2023 CLA CASE COMPETITION

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Case Title:

IT-based Forest Inventory Tool Strengthens Forest Planning in India

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Summary:

USAID's Forest-PLUS 2.0 program supports India's Ministry of Environment, Forest and Climate Change (MoEFCC) to strengthen forest management through development of decision-support tools for forest landscapes. A key objective of the Forest-PLUS 2.0 contract was to refine several information tools developed under the initial Forest-PLUS program to support data collection and development of Working Plans to set forest management objectives with State Forest Departments (SFD) in the program's three target landscapes. Using a Collaborating, Learning, and Adapting (CLA) approach, Forest-PLUS 2.0 engaged MoEFCC and the SFDs to reassess their needs for applications that support forest management, carried out a collaborative inception phase review of program activities, and worked closely with USAID to identify contract modifications required to support the new direction. With support from USAID and the Government of India, Forest-PLUS 2.0 applied adaptive management to reshape its technology tools, which are now being used to support forest inventory and analysis in 118 divisions across six states of India covering nearly 4 million hectares.

1. **WHAT: What is the general context in which the case takes place? What organizational or development challenge(s) or opportunities prompted you to collaborate, learn, and/or adapt?**

Among the key objectives of the Forest-PLUS 2.0 program, which launched in 2018, was the refinement of two data collection tools developed under the initial Forest-PLUS program implemented from 2012 – 2017. These tools, mForest and the Integrated Forest Management Toolkit (IFMT), were designed to support data collection and inform development of Working Plans working collaboratively with State Forest Departments. A legal requirement prescribed by the 2014 National Working Plan Code, Working Plans are a critical tool prepared every 10 years in each forest division, setting out the vision for managing India's forests which total 71.22 million hectares. A major objective of USAID's collaboration with the Government of India through both Forest-PLUS programs is therefore ensuring that these Working Plans incorporate a full range of economic, social, ecological, and cultural values to sustain healthy forests for future generations.
As Forest-PLUS 2.0 kicked off its initial consultations with MoEFCC, partners in selected landscapes, and USAID in early 2019, stakeholders shared that the mForest and IFMT tools did not support all of the functions needed to ensure comprehensive data collection, a prerequisite for ensuring robust and implementable Working Plans. They also expressed an interest in having a single, consolidated data collection tool that would better meet the requirements of their data collection and planning process. For example, they requested better alignment the technologies to facilitate additional data collection on ecosystem services, and more functionality for georeferencing and mapping. These discussions prompted internal analysis, critical discussions with USAID regarding contract requirements, and development of a new vision for an integrated tool that met the needs of the State Forest Department staff and a process to pilot, test, and refine collaboratively.

2. **What two CLA Sub-Components are most clearly reflected in your case?**

Adaptive Management

External Collaboration

3. **HOW: What steps did you take to apply CLA approaches to address the challenge or opportunity described above?**

Collaborative multi-stakeholder reflection sessions firmly established the need for a directional shift to develop an integrated tool for data collection and forest inventory in Working Plans. Creating opportunities for exchange and listening to Government of India partners ensured that Forest-PLUS 2.0's technological solutions were well adapted to their needs and mandates. Furthermore, USAID's participation in discussions with the government, as well as openness to review contract requirements, provided the flexibility needed to adapt the initial vision.

The shift to a single, integrated tool presented an operational challenge both in terms of contract requirements and management of the two subcontractors engaged in creating mForest and the IFMT. USAID and MoEFCC authorized the Forest-PLUS 2.0 team to proceed with the development of the integrated tool, which was named the Van system after the Hindi term for forest. Forest-PLUS 2.0 finalized the design for the integrated tool in close consultation with MoEFCC and SFDs to address all the data requirements of a Working Plan. To determine the foundation for the new system, Forest-PLUS 2.0 conducted an assessment of the two tools with its subcontractors and external expertise to ensure an objective analysis. The assessment determined that IFMT was more user-friendly, intuitive, and had better integration between the mobile app and the web platform for data analysis and report generation. All stakeholders, including USAID, agreed that mForest's functionalities should be added to IFMT. Since IFMT and mForest were separate deliverables in the Forest-PLUS 2.0 contract, the shift in vision required a contract modification. This merger was promptly approved by USAID responding to the collective consensus for a single comprehensive tool.

As Forest-PLUS 2.0 and its partners developed the Van system, next steps required working collaboratively with State Forest Departments in the project's three target landscapes – Kerala, Telangana, and Bihar – to collect data and provide feedback on the tool. The piloting process facilitated continuous hands-on learning, allowing for improvements to the tool and ensuring compliance with the Government of India's National Working Plan Code. The project established Institutional mechanisms to streamline inputs from the landscapes to the tool development team and Van system training sessions were conducted for the forest departments. Through an iterative process of training, field support to data collection, and integrating feedback into the tool design and development, forest officers found that the Van system reduces data collection time for Working Plan field data collection from over a year down to 2-3 months. This time and cost savings allows State Forest Departments to collect and analyze data more rapidly, make management decisions enshrined in the Working Plans, and put more of their focus on management rather than planning.

4. RESULTS: Choose one of the following questions to answer.

We know you may have answers in mind for both questions; However please choose one to highlight as part of this case story

A. DEVELOPM ENT RESULTS

Using an iterative approach to coordinate closely with Government of India partners, adapt to meet updated needs to support their forest management objectives, and learn continuously through pilot testing, Forest-PLUS 2.0 produced a functional, cost-efficient, and time-saving tool for the State Forest Departments. Based on the success of piloting the Van system in three divisions of the program's target landscapes, Forest-PLUS 2.0 began scaling its training and tools to additional divisions at the request of its State Forest Department colleagues. Building on the initial pilot in three divisions, the Van system is now deployed in 118 forest divisions across six states of India, covering an area of over 4 million hectares of forest. Forest-PLUS 2.0 has also trained over 5000 frontline forest staff across India, through direct training and technical assistance as well as facilitating exchange between forest officers in different divisions and states.

The process of adaptive management, pause and reflect sessions, continuous learning and improvement, and close collaboration amongst the stakeholders contributed to Van system's universal acceptance across the SFDs. Its use has also made the development of Working Plans a more consultative and participatory process, resulting in greater ownership of the plan amongst the forestry staff at different levels. Shorter duration for data collection and geo-tagged sample plots have also facilitated the security of female frontline staff in active data collection in remote forest areas. The success of the Van system also influenced MoEFCC to include suggestions for application-based data collection in the new proposed National Working Plan Code, and the program is under discussions regarding a national launch and housing of the system. These efforts will support long-term institutionalization of the Forest-PLUS 2.0 program's investment in the Van system.

5. **ENABLING CONDITIONS: How have enabling conditions - resources (time/money/staff), organizational culture, or business/work processes - influenced your results? How would you advise others to navigate any challenges you may have faced?**

Key challenges to designing an updated, effective solution to support Working Plan development included the existing contract requirements to refine both the mForest and IFMT tools, and existing agreements with multiple partners for their development. Rigorous analysis of how each tool met the needs of the State Forest Departments informed the process of dialogue with all relevant stakeholders to define a path forward.

Strong partnerships were also a key enabler for allowing the change in direction to redesign the technology tools developed under Forest-PLUS to deliver a solution that fully meets the needs of the program's government partners. Institutional mechanisms including a Program Advisory and Steering Committees to collaborate with MoEFCC and State Forest Departments enabled quick decision-making and ensured that the learning is documented, solutions are worked out together, and joint ownership is developed. Close coordination with USAID/India to discuss challenges openly also supported the process by ensuring support to quickly modify the deliverable requirements to ensure alignment of contract terms with implementation needs.