

India

FY2020 Ex-Post Evaluation Report of
Japanese ODA Loan

“Capacity Development for Forest Management and Personnel Training Project”

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0. Summary

The Project was implemented to improve the training environment for forest frontline staff (field staff) through the rehabilitation of State Forest Training Institutes (SFTIs) and the capacity development of frontline forestry staff with an emphasis on Joint Forest Management (JFM), thereby strengthening human resource development for sustainable forest management. Aiming for sustainable forest management since the 1990s, the role expected of forest frontline staff in various States in India has shifted from exclusive manager to those working with local communities. To establish and provide a training system in line with such transformation, it was necessary to develop the capacity of field staff by rehabilitating the training facilities dilapidated due to the State government’s budget shortage.

From the time of the Project appraisal to the ex-post evaluation, sustainable forest management is given priority in India’s policy and development goals. At the same time, there are development needs such as clearing the past backlog of training programs and introduction of new technologies and approaches even at the time of the ex-post evaluation. The Project was consistent with Japan’s ODA policy at the time of the Project appraisal as well. Moreover, capacity development of master trainers, trainers, and field staff were targeted through collaboration between the Japanese ODA Loan Project and a technical cooperation project (TCP) that was implemented with it. The Project is consistent with India’s development policy, development needs, and Japan’s ODA policy. Thus, the Project’s relevance is high. On the other hand, regarding the efficiency of the Project, the Project cost was within the plan, but the Project period was longer than the plan mainly because of delay in obtaining the Indian government’s approval at Project commencement, and thus judged to be fair. Regarding effectiveness, training courses at the target Central Academy for State Forest Service (CASFoS) and SFTIs are mostly conducted continuously, and the facilities are being used above the standard originally expected. Moreover, the number of training participants during the Project implementation was more than expected. Furthermore, considerations were given to female forest frontline staff in the Project; as a result of establishing female accommodation facilities, it became easier than before to have female forest staff. In terms of contribution to human resource development for sustainable forest management, which was the intended impact, it was not possible to confirm the direct effect of the Project. However, strengthened and improved relations between field staff and the communities were observed as a result of better communication skills among the field staff. Thus, future contribution to sustainable forest management is expected. With regard to impact on the natural environment and

resettlement and land acquisition, it was confirmed that most of the relevant institutions did not have issues. Objectives of the Project were mostly achieved, and thus, the Project's effectiveness and impact are high. From the sustainability point of view, many institutions reported shortage of manpower as regards to institutional aspect, but there are no issues in technical and financial aspects, as well as the status of operation and maintenance. Thus, the sustainability of Project effects is high.

In light of the above, the Project is evaluated to be highly satisfactory.

1. Project Description



Accommodation facility at SFTI
Jalukbari



Lecture at CASFoS Dehradun

1.1 Background

In the beginning of the 20th century, 40% of the land was forests in India. However, in 2005, India's forest coverage rate was 23.4%, lower than the world average of 30.3%. In India, many people including the poor depend on forests for such purposes as livestock feed, fuel, and income. Coupled with the population increase in recent years, the pressure on forests increased, degrading their conditions. In addition to reduced forest resources, the situation was causing shortage of agriculture and drinking water arising from the reduced water and soil retention capacity of forests, putting pressure on the poor whose lives depended on forests. This was resulting in the vicious cycle of burdening the forests. Moreover, as evidenced in India's high rate of degraded forests at 42.4% in 2003, the forests were unable to play their proper functions. Along with expanding the forest area, improving the quality of forests (reducing degraded forests) was an important issue in the Indian forestry sector.

Given these backgrounds, India has changed exclusive management of forest resources practiced until the 1990s to the introduction of JFM where communities dependent on forests cooperated with the forest department and managed government forests. JFM has been promoted as the pillar of forest conservation plans. Prior to 1990, the State Forest Departments managed forests without the involvement of local people in the name of environmental conservation. In this approach, no consideration was given to sustainable livelihood improvement of local people. With the promotion of JFM, roles required for the forest frontline staff of each State have changed

from managers to those working with local people. In addition, the staff have been expected to promote local people's active participation in forest conservation, and transfer skills and technologies needed for forest conservation. However, such changes were not sufficiently reflected on the training system and pedagogy for the field staff. Moreover, training schools located in 63 sites across India did not have full-fledged facilities for training for reasons such as lack of budget from the State government. Therefore, it was necessary to improve training contents and facilities to enhance the capacity of the forest frontline staff required for forest conservation knowledge and skills as well as for extension skills in promoting JFM.

1.2 Project Outline

The objective of this Project was to improve the training environment for forest frontline staff through the rehabilitation of SFTIs and the capacity development of the staff with an emphasis on JFM, thereby strengthening human resource development for sustainable forest management.

Loan Approved Amount / Disbursed Amount	5,241 million yen / 3,155 million yen
Exchange of Notes Date/ Loan Agreement Signing Date	October 2008 / November 2008
Terms and Conditions	Interest Rate 0.55% Repayment Period 40 years (Grace Period 10 years) Conditions for Procurement General untied
Borrower / Executing Agency	The President of India / Ministry of Environment, Forest & Climate Change (MoEF&CC) ¹
Project Completion	October 2018
Target Area	Ten States across India selected by the Executing Agency based on such criteria as the natural and social environments, effectiveness of the training, and spread of JFM ²
Main Contractor(s) (Over 1 billion yen)	-

¹ It was the Ministry of Environment and Forest at the time of the Project appraisal, but the name was changed after the Project started.

² The number of target States was changed to 13 after the Project started.

Main Consultant(s) (Over 100 million yen)	-
Related Studies (Feasibility Studies, etc.)	SAPROF for Capacity Development for Forest Management and Training of Personnel Project
Related Projects	<Technical cooperation>Project for Capacity Building of State Forest Training Institute and SFS Colleges (2009–2014) ³ <Japanese ODA Loan>Himachal Pradesh Forest Ecosystems Management and Livelihoods Improvement Project (2017), Uttarakhand Forest Resource Management Project (2014), West Bengal Forest and Biodiversity Conservation Project (2011), Tamil Nadu Biodiversity Conservation and Greening Project 2010), and more

2. Outline of the Evaluation Study

2.1 External Evaluator

Yumiko Onishi, IC Net Limited

2.2 Duration of Evaluation Study

This ex-post evaluation study was conducted with the following schedule.

Duration of the Study: October 2020–December 2021

Duration of the Field Study: April 1–30, 2021 and August 5–31, 2021⁴

2.3 Constraints during the Evaluation Study

Aside from MoEF&CC, the Executing Agency, the Project has 30 target institutions in total: four CASFoS and 26 SFTIs. For the questionnaire survey conducted in the ex-post evaluation, some of the institutions could not be contacted, and responses were received from all four CASFoS and 22 out of the 26 SFTIs. Interviews with the institutions were affected by the travel restrictions due to COVID-19. Two CASFoS were interviewed; one (Dehradun) was by telephone, and the other (Coimbatore) was interviewed by a local consultant visiting the site while the external evaluator joined the interview remotely. For SFTIs, the external evaluator and a local consultant visited Jalukbari while eight others (Betul, Walyar, Hijli, Dimapur, Sundarnagar, Chail,

³ Aiming at strengthening the forest training of the Indian government, the project was to improve and implement a course on training of trainers at CASFoS Deharadun, as well as to implement a master trainers' course for forest officers from the target States of the Japanese ODA Loan Project.

⁴ Mainly conducted by the local consultant. The field study was conducted intermittently during this period.

Shahapur, and Shivpuri) were visited by the local consultant while the external evaluator joined the interviews remotely (the interview with Dimapur was the only one in which the external evaluator did not join remotely). The external evaluator interviewed MoEF&CC in person.

As explained above, information could not be obtained from some of the institutions, and the ex-post evaluation was conducted, and drew its conclusions, on the basis of the information collected from about 80% of all the Project-related institutions, which was mostly obtained remotely.

3. Results of the Evaluation (Overall Rating: A⁵)

3.1 Relevance (Rating: ③⁶)

3.1.1 Consistency with the Development Plan of India

In the Eleventh Five Year Plan (April 2007–March 2021), which was the development plan of India at the time of the Project appraisal, emphasis was given to increasing the forest coverage rate by 5%, regenerating degraded forests, promoting JFM that involves forest fringe communities for sustainable forest management, and helping those dependent on forest resources gain alternative livelihood sources. The importance of these subjects did not change at the time of the ex-post evaluation. In addition, a 2018 draft of the revised National Forest Policy of 1988 points out that appropriate allocation of resources through human resource development is necessary for sustainable forest management to aim for a forest cover increase. The revised draft policy clearly mentions the need for training and skill upgrading of forest frontline staff. Furthermore, India's National Training Policy of 2012 points out the need to improve the quality of training through fostering master trainers by sector.

From the time of the Project appraisal to the ex-post evaluation, the policies and development targets of India's forestry sector have focused on increasing the forest area and covers as well as improving the quality of forests. Various policies in recent years explicitly state the need for human resource and capacity development. Thus, capacity development of forest frontline staff and human resource development for sustainable forest management targeted by the Project are consistent with the development policy of India.

3.1.2 Consistency with the Development Needs of India

As described in "1.1 Background," JFM has been the pillar of forest conservation plans in India since the 1990s. However, at the time of the Project appraisal, it was necessary to improve training contents and facilities for developing the capacity of field staff in the areas of knowledge and technologies required for forest conservation and extension skills for JFM promotion. Promoting JFM remained important at the time of the ex-post evaluation. In addition, there were needs for

⁵ A: Highly satisfactory, B: Satisfactory, C: Partially satisfactory, D: Unsatisfactory

⁶ ③: High, ②: Fair, ①: Low

regular recruitment of field staff and clearing the backlog of training field staff who could not attend the training for some reason or the other, as well as introducing new technologies and approaches. The Project partially resolved issues on capacity development of forest frontline staff, but the need for capacity development still remains. Therefore, the Project and the development needs of India are consistent at the time of both the Project appraisal and the ex-post evaluation.

The renovation and construction of training facilities through the Project enhanced the holding capacity at CASFoS and SFTIs. Because training guidelines and contents were made, it became possible to conduct training regularly and in the way that met demand, enabling many forest frontline staff in the target States to attend the training. Prior to the improvement of the training system and the renovation and construction of the facilities, some of the States had a backlog of training programs. However, since the completion of the Project, they have been able to clear the backlog. Moreover, many training institutions such as SFTI Arippa, Dimapur, and Pal opined that it was necessary to introduce new technologies and approaches for the frontline work, and develop the capacity of forest frontline staff in the future as well.⁷

3.1.3 Consistency with Japan's ODA Policy

The Country Assistance Strategy for India of May 2006 gave the utmost importance to poverty alleviation and addressing environmental problems, and, from the perspective of preventing soil degradation and erosion and improving livelihoods, clearly stated that the assistance to the forestry sector would be extended. Based on this, JICA set "support for responses to environmental and climate changes" as one of its core assistance areas. Furthermore, JICA was to support the prevention of soil degradation and deterioration in water and soil conservation functions by improving the extent and quality of forests through regenerating degraded forests for conserving natural resources and their sustainable use. Therefore, the Project was consistent with Japan's ODA policy at that time.

3.1.4 Appropriateness of the Project Plan and Approach

Project design

The Project targeted a number of States. In addition, as a means to contribute to capacity development of a larger number of forest frontline staff, it employed a cascading method of training that involved the training of master trainers, training of trainers⁸ (ToT), and training of the field staff by the instructors who underwent ToT. Particularly for the training of master trainers and ToT in the early stage, a synergy effect was expected from the TCP "Project for Capacity

⁷ Specifically, the institutions cited application of GIS technology and controlling crime against forest resources and wild animals.

⁸ Master trainers are personnel from Indian Forest Services who are candidates for trainers, recommended by the State Forest Department, and selected through the application process of the Project. Participants in ToT are State Forest Service personnel and have either attended a master trainers' course or ToT at CASFoS.

Building of State Forest Training Institute and SFS Colleges” to conduct master trainers’ training and help prepare training materials. The paces of implementing the Project (ODA Loan) and the TCP were not necessarily in tandem; however, the implementation of the TCP specifically focusing on training and capacity development of forest officers helped stakeholders understand the importance and concept of the training.

At the time of the Project appraisal, the central and State governments did not give much importance to human resource development in the Indian forestry sector. As a result, investment toward training facilities was limited. By establishing enabling conditions needed for conducting training through the renovation and upgrading of old facilities, the Project created an easier environment for forest officers to participate in training. Moreover, the interviews with CASFoS and SFTI officials and trainees during the ex-post evaluation revealed that the procurement of the latest equipment (such as computers and GPS) resulted in enhancing the forest frontline staff’s motivation to participate in training. By showing stakeholders the importance of capacity development in the forestry sector while enhancing the attractiveness of training through creating a proper environment, the Project provided an opportunity to revisit the importance of training.

Project implementation arrangement

Japanese ODA Loan projects in India had so far had State governments as Executing Agencies. However, in the Project, MoEF&CC, a central ministry, became the Executing Agency. Under MoEF&CC, several SFTIs engaged in the Project; thus, the Central Project Management Unit (CPMU) at MoEF&CC and the State Project Management Unit (SPMU) at the State level were established. For MoEF&CC, it was the first time to implement an ODA Loan project in this format. Nevertheless, no specific issues were found with regard to Project management. However, regarding the system for providing funds, it took time to finalize the mechanism for fund flow from MoEF&CC to target institutions after the Project started. Based on discussions among the Project-related institutions, it was decided to provide funds to SFTIs by first giving funds from CPMU to SPMU, and thereafter to the Territorial Division offices of the State Forest Department, before finally reaching SFTIs. At the time of the ex-post evaluation, officers from SFTIs and former SPMU members opined that there was no problem with this fund flow. On the other hand, in the fund flow used in the Project, the Project funds were allocated to subordinate organizations from the State Forest Department along with other budgets; in some cases, concerns were raised that the Project funds might be used temporarily for other activities. Given such concerns, MoEF&CC suggested that, for similar projects in the future, funds should preferably be provided from CPMU to SPMU, and then directly to SFTIs.

From the time of the Project appraisal to the ex-post evaluation, sustainable forest management in India was a priority in the country’s policy and development targets. In particular, JFM

promotion was called for; to achieve this objective, capacity development of personnel engaged in forest management was essential. In light of accelerating human resource development of forest frontline staff, dilapidated training facilities and shortage of funds in the State governments were issues at the time of the Project appraisal. At the time of the ex-post evaluation, there are still development needs such as clearing the backlog of past training programs and introduction of new technologies and approaches. The Project was consistent with Japan's ODA policy at the time of the Project appraisal as well. Furthermore, collaboration between the ODA Loan Project and the TCP is evaluated to be appropriate approach considering the scale and purpose of the Project, as well as the importance of capacity development in the forestry sector. Thus, the Project was highly relevant to India's development plan and development needs, as well as Japan's ODA policy. Therefore, its relevance is high.

3.2 Efficiency (Rating: ②)

3.2.1 Project Outputs

The scope of the Project was mostly implemented as planned. The Project targeted 13 States across India selected by MoEF&CC based on criteria such as the natural and social environments, effectiveness of the training, and extent of JFM promotion. According to the plan at the time of the appraisal, the Project targeted 10 States that did not have ongoing JICA-assisted projects; however, Sikkim was excluded based on the decision by the Project's Steering Committee because a new ODA Loan project was formulated in the State after the Project started.⁹ At the same time, because JICA and MoEF&CC had agreed that the targets for renovation and construction were 30 institutions, four States were added. Finally, 30 institutions in total including four CASFoS and 26 SFTIs were selected. Out of those, two SFTIs were newly constructed by the Project.

Prior to the renovation and construction of training facilities, MoEF&CC revised the *Guidelines for the Training of Foresters and Forest Guards Being Organised by the State Governments*. The guidelines, in addition to promoting training in line with JFM policy, clearly state allocating 10% of accommodation facilities to women, as consideration towards female forest staff whose number is increasing in recent years, and constructing female toilets in training and office buildings. Owing to such guidelines, in all the target institutions, female accommodation facilities were built, making it easier for female staff to participate in training than before. As in the cases of SFTI Walayar where it was earlier not possible to accept female staff, and other training institutions where female forest staff had to commute from off campus, it is now possible for them to stay on campus safely and participate in training sessions.

MoEF&CC prepared model syllabi and teaching notes reflecting the paradigm shift in the

⁹ Sikkim Biodiversity Conservation and Forest Management Project, L/A signed in March 2010.

forestry sector since the 1990s. For example, approaches that were mainstream before the introduction of JFM were changed from target- to process-oriented, from top-down decision making by the Forest Department to participatory decision-making with communities, and these approaches were included in the model syllabi and teaching notes. Moreover, training instructors had been mainly concerned with “what to teach,” but the Project had them replace this concept with “how to teach.” Based on the MoEF&CC guidelines, the target States revised their training guidelines, formulated and implemented training improvement plans such as facility renovation and construction plans for SFTIs, and prepared teaching materials by improving the training contents. Each State, by preparing its own teaching materials in accordance with MoEF&CC’s training guidelines and model syllabi and teaching notes, included contents that are unique to their State.¹⁰

As described earlier, synergy was expected between the projects by implementing the TCP and the Project simultaneously. This was envisaged through the TCP improving the training of Stateforest officials in CASFoS Dehradun, who would become instructors for forest frontline staff in the States, while helping to improve the training for field staff in SFTIs. In the TCP, training modules for ToT at CASFoS Dehradun were actually revised, and the modules were used for the training of forest officials who attended ToT from various States. For the outcome of ToT, please refer to “3.1.2 Qualitative Effects (Other Effects).” The TCP pointed out that the outcome of master trainers’ training and ToT should be monitored as well as the importance of institutionalizing such system. However, as described later, monitoring was not conducted in relation to the job performance of the participants after the training.



Hostel at SFTI Shahapur
(Before renovation)



Interior of the female hostel at SFTI
Chail (After renovation)

3.2.2 Project Inputs

(For details, refer to “Comparison of the Original and Actual Scope of the Project” at the end of the report)

¹⁰ For example, in Nagaland, topics such as State-specific forest policy and slash-and-burn shifting cultivation were added.

3.2.2.1 Project Cost

The total cost of the Project at the time of the Project appraisal was JPY 5,910 million (foreign currency JPY 196 million; and local currency JPY 5,714 million), and Japanese ODA Loan was JPY 5,241 million (all local currency). The actual Project cost was JPY 3,360 million and the ODA Loan portion was JPY 3,155 million. The main reason for the gap between the planned and actual Project costs is as follows: the foreign exchange rate was JPY 2.54 for INR 1.00 at the time of the Project appraisal, but the JPY appreciated owing to the fluctuation during the Project implementation, and the average rate became JPY 1.71 for INR 1.00, resulting in reducing the construction and renovation costs of the facilities. As a result, the total Project cost became 57% of the planned amount, and 60% regarding the ODA Loan alone.

3.2.2.2 Project Period

According to the plan at the time of the Project appraisal, the Project period was to be 5 years and 4 months (64 months) from the L/A signing until the completion of all scopes. JICA and MoEF&CC agreed at the time of the appraisal to obtain approval from the Cabinet Committee on Economic Affairs (CCEA), which was needed to start the Project before L/A was signed. However, obtaining CCEA approval took time because a general election was slated in 2009; the approval was not obtained until July 2009 and the commencement of the Project was delayed. Moreover, delays were caused by having the target States understand the Project concept after the Project's inception, and due to varying implementation capacities among the States. Moreover, as described in "3.1.4 Appropriateness of the Project Plan and Approach," it took time to finalize the Project fund flow mechanism from MoEF&CC to SPMU. In addition, the following factors were time-consuming: the Project budget was temporarily used for other activities because it was allocated with other budgets in the Forest Department; and stringent third-party inspection upon the completion of facility renovation and construction.

Because of the reasons above, after extending its period three times, the Project was finally completed in October 2018. The actual Project period was from November 2008 to October 2018 (10 years 0 month, or 120 months) from the time of L/A signing, making it 188% against the plan, which is significantly longer than planned.

Although the Project cost was within the plan, the Project period exceeded the plan. Therefore, the efficiency of the Project is fair.

3.3 Effectiveness and Impacts¹¹ (Rating: ③)

3.3.1 Effectiveness

3.3.1.1 Quantitative Effects (Operation and Effect Indicators)

¹¹ Sub-rating for Effectiveness is to be put with consideration of Impacts.

The Project's operation and effect indicators were as follows: a) rate of training facility use, b) number of trainees during the Project, and c) training participation rate of female field staff. The following are descriptions on the interpretation of each indicator, targets set at the time of the Project appraisal, and actual figures spanning from fiscal year (FY) 2017 to 2019 as confirmed during the ex-post evaluation. MoEF&CC suggested twice revising the target figures based on the training improvement plan submitted by each State after the Project commencement. However, the revised figures proposed in 2014 were based on the holding capacity of training facilities, and the ones proposed in 2015 were revised based on the progress of Project implementation. Thus, after due consideration in JICA, a consensus was reached with MoEF&CC that the original figures would be taken as the final target figures.

a) Rate of training facility utilization

For the ex-post evaluation, MoEF&CC provided actual data on the average rate of facility utilization calculated from the number of people who participated in induction training for each FY against the holding capacity of the target CASFoS and SFTI facilities (accommodation and training facilities [see the upper row in Table 1]). However, the data were checked again with each institution during the ex-post evaluation because it was not possible to confirm the details of calculation. At that time, the rate of facility utilization was defined as the actual number of people who participated in the training against the maximum number of trainee seats available for the year.¹² For example, in the case of SFTI Jalukbari, against 210 seats available for FY2017 training (out of which 120 are for induction courses and 90 for refresher courses), the actual number of training participants in that FY was 147 (109 in the induction courses and 38 in the refresher courses), making the rate of facility utilization $147 \div 210 \times 100 = 70\%$. The rate of facility utilization was calculated in the same manner for the target institutions, and the average obtained is indicated in the bottom row of Table 1. The figure is based on the data obtained from 21 out of the 30 CASFoS and SFTIs that gave valid responses to the questionnaires.

Table 1: Rate of training facility utilization

Data source	Target	Actual		
	2 years after completion	FY2017	FY2018	FY2019
			Completion year	1 year after completion
MoEF&CC		80%	90%	90%
Confirmed at the time of the ex-post evaluation	77.5%	82%	82%	86%

¹² To define the rate of facility utilization, dividing the number of actual days in use by 365 days was also considered. However, for standard field staff training, about 30% of the time is spent in the field based on its curriculum. Thus, the number of people participated in the training was divided by the total number of seats available for the year.

SFTIs conduct two cycles of six-month induction courses per year. During this time, trainees spend about 70% of the time on the campus of the training institution. Hence, except a few weeks between the first and second training cycles, there are trainees on campus throughout the time. Accommodation facilities (hostels) are in use whenever training is conducted on campus. For instance, in case of SFTI Shahapur, trainees' hostels were in use for 360 days out of a year in both FY2018 and FY2019. In FY2020, which is two years after the Project completion, many of the institutions temporarily closed their campus because of COVID-19, and some of them had zero days of use for their accommodation facilities. Therefore, FY2020 is not included in actual figures. Nonetheless, after the lifting of the national lockdown that started in March 2020, some institutions started online training courses. As of August 2021, because the spread of COVID-19 in India has been somewhat contained, courses such as induction ones -- in which in-person training is essential -- have begun to return on campus again.

b) Number of trainees during the Project

Table 2: Number of trainees during the Project

Indicator	Target (project completion ¹³)	Actual (end of FY2018)
Total number of trainees during the Project	1,750	11,960
Master trainers	50	70
ToT participants	100	309
Forest frontline staff	1,600	11,581

Source: Actual figures were obtained from the terminal evaluation conducted by the Indian Institute of Forest Management, and the external evaluator has selected the relevant data.

According to the Project appraisal, the target year was that of Project completion. For the purpose of the ex-post evaluation, considering that the Project completion was October 2018, data from the end of FY2018 were used as actual figures. Regarding the master trainer course, 70 master trainers were trained by the end as a result of the longer Project period; by FY2018, there were 50 master trainers who took the course at CASFoS Dehradun, but in 2018, CASFoS Coimbatore conducted an additional course. There were two ToT courses where one was conducted at CASFoS and the other at SFTIs where the individual master trainers belong to. In Nagaland, ToT was not conducted during the Project, but the instructors were trained instead at SFTIs in Assam.¹⁴

¹³ The target year was agreed upon at the time of the Project appraisal.

¹⁴ Of the master trainers' course participants, 19 out of 33 contacted during the ex-post evaluation conducted ToT.

The target number of forest frontline staff trained was calculated based on the number of training courses to be conducted at each SFTI in 1 to 1.5 years after the renovation and construction of the facilities by the time of Project completion and the facilities' holding capacity. When the target number was being worked out, it was envisaged that 20 out of 26 SFTIs would hold only one cycle of induction course. However, in reality, SFTIs conduct two induction courses per year. Moreover, considering the risk of not filling all the seats available, the final target number was settled at 75% of the holding capacity.¹⁵ In addition, the Project period that was longer than the initial plan was another reason that the actual number exceeded the target number significantly. Considering the situation above on conducting training and the use of facilities in each State, the achievement appears satisfactory.

c) Training participation rate of female field staff

For this indicator, the details of the definition at the time of the Project appraisal could not be confirmed. Considering the expression “training participation rate of female field staff,” it can be understood as the ratio of female field staff in the target State who have attended the training during the Project. At the same time, because the target is set at 100%, and based on discussions with MoEF&CC and institutions associated with the Project, it was concluded that what was expected of the Project as an outcome was an equal training opportunity given to the female field staff as their male counterparts. Because it was not possible to confirm whether each forest frontline staff attended training within a given time period, the ratios of women to the total number of field staff and to the total training participants in the State were compared. During the ex-post evaluation, the external evaluator sought from the State Forest Departments and SFTIs the data on the number of female field staff and gender-wise breakdown of training participants. However, the data were only partially available from a few institutions, as some data were not organized. Table 3 presents the results based on the data obtained from four SFTIs. As shown in the table, the ratio of female field staff who participated in the training is either the same or greater than the ratio of women to the total field staff, barring the case of Mahasamund in FY2019.

Table 3: Ratio of women to trainees and field staff

SFTI	Ratio against training participants			Ratio against field staff		
	FY2017	FY2018	FY2019	FY2017	FY2018	FY2019
Dimapur	-	10%	19%	5%	6%	6%
Mahasamund	12%	14%	4%	12%	14%	6%
Pal	25%	26%	18%	25%	26%	18%
Jagdupur	26%	13%	20%	26%	13%	20%

Source: Prepared by the external evaluator based on responses to a questionnaire

¹⁵ The target would have been 2,230 in case of a 100% occupancy.

In addition, five SFTIs, namely Aizwal, Amarkanta, Lakhnadon, Shahapur, and Shivpuri, reported that 96 to 100% of female new recruits participated in training between FY2017 and 2019. Although the data are limited, it is fair to say that the female field staff are given the same training opportunities as their male counterparts.

Although the definition and target setting of indicators remain somewhat questionable, the operation and effect indicators a) to c) can be considered achieved. In particular, the cascading method of training courses including master trainers, ToT, and forest frontline staff attained outcomes exceeding the original expectations as seen in the figures from indicator b). Regarding a) rate of facility utilization as well, the facilities were sufficiently used if the impact of COVID-19 were excluded.

3.3.1.2 Qualitative Effects (Other Effects)

In the Project, improving the JFM implementation capacity of forest frontline staff in the State Forest Departments was expected as a qualitative effect. Range Forest Officer and Division Forest Officer,¹⁶ who supervise the field staff, keep track of the performance of their staff; however, they do not monitor the performance with regard to training outcome. Hence, it was not possible to identify the direct relationship between the improvement of JFM implementation capacity among the field staff and the Project.

On the other hand, from the interviews during the ex-post evaluation with master trainers and ToT participants who were still working as instructors or associated with training responsibilities, it was reported that by participating in the Project's training courses, they acquired skills such as communication skills, and those for mentoring and preparation of lesson plans. Furthermore, they learned methods such as role play and group discussions, and by actively using these methods in training of forest frontline staff, which previously had been lecture-oriented, they were able to boost the interest and motivation of the trainees. Regarding the capacity development of the field staff, opinions were heard in interviews with SFTIs and Forest Department personnel that the relationship between the field staff and local communities improved because of the abovementioned training methods and better communication skills. For instance, according to a Deputy Ranger¹⁷ in West Bengal, when the Forest Department was cracking down on illegal activities in the forest area, the local people were agitated, and it could have led to a confrontation with the field staff. However, under such circumstances, the field staff managed to calm down the people and reach reconciliation. The director of SFTI Amarkanta was also of the view that forest frontline staff with strong communication skills can communicate better with communities,

¹⁶ They are service ranks of the State Forest Department. They are in-charge of forest administrative unit such as Range and Division, respectively. Range is the smallest forest administrative unit, and Division is the sum of a few Ranges.

¹⁷ Service rank of the State Forest Department. As in the case of Forest Guard and Forester, they are forest frontline staff.

establish a better relationship, and, in turn, contribute to more effective forest management. Thus, although based on limited information from the Forest Departments, it appears that the Project contributed to improving the JFM implementation capacity of forest frontline staff.

3.3.2 Impacts

3.3.2.1 Intended Impacts

The intended impact of the Project was “human resource development for sustainable forest management.” The following three points are the issues related to JFM at the time of the Project appraisal. The impact of the Project is considered achieved if the Project helped address these issues.

- Sustainability: Continuous follow-up, training, and fund flow by and from the State Forest Department are necessary for JFM.
- Dependency: As each forest community depends heavily on the Forest Department, it is necessary to promote self-reliance of the community by strengthening the capacity of Forest Department to lead, instruct, and foster the community.
- Inclusion: Forest Department staff need to be able to appropriately identify and select target beneficiaries for poverty alleviation.

According to a questionnaire survey conducted during the ex-post evaluation, 18 institutions that responded to the survey said that they felt the Project contributed to developing capacity to supervise the forest communities and select appropriate beneficiaries for poverty alleviation programs. Nonetheless, the survey results do not identify the Project’s effect on the dependency and the inclusion mentioned above. From the sustainability perspective, each institution recognized the necessity for continuous follow-up, training, and fund flow, but that does not necessarily mean proper measures were taken. Training courses are continuously being conducted, but as mentioned earlier, there is no mechanism to follow up on the performance of the trainees afterwards. Therefore, it is hard to prove the direct linkage between the Project and its effect on human resource development for sustainable forest management. Moreover, such effect would take a certain amount of time to be visible. Henceforth, at the time of the ex-post evaluation, it could not be confirmed whether the Project directly contributed to resolving the issues related to JFM. However, as described in the section on the qualitative effect of Effectiveness, the Project contributed to a certain extent to improving the JFM implementation capacity of forest frontline staff; in the future, it is likely to contribute significantly to human resource development for sustainable forest management.

3.3.2.2 Other Positive and Negative Impacts

The Project was classified as category B in accordance with the *JBIC Guidelines for*

Confirmation of Environmental and Social Consideration (April 2002) as its negative impact on the environment was not severe considering the characteristics of the sector, the Project, and local conditions. Preparation of an Environmental Impact Assessment report was not mandatory for the Project according to the applicable Indian laws. Moreover, the Project was implemented on the land owned by the Forest Department of each State; according to the information from the Project appraisal, no land acquisition or resettlement was to take place.

The Project renovated 28 CASFoS and SFTIs and newly constructed two SFTIs. For the renovation, no monitoring during the work was implemented because the work took place within the premises of existing institutions, and the Forest Department was the agency in charge of monitoring the environmental impact in the State. Not conducting environmental monitoring during the work is considered appropriate for the following reasons: it was based on the decision of the Forest Department; the scale of the work was not large and the areas of CASFoS and SFTIs were extensive; and no adverse impacts on the natural environment were reported. For the existing CASFoS/SFTIs, no land acquisition or resettlement arose.

SFTI Hijli and Gaya are the two institutions newly constructed. At Hijli, air pollution, soil erosion, noise, and water quality were monitored during the construction. The institution required 29 acres of government land and 0.27 acre of private land. Of the 0.27-acre private land, it was confirmed that 12 affected households in 0.12 acre already received compensation in accordance with West Bengal's *Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006*. The compensation for the land was given at the market rate based on discussions with the affected people. For the remaining 0.15 acre, compensation is being negotiated with three affected households. According to MoEF&CC, for SFTI Gaya, no land had to be purchased and no resettlement occurred.

As seen above, training programs at each institution are mostly conducted on a continuous basis, and the facilities are sufficiently in use. In addition, as seen in the number of training participants in different courses during the Project, more than the expected number of field staff attended the training programs. From the perspective of enhancing the capacity of field staff for JFM promotion and human resource development for sustainable forest management, it is difficult to assert the Project's contribution. At the same time, from the interviews with the stakeholders, it became clear that the training contents offered under the Project enhanced the teaching method and communication skills. Thus, the Project brought forth an impact with regard to facilities, and the environment, quality, and opportunities of forest training. Although the impact on the natural environment during the implementation phase and the details of land acquisition and resettlement for a small number of SFTIs could not be confirmed, no adverse impact was seen in 26 out of the 30 institutions. The Project saw most of its planned effects manifest themselves. Therefore, the effectiveness and impacts of the Project are high.

3.4 Sustainability (Rating: ③)

3.4.1 Institutional/Organizational Aspect of Operation and Maintenance

The Research & Training Division (Forestry) of MoEF&CC, which was the main Executing Agency of the Project, is in charge of formulating and implementing policies on training and research for forest officers working on forest administration in India. Their role remains the same even at the time of the ex-post evaluation. The operation and maintenance of facilities renovated and constructed in the Project and the training courses at CASFoS/SFTIs are looked after by each institution.

At CASFoS and SFTIs, shortage of manpower has been a chronic issue. As revealed by a questionnaire survey of the ex-post evaluation, 16 out of the 26 institutions that responded to the survey reported a shortage of staff. Because it is difficult to post full-time instructors, 59% of the instructors on average are actually guest lecturers. Shortage of staff is also prevalent in State Forest Departments. Many of the institutions that cannot post training instructors on a full-time basis cite that there are vacancies in not only SFTIs but also the Forest Department triggered by retirement of State forest officers, and the vacancies are a result of forest officers not opting to become instructors in their career. Many of the SFTIs are located in remote places with limited access, and it has been pointed out that candidates for instructors tend to avoid such places of posting. Given such situation, many CASFoS and SFTIs have made provisions such as providing a special allowance in addition to the salary. Moreover, if full-time instructors cannot be secured, guest lecturers are invited, and training is conducted as planned. Therefore, the issue has not hindered the operation of training programs so far. Nevertheless, stakeholders must recognize the importance of training in the forestry sector, and strive to fill vacancies in coordination with the State Forest Department.

In the Project, formulating an exit strategy was considered at the time of the Project appraisal, in order to continue using the training facilities and system for forest officers, which were improved by the Project, beyond the Project implementation. However, an exit strategy was proposed by consultants only in Himachal Pradesh. The strategy suggested conducting a training needs assessment every five years and reflecting its results in the training plan, and conducting monitoring to ensure the quality of training. However, when checked during the ex-post evaluation, the strategy was neither adopted nor implemented.

3.4.2 Technical Aspect of Operation and Maintenance

Those associated with the planning and operation of training at CASFoS and SFTIs are trained forest officers who have a certain amount of practical experience. Forest officers who work as instructors hold the designation of Ranger¹⁸ or above. Of 12 former master trainers or ToT

¹⁸ Forest officer in charge of Range, which is the smallest forest administrative unit.

participants interviewed during the ex-post evaluation, nine were in teaching positions at that time. Regarding maintaining and upgrading the technical standards of training officers, although there is no specific training system for those working as instructors, as in the case of other forest officers, they can attend various training courses according to the Forest Department's judgment. Forest officers conducting training courses in CASFoS and SFTI are equipped with sufficient knowledge and experience of the forest sector to teach. Regarding teaching methods, many of the instructors participated either in master trainers' training or ToT, and thus, meet appropriate standards. Hence, no issues are seen with regard to technical aspects of operation and maintenance.

Impacted by the COVID-19 pandemic, the target CASFoS and SFTIs temporarily closed their campus and stopped training operations. After the national lockdown that was imposed in March 2020, SFTI Sundarnagar quickly switched to online training courses. However, some institutions were still putting on-campus training on hold even at the time of the ex-post evaluation. Under these circumstances, it is critical to take advantage of IT to conduct training remotely for the courses that do not require to be in the field, such as lectures. Some of the SFTIs such as Jalukbari do not have institutional arrangements or technical knowhow to conduct online training, and it would be desirable for them to address these issues to meet the requirements of remote training.

3.4.3 Financial Aspect of Operation and Maintenance

Budget sources are generally made up of the central government for CASFoS, and central and State governments for SFTIs. Twenty-five out of the 26 institutions that responded to a questionnaire survey of CASFoS and SFTIs stated that they had no issues regarding finance related to operation and maintenance. The SFTI that raised an issue stated that there was a shortage of funds for maintaining its facilities. When the budget and expenditures were checked among those that responded to the questionnaire, all of them were using the allocated budget fully. A few institutions reported that the allocated budget was reduced from FY2019 because of COVID-19; however, as it may have been a temporary measure, major issues were not observed in the financial aspect.

3.4.4 Status of Operation and Maintenance

In nine out of the 30 CASFoS and SFTIs visited by the external evaluator and the local consultant, it appeared that the facilities, equipment, and furniture were properly maintained as there were no signs of damage and it has only been two to three years since the Project completed. From the questionnaire survey, there was a report of leaking roofs in the buildings at SFTI Amarkanta, but all the others replied that the facilities renovated or constructed by the Project were in good condition. Although the use of facilities varies among the institutions, as seen in the past facility use rate under Effectiveness, had there been no COVID-19 pandemic, they would have been used at a certain level. As in the case of SFTI Jalukbari, there are institutions whose

facilities have not been in use for almost one year because of COVID-19, but most of the CASFoS and SFTIs are conducting training courses remotely, and the courses with high priority are brought back to the campus while keeping watch on the pandemic situation.

No major problems were observed in the institutional/organizational, technical, financial aspects and the current status of the operation and maintenance system. Therefore, the sustainability of the Project effects is high.

4. Conclusion, Lessons Learned and Recommendations

4.1 Conclusion

From the time of the Project appraisal to the ex-post evaluation, sustainable forest management was given priority in India's policy and development goals. At the same time, there were development needs such as clearing the past backlog of training programs and the introduction of new technologies and approaches even at the time of the ex-post evaluation. The Project was consistent with Japan's ODA policy at the time of the Project appraisal as well. Moreover, the cascading method of capacity development was employed through collaboration between the Japanese ODA Loan Project and the TCP. Therefore, the Project's relevance is high. On the other hand, regarding the efficiency of the Project, the Project cost was within the plan, but the Project period was longer than the plan because of the delay in obtaining CCEA approval at the Project's commencement, and thus judged to be fair. With regard to effectiveness, training courses at the target CASFoS and SFTIs are mostly conducted continuously, and the facilities are being used beyond the standard originally expected. Moreover, the number of training participants during the Project implementation was more than expected. Furthermore, consideration was given to female field staff in the Project, and as a result of establishing female accommodation facilities, it became easier than before to have female staff. From the perspective of human resource development for sustainable forest management as the intended impact, no direct outcome of the Project was confirmed. However, strengthened and improved relations between field staff and communities as a result of better communication skills among the field staff were observed; thus, future contribution to sustainable forest management is expected. Regarding impacts on the natural environment and resettlement and land acquisition, it was confirmed that most of the institutions had no issues. Objectives of the Project were mostly achieved, and thus, the effectiveness and impact of the Project are high. From the sustainability point of view, many institutions reported a shortage of manpower as regards to institutional aspect, but there were no issues in technical and financial aspects, as well as the status of operation and maintenance. Thus, the sustainability of Project effects is high.

In light of the above, the Project is evaluated to be highly satisfactory.

4.2 Recommendations

4.2.1 Recommendations to the Executing Agency

Resolving the shortage of staff

This recommendation is meant for CASFoS and SFTIs as well as the State Forest Departments in charge of training operation. Shortage of manpower is a chronic issue faced by both Forest Departments and the training institutions. Particularly for SFTIs, forest officers aspiring to be in teaching positions are limited because the importance of training was not recognized in the forestry sector and the postings are in remote areas. So far, when full-time instructors are not secured, guest lecturers are invited to ensure there is no disruption to continuous training. However, it would be desirable to resolve the manpower shortage through better understanding of stakeholders on the importance of training and filling vacant posts in the training institutions.

Enabling remote and online training courses

Because of the COVID-19 pandemic, all the CASFoS and SFTIs were forced to close the training facilities temporarily or for a long time. Some courses were postponed considering the pandemic situation; however, some of the courses needed to be conducted remotely for induction training and continuous capacity development. Under such circumstances, some of the institutions have been conducting courses that can be offered online, such as lectures. At the same time, a small number of institutions were unable to hold training remotely for such reasons as the instructors not being equipped with proper knowledge and experience to conduct online training courses and lack of IT personnel in the institutions. To cope with the COVID-19 pandemic and any similar situation in the future, it is desirable to make institutional arrangements so that training courses can be conducted remotely at each institution. For preparation, if opportunities for sharing knowhow on remote training and the use of online training applications among CASFoS and SFTIs can be made and focused assistance can be provided to SFTIs struggling with remote training, then it will be possible to develop the capacity of forest frontline staff continuously even when on-campus training cannot be conducted.

4.2.2 Recommendations to JICA

None.

4.3 Lessons Learned

Holistic approach to supporting capacity building

The Project was implemented while highlighting training and capacity development that tended to be given less importance in the Indian forestry sector. For capacity development of forest frontline staff, it may seem important to provide support only with regard to training. However, the Project successfully enhanced the attractiveness of training and participants' motivation by

creating an environment that made it easier for field staff to attend training. In addition, this was made possible by establishing and enhancing female accommodation facilities and renovating other dilapidated facilities. The Project not only set a suitable environment for training, but also spread the teaching methods that had not been frequently used by selecting forest officers for master trainers, who, in turn, foster other instructors. Moreover, the Project was able to enrich the training contents so that trainees improve their communication skills in addition to their forestry technologies.

Follow-up and monitoring until the effect of the training reaches the field

The cascading approach of training adopted in the Project shows a clear effect until master trainers' training and ToT. However, as explained in the section on qualitative effects under Effectiveness and Impact, capacity development of forest frontline staff, particularly from human resource development for the sustainable forest management perspective, a long time is required until its effect becomes visible. As the Project duration is limited, it appears necessary to consider arrangements for matters that need to be addressed even after the Project define the path for realizing a tangible effect in the field, and make a mechanism for follow-up. There is no structure to confirm as a project whether the contents and outcomes of training are reflected in the work of forest frontline staff. Given such situation, if the Project has the next phase or the Government of India will continue a similar effort on its own scheme, it would be desirable to follow up on ToT participants of the Project and establish a system to monitor changes in the work of field staff instead of just expanding the Project to other States.

5. Roles/Contributions

5.1 Role and contribution of JICA

JICA has implemented many forestry projects in India since the 1990s. Those before the Project had the State Forest Department as Executing Agency, targeted a State as a unit, and effort was made to increase the forest coverage in the State while JFM promotion was added more recently. While these State-level projects had capacity building of forest officers as a component, their main focus was not necessarily on capacity development. From many years of assisting the Indian forestry sector, JICA realized that, to promote people-centric JFM, forest frontline staff, who are the linkage with local communities, had to understand the importance of JFM and be equipped with relevant skills. This led to the formulation of the Project focusing on capacity development. The implementation of the Project, which is an undertaking aiming at capacity development with a donor's assistance, has created an opportunity to reaffirm the importance of training and capacity development in the Indian forestry sector.

End

Comparison of the Original and Actual Scope of the Project

Item	Plan	Actual
1. Project outputs		
A. Support for strengthening the forest training system	<ul style="list-style-type: none"> a) Revision of training guidelines by MoEF b) Preparation of sample course materials and teaching notes by MoEF c) Preparation of training guideline and training improvement plan by State government d) Preparation of teaching materials by State government e) Appraisal of training guidelines and training improvement plan by MoEF f) Monitoring and evaluation by the central government 	As planned
B. Rehabilitation and construction of training institutes/schools	<ul style="list-style-type: none"> a) Rehabilitation of CASFoS Dehradun b) Rehabilitation (27) and construction (3) of SFTIs 	<ul style="list-style-type: none"> a) Rehabilitation of four CASFoS b) Rehabilitation (24) and construction (2) of SFTIs
C. Implementation of training	<ul style="list-style-type: none"> a) Master trainers' training b) Training of Trainers c) Training for field staff 	As planned
D. Project management	<ul style="list-style-type: none"> a) Support for project implementation for CPMU b) Support for project implementation for State government 	As planned
2. Project period	September 2008 – December 2013 (64 months)	November 2008 – October 2018 (120 months)
3. Project cost		
Amount Paid in Foreign Currency	JPY 0 million	JPY 0 million
Amount Paid in Local Currency	JPY 5,910 million (INR 2,327 million)	JPY 3,360 million (INR 1,964 million)
Total	JPY 5,910 million	JPY 3,360 million
ODA Loan Portion	JPY 5,241 million	JPY 3,155 million
Exchange Rate	INR 1.00 = JPY 2.54 (As of June 2008)	INR 1.00 = JPY 1.71 (Average between November 2008 and October 2018)
4. Final disbursement	October 2018	