeneration: A Management Strategy based on Lessons Learned from Rampur Landscape, Himachal Pradesh	Sept 2017
12.	Mobilizing Financial Resources for Tree Plantations: A Management Strategy based on Lessons Learned from Hoshangabad Landscape, Madhya Pradesh	Sept 2017
13.	A Report on Multifaceted Programs in the Forest-PLUS Landscapes	Sept 2017
14.	Direct Seeding Techniques for Oak and Horse Chestnut in Himachal Pradesh, India	Aug 2017
15.	Integrated Forest Management Toolbox	Aug 2017
16.	Sub-national Jurisdictional REDD+ Program for Sikkim, India	June 2017

No.	Title	Date
17.	Potential Opportunities for Communities to Benefit from Sustainable Forest Management, with Particular Emphasis on Benefits from the Economic Value of NTFPs, such as Through the Development of New Value Chains	Dec 2016
18.	Improved Grazing Management Techniques for Rampur Landscape	Sept 2016
19.	Inputs for India's Forest Sector Policy Reforms to Promote Climate Change Mitigation	Sept 2016
20.	Innovative Technologies for Sustainable Development & Management of Forests in Shivamogga, Karnataka	July 2016
21.	Sustainable Forest Ecosystem Management: A Strategy for India	May 2016
22.	"Wood is Good" - Policy Change Recommendation to Address Climate Change	Sept 2015
Forest-PLUS Training Communications and Awareness		
23.	Communicating Forest, Climate Change and REDD+: Report of Forest-PLUS Outreach, Communication and Education Programs	Sept 2017
24.	Consolidated Report of Training Programs Conducted on Community-Based Forest Carbon Measurement and Carbon Monitoring in Forest-PLUS Landscapes	Sept 2017
25.	Hands-On Training Programs	Aug 2017
26.	Report of Training Program on Climate Change, Greenhouse Gas Inventories, Vulnerability, Mitigation and Adaptation	Aug 2017
27.	Consolidated Report of Training Program on Ecosystem Approach to Forest Management in Forest-PLUS Landscapes	June 2017
28.	Resource Material for Training on Global Climate Change, Greenhouse Gas Inventories, Vulnerability, Mitigation and Adaptation	April 2017
29.	Resource Material for an Ecosystem Approach to Forest Management in India	April 2017
30.	Resource Material for Training of Trainers on Forest Carbon Measurement, including Community-Based Carbon Measurement	April 2017
31.	Training Manual, Remote Sensing Models for Measuring and Mapping Forest Carbon with Optical Data	April 2017
32.	Training Manual for the SAR Technical Protocol for Forest Monitoring	Mar 2017

No.	Title	Date
33.	SAR Technical Protocol for Forest Monitoring	Jan 2017
34.	Training Reference Manual for Sustainable Management of Non-Timber Forest Products in Shivamogga	Sept 2016
35.	Training Manual for Sustainable Management of Non-Timber Forest Products in Himachal Pradesh Landscape	Sept 2016
36.	Report on the SIGN GREEN Campaign (Jan 30 - Feb 03, 2014), New Delhi	Feb 2014
37.	Sustainable Harvesting Techniques for NTFPs of Hoshangabad Landscape	Dec 2013
38.	Partnership for Land Use Science (Forest-PLUS), USAID, information brochure	July 2013
Forest-PLUS M&E, Quarterly and Annual Progress		
39.	Annual Report, October 1 2016 – September 30 2017	Oct 2017
40.	Quarterly Report, April 1 – June 30, 2017	July 2017
41.	Quarterly Report, January 1 – March 31, 2017	April 2017
42.	Performance Monitoring Plan (PMP), updated from 2015	Jan 2017
43.	Quarterly Report, October 1 – December 31, 2016	Jan 2017
44.	Annual Report, October 1, 2015 – September 30, 2016	Oct 2016
45.	Quarterly Report, April 1 – June 30, 2016	July 2016
46.	Quarterly Report, January 1 – March 31, 2016	April 2016
47.	Quarterly Report, October 1 – December 31, 2015	Jan 2016
48.	Performance Monitoring Plan (PMP)	Dec 2015
49.	Annual Report October 1, 2014 – September 30, 2015	Oct 2015
50.	Quarterly Report, April 1 – June 30, 2015	July 2015
51.	Quarterly Report, January 1 – March 31, 2015	April 2015
52.	Quarterly Report, October 1 – December 31, 2014	Jan 2015
53.	Annual Report, October 1, 2013 – September 20, 2014	Oct 2014

No.	Title	Date
54.	Quarterly Report, April 1 – June 30, 2014	July 2014
55.	Quarterly Report, January 1 – March 31, 2014	April 2014
56.	Quarterly Report, October 1 – December 31, Q1/2014	Jan 2014
57.	Annual Progress Report, October 1, 2012 – September 30, 2013	Oct 2013
58.	Quarterly Report, April 1 – June 30, Q3/2013	July 2013
59.	Quarterly Report, January 1 – March 31, Q2/2013	April 2013
60.	Quarterly Report, October 1 – December 31, Q1/2013	Jan 2013
61.	Quarterly Report, August 1 – September 30, Q4/2012	Oct 2012
Forest-PLUS Success Stories		
62.	Forest-PLUS Accomplishments: Scalable Approaches for the Future of India's Forests	Sept 2017
63.	Forest-Plus Tools and Methods, Achievements to Date	May 2017
64.	Innovation for Forest Management in India	N/A
65.	Fuel Saving Technologies Improve the Health of People and Forests	N/A
66.	Restoring Oak Forests in the Western Himalayas	N/A
67.	Forest-PLUS Tools and Approaches for Improved Forest Management	N/A
68.	Innovative Tools to Manage Healthy Indian Forests	N/A
69.	Forests are Life	N/A
70.	Innovations in the <i>Mahua</i> Flower Value Chain, Madhya Pradesh	N/A
71.	Partnering to Plant More Trees	N/A
Other Relevant Documents		
72.	Social Impact's Technical Proposal SOL-386-17-000006: Evaluation of the Forest PLUS Program, USAID/India	July 2017
73.	USAID/India: Request for Task Order Proposal (RFTOP) No. SOL-386-17-000006 for Final Performance Evaluation of Partnership for Land Use Science (Forest-PLUS) Technical Assistance Program under IDIQ # AID-486-I-14-00001	June 2017

No.	Title	Date
74.	Develop Tools, Techniques and Methods for REDD+ Forest Management in India, Forest Research Institute, Dehradun, Uttarakhand	2017
75.	Final Report: Presenting baseline biophysical conditions measured and mapped for each of the Forest Type Groups in the Himachal Pradesh, Sikkim and Madhya Pradesh Forest-PLUS landscapes, Forest Research Institute (Indian Council of Forestry Research and Education), Dehradun, Uttarakhand	2017
76.	Status Report: Presenting baseline total and individual forest resource productivity of commercially important NTFPs measured and mapped for each of the Forest Type Groups in the Himachal Pradesh, Sikkim and Madhya Pradesh Forest-PLUS landscapes, Forest Research Institute (Indian Council of Forestry Research and Education), Dehradun, Uttarakhand	2017
77.	AFOLU Carbon Calculator Project Report, Himachal Pradesh (Submitted by: Atri Shaw), USAID reporting	Oct 2016
78.	USAID Evaluation Policy: "Evaluation: Learning from Experience" (updated from January 2011)	Oct 2016
79.	USAID – Integrating Biodiversity and Climate Change Adaptation in Activity Design	July 2015
80.	Forest-PLUS Contract # AID-386-C-12-00002(fe) between USAID/India and Tetra Tech ARD	July 2012
81.	USAID/India Country Development Cooperation Strategy 2012 -2016	2012

ANNEX F: SCHEDULE OF PERSONS INTERVIEWED**Key Informant Interviews (KIIs)**

No.	Date	Location	Name	Position
Madhya Pradesh				
1	30.10.17	Bhopal	Dr. Bhaskar Sinha	Director, IIFM
2	30.10.17	Bhopal	Anurang Srivastara	APCCC IT, MPFD
3	30.10.17	Bhopal	Neeraj Shrivastara	MP Program Officer, Inspire Network for Conservation
4	31.10.17	Hoshangabad	Vijay Singh	DFO, MPFD, Harda / Hoshangabad
5	31.10.17	Hoshangabad	Avinash Lavania	District Collector Hoshangabad
6	31.10.17	Hoshangabad	Saurabh Tiwari	JNR Coordinator, IORA Ecological Solutions
7	1.11.17	Bhopal	Sudhir Kumar	APCCF, MPFD
Dehradun, Uttarakhand				
8	3.11.17	Dehradun	Prakash Lakhchaura	Director, Forest Survey of India (FSI)
9	3.11.17	Dehradun	Rajesh Kumar	Director, Forest Inventory Unit, FSI and Deputy Director-General (??)
10	3.11.17	Dehradun	Dr. Savita and colleagues:	Director, Forest Research Institute (FRI) and Vice-Chancellor FRI Univ.
			Dr. Neelu Gera	DDG Education, ICFRE
			Dr. S. D. Sharma	Head, Silviculture & Forest Management Division, FRI
			Dr. Manisha Thapliyal	Silviculture & Forest Management Division, FRI
			Vishwajeet Sharma	Silviculture & Forest Management Division, FRI
Himachal Pradesh				
11	6.11.17	Rampur (Sarahan)	Dr. Lal Singh	Director, HRC
12	7.11.17	Rampur (Doi)	Narendra Palsara	Forest-PLUS volunteer, resident of Doi village
			Mrs. Nirmal Devi	President, JFMC, Doi
13	7.11.17	Rampur	Ashok Negi	DFO - HQ & Ani, FD HP
			Hardev Singh	Deputy Project Director, JICA, Rampur, FD HP
14	8.11.17	Shimla	A.F.S. Reddy & colleagues:	APCCF (IT/MIS/GIS) FD HP

No.	Date	Location	Name	Position
			Alok Prem Nagar	CCF (Project Formulation) FD HP
			Rajaneesh Kumar	Senior Scientific Officer, GIS Lab FD
			Prashant Gautam	GIS Expert, DFO GIS/IT
			Sheetal Sharma	Staff, DFO GIS/IT
15	8.11.17	Shimla	Dr. Sanjeeva Pandey	PCCF, FD HP
			Alok Prem Nagar	CCF (Project Formulation) FD HP
16	9.11.17	Shimla	Dr. Joachim Gratzfeld	GIZ project, Himachal Pradesh
Karnataka				
17	30.10.17	Bengaluru	Dr. Jaganath Rao	Associate Professor, Institute for Transdisciplinary Health, Science, and Technology
18	30.10.17	Bengaluru	Smita Bijjur	Chief Conservator of Forests (Evaluation), Department of Forest, Government of Karnataka
19	30.10.17	Bengaluru	Brijesh Kumar	Additional Principal Chief Conservator of Forests, Department of Forest, Government of Karnataka
20	30.10.17	Bengaluru	Sanjai Mohan	Additional Principal Chief Conservator of Forests (Research & Utilisation) and in charge of Karnataka Medicinal Board, Department of Forest, Government of Karnataka
21	30.10.17	Bengaluru	Dr. K. N. Murthy	Additional Principal Chief Conservator of Forests, Department of Forest, Government of Karnataka
22	31.10.17	Tumkur	Poshini Naik	Formerly Community Outreach/Communications Specialist, Forest-PLUS, Tetra Tech
Sikkim				
23	07.11.17	Gangtok	Thomas Chandy	PCCF cum Secretary, Sikkim Department of Forest
24	07.11.17	Gangtok	C.S. Rao	Chief Conservator of Forests and REDD+ cell member; Department of Forest, Government of Sikkim
25	07.11.17	Gangtok	Nischal Gautam	DFO for WP and REDD+ cell member; Department of Forest, Government of Sikkim

No.	Date	Location	Name	Position
26	07.11.17	Gangtok	Bhumika Rai	ECF for WP and REDD+ cell member; Department of Forest, Government of Sikkim
27	07.11.17	Gangtok	Tshering Pintso Bhutia	DFO for Administration, Sikkim Biodiversity Conservation & Forest Management Project (SBFP); WP and REDD+ cell member; Department of Forest, Government of Sikkim
28	08.11.17	Gangtok	Anjana Lama,	General Manager, National Bank for Agriculture and Rural Development (NABARD)
29	08.11.17	Gangtok	P. Jayakannan	Deputy General Manager, NABARD
30	08.11.17	Gangtok	Bhama Deuri	Manager, NABARD
31	10.11.17	Gangtok	Basant Sharma	Formerly Regional Community Outreach/ Communications Specialist for Forest-PLUS, Tetra Tech
Delhi / New Delhi				
32	14.11.17	Delhi	Benjamin Caldwell	CoP, Forest-PLUS, Tetra Tech
33	14.11.17	Delhi	Ashish Raj	M&E Specialist, Forest-PLUS, Tetra Tech
34	14.11.17	Delhi	Chhaya Bhanti	Founder and Creative Director, Vertiver
35	7.12.17	Delhi	Dr. Rekha Pai	Former Inspector General of Forests, MOEF&CC

ANNEX G: FOREST-PLUS INITIATIVE SUCCESS STORIES

Forest-PLUS initiative in Sikkim: Community Managed Cardamom Drying Station



Traditional dryer

Improved dryer

Large cardamom is a major cash crop of the people of Dalapchan in Sikkim with about 3850 metric tons produced annually by approximately 17,000 holdings. Natural drying of cardamom is not possible due to time, space, and availability of sunlight, so a primitive method of curing (called *bhatti*) was used. This produced poor-quality dry cardamom, and the process was very inefficient as it required a huge amount of firewood. As one community member noted, “*The traditional smoke-drying kiln needs a lot of firewood, which is not possible to operate nowadays due to the prohibition on entering the forests areas, which are now protected as conservation areas.*”

As part of its climate change adaptation project, Forest-PLUS introduced a more efficient dryer in 2016, which needs less firewood than the traditional dryer. The villagers were neither aware of this new dryer nor had they seen this technology before. Forest-PLUS provided the wood combustor and 42,000 rupees to construct the drying station. Communities contributed their labor and are now using the new dryers for their cardamom. It consumes only 10% of the firewood needed by traditional dryers, and the quality of the product is better. The capacity of the new dryers is enough to support five families who reside nearby the kiln.

Forest-PLUS initiative in Sikkim: Environmentally Friendly Bio-briquettes as a Good Source of Income



Mrs. Shanti Maya Rai of Sikkim is a master trainer of bio-briquette making and a bio-briquette entrepreneur. She started making bio-briquettes in 2015 after receiving training from Forest-PLUS. She received a mold and a stove to produce the bio-briquettes and immediately started producing them and selling them in the village. As raw material, Shanti uses local agricultural waste to make coal dust and mixes it with soil to make the product. It doesn't produce smoke when burned, so it is environmentally healthy, she says. Initially, her business was small, and she sold her products in the nearby villages only. Now, Shanti has linked up with Sikkim Integrated Marketing Corporation to market her products outside of the state to increase demand. She earns roughly 20,000 rupees annually by selling the bio-briquettes, which is extra income for her. Additionally, as a master trainer, she also receives recognition within her community, and she earns additional fees as a resource person, adding further to her livelihood. She is very happy about the income, but more importantly, she feels proud to be a master trainer and to be able to serve her village by providing this low carbon emission technology. She says that, "With this small action, I feel that I am contributing to reducing carbon emissions to make our planet green and safe for our families. In doing so, my economic and social status has also been changed."

Forest-PLUS initiative in Andagadodur, India for sustainable harvesting makes breadwinners out of the women in the community.



“Before Forest-PLUS, we mostly stayed indoors,” said Ms. Girijamma of Andagadodur, Karnataka, India.

The Forest-PLUS project worked closely with the VFC and both male and female community members of Andagadodur from 2016 through 2017 on sustainable harvesting of non-timber forest products readily available in the area. One of the most abundant products growing in the forests of Andagadodur is *Garcinia gummigutta*, which was traditionally marketed in the form of dry rinds. Forest-PLUS provided training and supplies to encourage sustainable harvesting practices, reduce the amount of fuelwood used in processing Garcinia, and increase the value of the product in the marketplace. One group of women, including Ms. Girijamma, was trained on how to extract juice from Garcinia and process it into vinegar. “We didn’t realize the value of *Garcinia gummigutta* before, but now we know the commercial worth of this fruit. For the first time, I am directly generating income for my family. Because of this, I have started taking part in decisions for my family. I now stand shoulder to shoulder with the men in the village.”

As part of promoting an ecosystem approach to forest management in Andagadodur, Forest-PLUS gave women in the community more authority for decision making within their families and communities.