

JICA
ASSISTED
FORESTRY
PROJECTS
IN INDIA



JAPAN INTERNATIONAL COOPERATION AGENCY

Established as an independent administrative institution, The Japan International Cooperation Agency (JICA) aims to contribute to the promotion of international cooperation as well as the sound development of Japanese and global economies by supporting the socio-economic development, recovery or economic stability of developing regions.

JICA works at the level of ordinary people to help developing countries become self-reliant in pursuing their own socio-economic development.

JICA's aim is to act as a bridge between Japan & developing countries so that knowledge and experience of the Japanese people can be shared, and developing countries can strengthen their own problem-solving capabilities.



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MESSAGE FROM CHIEF REPRESENTATIVE OF THE JICA INDIA OFFICE



Japan International Cooperation Agency, JICA, has been assisting forestry and natural resource management projects in India since 1991. JICA continues to be the largest donor to the forestry and natural resource management sector in India for several years now. JICA-assisted forestry projects have facilitated environmental improvement from increased forest cover, effective soil and moisture conservation, institutional strengthening through introduction of management processes and latest technologies at state forest departments, and strong community participation through Joint Forest Management (JFM), which includes alternative income generation activities and community development works, to facilitate sustainable forest resource management by local communities.

Over the last 25 years, learnings from the implementation and outcomes of JICA-assisted forestry projects have contributed to development of the JFM. Lessons learnt are being disseminated at the field level (communities, forest departments etc) and also at the national level through annual workshops for JICA-assisted forestry projects.

During the 1990s forestry projects emphasized on afforestation, regeneration, soil and water conservation and other allied activities. However, from 2003 onwards the projects included ecological conservation and livelihood enhancement activities, market-linkages for various forest products such as aloe vera, turmeric etc, technology introduction through Geographic Information System (GIS), creating Self-Help Groups (SHGs). Going forward, forestry projects will lay emphasis on Carbon Financing through REDD+ mechanisms, among other components.

Another significant contribution of the JICA projects is environmental awareness and dissemination program, especially among school children.

JICA has committed 225.8 billion Japanese Yen (approximately Rs. 12,000 crore) for 23 forestry projects across 13 states of India. The commitment includes a project for capacity development of the frontline forest department staff across 13 states of India, and it is a matter of pride that this project has been awarded for 'Excellence in Training' at the inaugural National Symposium on Excellence in Training organized by the Department of Personnel and Training, Government of India. JICA is also assisting strengthening of training facilities and faculty at the Directorate of Forest Education and Central Academy for State Forest Service, under Ministry of Environment, Forest & Climate Change.

This booklet serves as an overview of JICA-assisted forestry and natural resource management projects in India and of best practices under various projects. We hope that experiences from the JICA-assisted forestry and natural resource management projects, which have been formed through active collaboration between India and Japan and executed by the Ministry of Environment, Forest & Climate Change and 13 different states, would facilitate development of other forestry projects in India. JICA expects to continue its support to the forestry sector in the years to come.

Takema Sakamoto

Chief Representative, JICA India Office

ACKNOWLEDGEMENT

JICA India Office would like to express its sincere gratitude to the Ministry of Environment, Forest & Climate Change, Government of India, and the Forest Department of each state where Japanese ODA Loan and Technical Cooperation forestry projects are being implemented. They have provided us with necessary information, data and photographs to bring this booklet into existence. Needless to say, it is due to the efforts of the State Forest Departments, who are the Executing Agencies of the projects, that best practices have been evolved, which shall continue to bring about effective changes impacting the forestry and natural resource management sector scenario of India in a positive way. We appreciate the efforts and endeavours of all those who have been part of JICA-assisted forestry projects and look forward to a more strengthened relationship with them in the future.



JAPANESE ODA ASSISTANCE TO THE INDIAN FORESTRY SECTOR



Japanese ODA Assistance to India



JICA's Assistance to the Forestry Sector in India

The Japan International Cooperation Agency (JICA) is a Japanese government financial institution responsible for providing Japanese Official Development Assistance (ODA) Loans, Grant Aid and Technical Cooperation to developing countries. Japanese ODA Loans are concessionary, long-term, low interest funds that supplement the efforts of the developing countries in building their socio-economic infrastructure and achieving sustained economic growth. Grant Aid is a form of ODA involving the provision of funds to the governments of developing countries without the obligation of repayment, primarily to upgrade its facilities for health and education. Technical Cooperation involves Japan and a developing country pooling their knowledge, experience and skills to arrive at customized solutions for a developing country. Such cooperation involves dispatching of experts from Japan to provide technical support, invitation of personnel from developing countries to Japan for training and/or the provision of necessary equipment.

Japan's ODA to India started in 1958, when a Japanese ODA Loan of 18 billion Japanese Yen was extended to supplement the implementation of the 2nd Five-Year Plan at the request of the then Prime Minister, Pandit Jawaharlal Nehru. In 2004, India became the largest recipient of Japanese ODA Loans, in terms of annual commitment, and that trend has continued thereafter.

Over 16% of India's population of 1.25 billion, about 200 million, live in and around forest areas and largely depend upon forestry resources for their sustenance, as per 2011 census. The excessive biotic pressures have led to depletion of forest resources and biodiversity across the country and have also led to an increase in disaster risk in hilly areas. In order to restore ecological balance the Government of India and State Governments have undertaken afforestation and regeneration programs with their own resources and with assistance from international donors such as JICA, World Bank, DFID, KfW and AFD.

JICA's assistance to forest and natural resource management in India started in 1991 with an ODA Loan for 'Afforestation and Pasture Development Project along Indira Gandhi Canal Area' in Rajasthan. Since then, Japanese ODA Loans have been extended to 23 forest and natural resource management projects, across 13 states (Rajasthan, Gujarat, Tamil Nadu, Karnataka, Punjab, Haryana, Odisha, Himachal Pradesh, Tripura, Uttar Pradesh, Sikkim, West Bengal and Uttarakhand) in India, making Japan the largest donor in the sector.

JICA is also facilitating through an ODA Loan a Human Resource Development project, 'Capacity Development for Forest Management and Personnel Training', for front line staff in 13 different states, synergistically with a Technical Cooperation project at Directorate of Forest Education (DFE) and Central Academy for State Forest Officers (CASFOS), Dehradun for improvement of 'Master Trainers' program for frontline staff and for 'Training of Trainers' at the state level.





JICA's Approach to Forest Resource Management

In 1991, the concept of Joint Forest Management (JFM), wherein the local state forest department and communities living on forest-fringes jointly manage the forests, was in the stage of evolution. The projects which were designed by the Government of India and proposed from 1991 to 1997 for Japanese ODA Loans, which are called first generation forestry projects in India, were primarily focused on afforestation and included components such as soil and water conservation, training, extension and procurement of equipment.

In 2000, a study was instituted by JICA to review the 'forestry sector policy issues' under which the then ongoing projects were examined in terms of design, implementation, effectiveness and sustainability. The report following the study was discussed with the Ministry of Environment and Forests, Government of India and other concerned agencies, and the recommendations were incorporated in future projects.

The projects which began after 2003, were the second generation projects, aimed at striking equilibrium between afforestation and sustainable livelihood improvement of local communities through JFM. The projects also included institutional capacity building of state forest departments, soil and water conservation measures, improvement of infrastructure, introduction of technology based planning and monitoring, research and extension and involvement of NGOs/community development officers in project implementation. Moreover, the design of the projects followed a structured, phase-wise implementation, with concurrent internal and third party evaluation and sharing of best practices with other forestry projects.

From 2013 onwards, the third generation projects have come into being, with the inclusion of several other components. JICA is also exploring the possibilities of considering preparedness for Reducing Emissions from Deforestation and Forest Degradation (REDD+) mechanism under the ongoing and future forestry projects which would lead to flow of monetary benefits in future directly to forest dependent communities, and putting into effect mechanisms for achieving sustainability of project impacts.

Photo: A small isolated hamlet situated near the Dhanana distributary in Jaisalmer, Rajasthan. JICA is involved in desert plantation activities in the region to stop siltation of the distributaries.

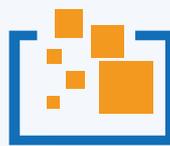
JAPANESE ODA ASSISTANCE TO THE INDIAN FORESTRY SECTOR



Guidelines for formulation of forestry projects

As the number of forestry projects supported by the Japanese ODA Loans increased over the years, many prospective projects emerged for possible assistance from JICA. It is at that point of time, JICA (former JBIC) felt an urgent need to streamline the procedure for preparation of the project proposals by the State Governments/Government of India. Accordingly, in 2005, Guidelines for Designing of Forestry Projects were formulated by former JBIC to improve formulation of new projects in terms of design, effectiveness, implementation, strategy, sustainability, etc. The contents of the guidelines were reviewed and concurred by the Ministry of Environment and Forests, Government of India.

As per the guidelines, any new forestry project, which is expected to be taken up with the assistance of the ODA Loans, needs to be comprehensive in terms of content by adopting a holistic approach. Emphasis is not only given to afforestation but also to other activities like water and soil conservation, training, community development activities, etc. Some of the examples of the components of the project that are suggested to be undertaken based on requirement of different states are as follows which also include components of third generation projects that are now being taken up by JICA for assistance.



Components of the Project

- » Afforestation (village-based cluster approach on watershed basis)
- » Agro-forestry/farm forestry
- » Water and Soil Conservation
- » Training and Extension
- » Biodiversity Conservation and Ecotourism
- » Community Development Activities
- » Income Generation Activities through SHGs
- » Involvement of NGOs as facilitators for Micro Planning, Training etc.
- » Training of all stakeholders
- » Dovetailing of project activities with other government departments schemes (Inter-sectoral convergence)
- » Technology-based Planning & Monitoring
- » Monitoring and Evaluation
- » Impact Analysis after Project Completion



Phase-wise Approach

In terms of the project design, it is imperative to adopt a phase-wise approach in order to make the projects effective and sustainable. Accordingly, the entire project is divided into three phases i.e. Preliminary Phase, Implementation Phase and Consolidation Phase. In brief, the major activities under each phase are as under:

Preliminary Phase (1-18 months)

- » Set up an effective organization structure which includes project management unit under Society Mode, appointment of consultants, formation of village forest committees, Micro Planning etc.
- » Capacity building of forest department staff
- » Procurement of Equipment

Implementation Phase (3-4 years)

- » Sole focus is on implementation of project components.
- » Concurrent internal/external monitoring and evaluation is undertaken.

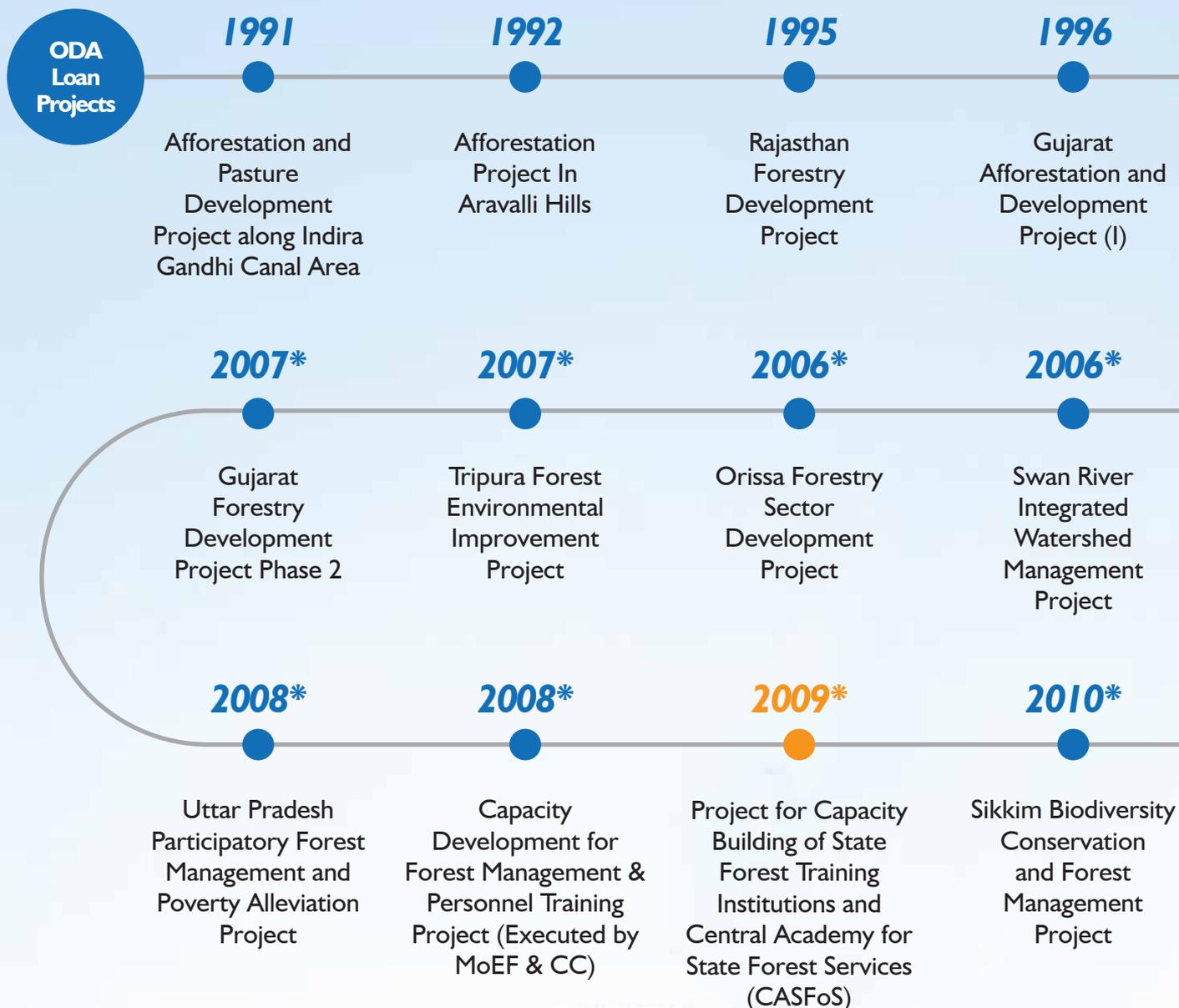
Consolidation Phase (1-2 years)

- » No fresh activities taken up.
- » Time for introspection and remedial measures
- » "Exit policy" is implemented.

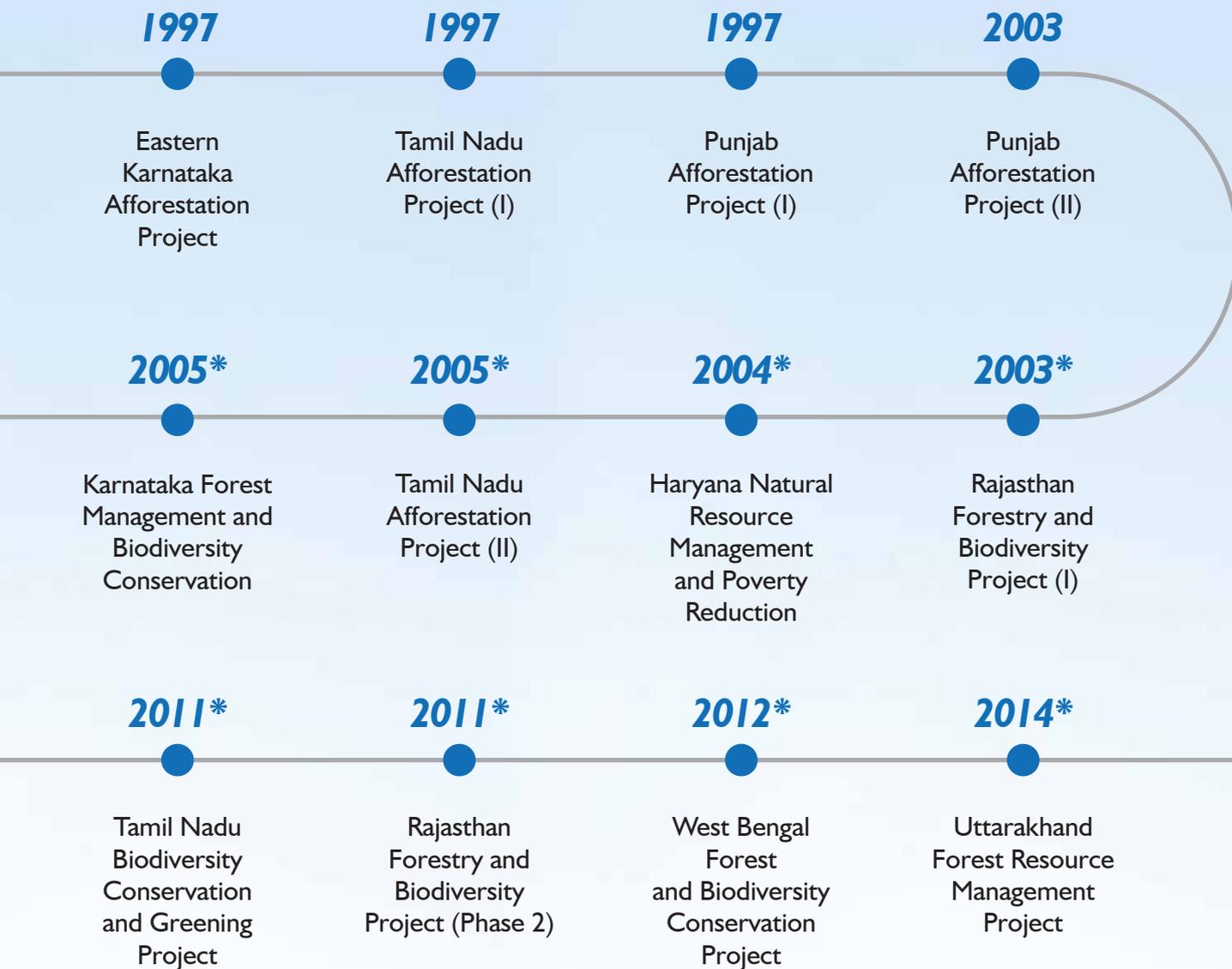
With 25 years of experience in the Indian forestry sector, Japanese ODA Loans will continue to extend assistance for new forestry projects. Further, the endeavour will be to strengthen the capacity of executing agencies and reposition forestry projects so as to align them with the challenges against global warming and poverty alleviation.



JICA-ASSISTED FORESTRY PROJECTS IN INDIA



● Loan Agreement (Year) ● Technical Cooperation (Year) ● Name of the Projects



* On-going projects are described in detail inside



RAJASTHAN

Forestry and Biodiversity Project*



EXECUTING AGENCY

Department of Forest,
Government of Rajasthan



LOAN AMOUNT

Amount: JPY 9,054 million
Agreement signed: 2003



Carrying of axe and hooks in the afforested area is prohibited by our village council. We penalize the person who does so. I even penalized my relative.

NARAYAN KULHERI

VFC President, Jaloi Village

The Rajasthan Forestry and Biodiversity Project was initiated with the aim of checking desertification, improving ecological status of Aravalis as well as augmenting the availability of forest produce and thereby improving the socio-economic conditions of the rural poor of Rajasthan. The key project activities include afforestation, biodiversity conservation, soil and moisture conservation and numerous Joint Forest Management (JFM) consolidation activities. Afforestation was undertaken in 123,967 hectares, and 30 million man-days of employment were generated under the project. In addition, 2,599 moisture conservation structures were developed. As part of JFM consolidation, 1,012 Village Forest Protection and Management Committees (VFPMCs) were constituted and strengthened under the project, and a corpus fund of Rs 90.35 million has been provided to these VFPMCs for maintenance of project assets after the project completion. 1,428 Self Help Groups (SHGs) were formed to promote income generation activities.

Under the project, funds for raising 4 million seedlings in departmental nurseries were provided in the first year. These seedlings were sold and the proceeds from the sale were used to raise and sell 20 million seedlings in the period 2003-04 to 2008-09.

▼ Locals of Balicha village and forest officials in discussion during a VFPMC meeting in Udaipur district



▼ Aloe Vera juice extracting and bottling plant in Oghna, Udaipur district.
Male members from the local VFPMC in Oghna have been provided with seasonal employment at the plant.



▶ Aloe Vera gel is extracted from a crushing machine.



▶ Extracted gel goes through a five process filtration.



▶ Aloe Vera juice is packaged in bottles before shipping.

▼ Soil & Moisture conservation activity at Kewra ki Nal situated in Saroda range, Udaipur district



BEST PRACTICES - Soil & Moisture Conservation

The adoption of intensive insitu soil and moisture conservation and water harvesting techniques such as construction of contour trenches, contour dykes, check dams, anicuts, v-ditches, etc. have resulted in improved plant growth and survival rate as well as improved results of seed sowing and rejuvenation from root stock.

*The project was completed in July 2010.

HARYANA

Integrated Natural Resource Management and Poverty Reduction Project



EXECUTING AGENCY

Forest Department,
Government of Haryana



LOAN AMOUNT

Amount: JPY 6, 280 million
Agreement signed: 2004

publicity and extension, human resource development, Management Information System (MIS), Geographical Information System (GIS), etc. Plantations have been carried out on a total of 48,800 hectares on government lands, wastelands owned by the state government, selected village common lands and private farmlands. Plantation and poverty reduction activities are spread over 800 villages in 17 districts of Haryana, excluding Gurgaon and Faridabad, where the "Children Forest Programme" (CFP) is being implemented.

Furthermore, institutional capacity building consultants have been appointed under the poverty reduction component to specially work for making the income generation activities of the Self-Help Groups (SHGs) more effective and sustainable. The consultants not only help in forming and educating SHGs but also provide and arrange training in different vocations and then link them with markets in the towns and cities. This is working very effectively and benefiting a large number of SHGs under the project.

The project aims to rehabilitate forests and wastelands of Haryana in an ecologically sustainable manner and to improve the quality of life of the village communities residing in adjoining areas. The scope of the project comprises afforestation, soil and moisture conservation, poverty reduction programmes, technical assistance,

▼ *Members of Shiv Shakti and Kalpana SHGs formed in 2008-09 in Barsat village*



▼ Road side plantations



▲ Eucalyptus and Jamun plantation near Muyana Drain



▲ Mixed plantation on Bahari Road



▲ Eucalyptus plantation along Badhana Distributory in Jind

▼ Women from Bhanjra community make bamboo baskets in Godam village located in Pinjore. The income generating activity is performed by providing the community with culms from bamboo plantations grown in adjacent protected forest areas.



▼ Beauty parlour and tailoring shop: Balwant Kaur (standing in Left corner) is the secretary of Satguru SHG situated in Uparalabas VFC near Panchkula. Satguru SHG has a total of thirteen female members and they have been running a tailoring shop, boutique and beauty parlor since 2008.



TAMIL NADU

Afforestation Project -Phase II



EXECUTING AGENCY

Forest Department,
Government of Tamil Nadu



LOAN AMOUNT

Amount: JPY 9,818 million
Agreement signed: 2005



We formed SHG and got loan through TAP for starting up the income generation activities. My daughter Gayatri wanted that she should study Microbiology and with the increased income that I could get her dream come true.

She has completed her M.Sc. in Microbiology and is preparing for PhD. entrance examination.

LATA Karpagambal SHG, Padvedu Village

To continue, consolidate and replicate the gains of Tamil Nadu Afforestation Project I (TAP I), another project, Tamil Nadu Afforestation Project II (TAP II) was designed. Besides afforestation, the projects focused on new frontiers such as geographical information system (GIS), human resource development, research, forest extension and infrastructure development.

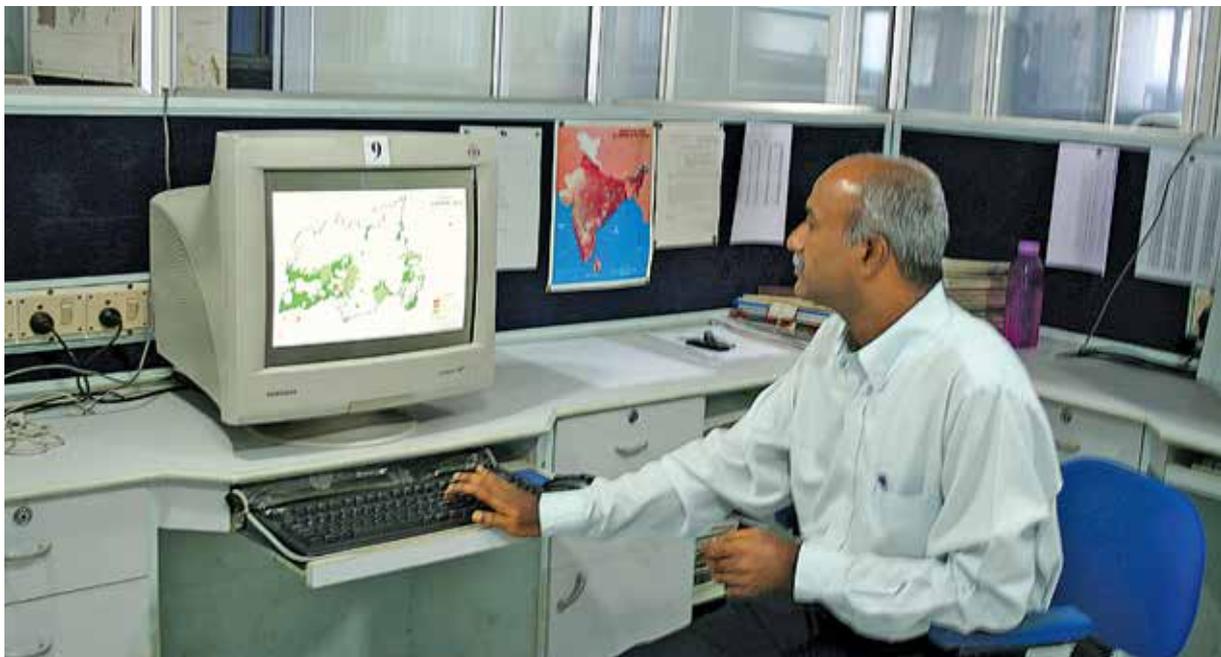
In TAP II, the model of TAP I has been expanded to plantation of another 180,000 hectares of land and 800 villages wherein Village Forest Committees (VFCs) have been constituted to execute the project works based on Joint Forest Management framework. In an effort to strengthen women's participation and to provide alternate livelihood opportunities for poor communities living in the forest area, the project has formed Self-Help Groups (SHGs) to introduce micro credit activities through a revolving "corpus fund" established with project funds.

The project targets have already been achieved. A total of 800 VFCs and 2,900 SHGs have newly been formed.

▼ Plantation activity in a Nursery



▼ GIS laboratory in Chennai

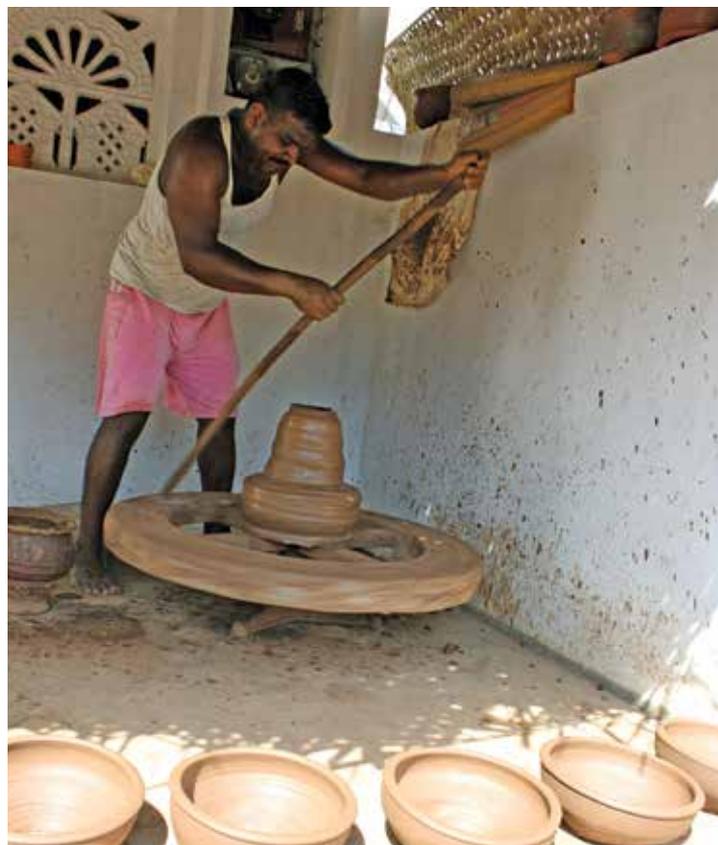


BEST PRACTICES

- GIS for Forest Management

To strengthen the quality of project planning and monitoring, TAP has introduced GIS which has proved to be an effective management tool. GIS has been used by the Tamil Nadu Forest Department to prioritize the works in the forest areas, delineate micro-watersheds, plan for appropriate water harvesting structures, etc. Monitoring vegetation and forest degradation changes using GIS has also helped in development of protocols for bio-resource/landscaping level conservation.

▼ Pottery Making as a part of income generation activities, Padveddo Village, Vellore District



KARNATAKA

Sustainable Forest Management and Biodiversity Conservation Project



EXECUTING AGENCY

Forest Department,
Government of Karnataka



LOAN AMOUNT

Amount: JPY 15,209 million
Agreement signed: 2005

Karnataka Sustainable Forest Management and Biodiversity Conservation Project covers all the districts of Karnataka. In addition to afforestation, farm forestry, soil and water conservation works, the project also covers conservation of rich biodiversity and improvement of the management of protected areas within the state. For this purpose, apart from village forest committees, Eco Development Committees (EDCs) have been formed to protect one national park and four wildlife sanctuaries that fall under the project.

Realizing the importance of mangrove forests that provide a critical habitat for a diversity of marine and terrestrial flora and fauna, the project is restoring and conserving the salt tolerant fore shore ecosystems in coastal Karnataka.

The project also realizes the urgent need for environmental education of children and is covering 2,000 schools to promote ecological awareness among school children.



A novel concept of Eco-Tourism in protected areas is providing new livelihood prospects to the local communities in the form of ticketing, parking facilities and shops.

SUBRAMANIAM VFC President, Koppa Division

▼ SHG member making leaf plates as one of the income generation activities



▼ SHG member involved in Petty shop management



BEST PRACTICES - Initiatives to Strengthen Joint Forest Management

A facilitation network of NGOs has been created to form and build capacities of VFCs and EDCs. The NGOs have also supported VFCs and EDCs in developing micro plans for their respective villages as well as strengthening income generation activities by Self Help Groups. The Karnataka Forest Department has developed a comprehensive system for assessment of the performance of VFCs/EDCs. A mechanism of reward and recognition of best performing VFCs/EDCs have been instituted to generate enthusiasm and competition for improved performance by these institutions. The forest department has also appointed volunteers and motivators (out of state funds) to support the VFCs and EDCs after the completion of the project.

▼ Bamboo plantation done by Village Forest Community in Kolar district of Karnataka



▼ EDC members, Shringeri Range, Koppa Division



SWAN RIVER

Integrated Watershed Management Project



EXECUTING AGENCY

Forest Department,
Government of
Himachal Pradesh



LOAN AMOUNT

Amount: JPY 3,493 million
Agreement signed: 2006

Catchment areas of Swan River in Himachal Pradesh are located in the fragile and vulnerable Shivalik hills where the river frequently overflows its banks during the monsoon causing erosion of soil resources. To protect lands from soil erosion and floods, regenerate the forest cover and enhance agricultural productivity in Swan River catchment area in Una district, this Project is being implemented in the selected sub-watersheds of Swan River.

The project activities include afforestation, civil works for soil and river management, soil protection and land reclamation, and livelihood improvement activities, thereby improving the living conditions of people including the poor in the catchment area. The livelihood activities encompass on farm production activities, community infrastructure development and income generation activities through Self-Help Groups.

The catchment of the Swan river has been divided into 42 sub-watersheds, out of which 22 sub-watersheds with an area of 61,900 hectares have been selected for treatment.

The Project will be implemented through 95 Panchayat Development Committees (PDCs), an authorized body constituted under the Gram Panchayats. The approach adopted for intervention involves the Community Based Participatory approach jointly facilitated by the Project Implementation Unit of the project and community based organizations. The Forest Department is the nodal agency of the project. Besides, the Departments of Agriculture, Horticulture, Animal Husbandry, Irrigation and Public Health and Rural Development of the State are participating in the project.



◀ Tarsem Lal (L), a member of Shiva vegetable protection group stand in his turmeric crop with his wife Sushma Devi (R) in Ambota village in Una district.

▼ Earthen dam in village Pandoga in Una district



▼ Concrete water harvesting dam in village Amlehar in Una district.



▼ Dev Raj, a farmer, opens the sluice valve to irrigate his field as water flows with gravity from the dam in village Amlehar in Una district.



▼ A farmer working in his field in village Amlehar in Una district.



ORISSA

Forestry Sector Development Project



EXECUTING AGENCY

Forest and Environment
Department,
Government of Orissa



LOAN AMOUNT

Amount: JPY 13,937 million
Agreement signed: 2006



Karada is a small tribal village in Rayagada division and villagers depend mainly on forest produce. Karada and its surrounding villagers collect plenty of tamarind and other NTFPs, which they sell at nearest market (Ramnaguda which is 8 kms away). Sometimes, petty traders come to the village for purchasing these NTFPs. After the formation of VSS under OFSDP, the VSS committee purchased one 50 kg weighing machine under VSS's EPA fund and provided loan of Rs. 40,000/- from VSS revolving fund.

MALATI DEVI MUTIKA
VSS President, Karada Village

The project aims to restore degraded forests and improve the income level of the villagers by promoting sustainable forest management including plantations through Joint Forest Management (JFM) and community/tribal development. The project is to be implemented in 14 forest and wildlife divisions, namely Angul, Balliguda, Bonai, Deaogarh, Jeypore, Keonjhar, Koraput, Parakhemundi, Phulbani, Rayagada, Rourkela, Satlkosai, Balasore, and Bhadrak. These divisions fall in 10 districts of the state.

The major activities are to be planned and implemented by the Van Samrakshan Samities (VSSs) through preparation of comprehensive micro plans not only for the restoration of the degraded forests assigned to the communities, but also for the overall development of the village. One important sub-objective and approach of the project is to enhance capacity of the forest department staff, members of VSS, Self-Help Groups (SHGs) and the communities at large.

Under the project, 196,650 hectares of degraded forests shall be restored and 2,810 hectares of coastal plantations would be undertaken. A total of 2,275 VSSs and 4,500 SHGs would be formed under the project.

▼ Members of Chandimata SHG run a betel leaf plantation in Khadibil, Jaleswor district.



▼ Members of Mahamangla SHG making small hand made crafts from bamboo in Bardasahi



BEST PRACTICES - Autonomous Institution for Implementation

The Orissa Forestry Sector Development Society, which is the implementing agency of the project, is an autonomous organisation formed by the Government of Orissa under the Forest and Environment Department. The society has been registered under the Registration of Societies Act, 1860. The Chief Secretary and the Agriculture Production Commissioner, Orissa are respectively the President and Vice-President of the Society. The Project Director is the Ex-Officio CEO of the Society. The Society has a High Powered Committee headed by the Chief Secretary, and Governing Body headed by the Agriculture Production Commissioner- cum-Additional Chief Secretary. The Project Management Unit (PMU) is headed by the Project Director. The Society has its own bye-laws and accounting procedures developed in concurrence with the Accountant General and approved by the Government of Orissa. The Annual Action Plan and the annual budget are approved by the High Powered Committee. Being a society helps in taking quick decisions and timely implementation of different activities. Financial powers have been delegated to the PMU head, and also to the division level management unit chiefs to facilitate timely sanction of different works and for smooth implementation.

▼ Forest department staff working inside the hardening chamber at the Orissa Forest Rangers College hi-tech nursery in Angul



TRIPURA

Forest Environmental Improvement and Poverty Alleviation Project



EXECUTING AGENCY

Forest Department,
Government of Tripura



LOAN AMOUNT

Amount: JPY 7,725 million
Agreement signed: 2007



Taking advantage of 21 species of bamboos in the state, the Project undertook Skill Development of over 500 artisans in basket making, furniture making, turning products, bamboo-based ornaments, bamboo mat-making bamboo incense stick making and other office and domestic utility products. In addition, the Project is also encouraging handlooms and terracotta products. These products manufactured by the artisans are sold inside and outside state through the brand name 'Crafts & More'.

G.S. RAJU Project Director

The Project is being implemented in Tripura in 7 Districts (40 blocks) of the State since 2007 through 463 Joint Forest Management Committees (JFMC) and Eco-Development Committees (EDCs). The Project focuses on restoration of degraded forests and improving the livelihoods of people, especially the tribal population engaged in traditional shifting cultivation. The Project is managing about 70,000 hectares (ha) of forest land through participatory forest management involving 40,000 forest dependent families of which more than 90% are tribals.

The Project has so far achieved 53,187 ha of plantation, 8,533 ha of agroforestry and 507 ha of enrichment plantations. Under the Project, 2,449 ha of check-dams have been constructed for soil and water conservation and for ensuring sustainable livelihoods through fishery. As entry point activities, the project had constructed Vocational Training Centres (VTCs) which added to the village infrastructure.

The Project has formed 1,505 Self-Help Groups (SHGs) in 463 JFMCs, and these SHGs are running 2,645 micro enterprises which included pig rearing, fishery, broom value addition and a wide variety of other activities.

▼ Agroforestry Plantation Taidu RMU



The Project has a special component for settlement of 2,100 families who have been dependent on shifting cultivation in 16 Regrouped Forest Villages. The achievement so far has included raising 1,044 ha of agroforestry plantations, providing drinking water facilities and providing sustainable livelihoods through Non-Timber Forest Produce (NTFP) and other income generation activities.

Under the Project nine agro-forestry models have been developed for the first time in Tripura for rehabilitation of shifting cultivators in the forest land given to the tribals for deriving usufruct benefit. Under these agro-forestry models, short term intercrops, medium term intercrops and long-term primary crops are mixed in compatible manner.

▼ *Bamboo Turning Product Making*



▼ *Check-Dams and Fishery*



▼ *Embroidery*



▼ *Broom Making*



BEST PRACTICES - Centre of Excellence

The NTFP Centre of Excellence (NCE) has been formed under the project to focus on Non-Timber Forest Produce (NTFP) and value addition in a comprehensive manner. It is envisaged that NCE shall undertake research and provide modern technologies and productive planting stock. NCE shall also conduct training of community members as well as strengthen value addition and marketing of NTFP. In this regard, five Common Community Facility Centres (CCFCs) have already been set by NCE in partnership with various agencies for value addition of bamboo and various NTFP. Processing of broom grass and incense sticks (agarbatti sticks) have been identified as potential income generation activities considering the comparative advantage of Tripura with regard to these activities.

GUJARAT

Forestry Development Project - Phase II



EXECUTING AGENCY

Forest Department,
Government of Gujarat



LOAN AMOUNT

Amount: JPY 17,521 million
Agreement signed: 2007



The project has emphasized on creation and rejuvenation of Peoples Organizations' (JFMC/EDC) and developing sustainable livelihoods with a view to build the stake of communities in conservation and protection of forests. Recent initiatives under the project include the first ever successful attempt to get Organic Certification for selected forest produce, value addition of forest produce and development of market linkages.

ANIL JOHRI Project Director

The state of Gujarat faces the Arabian Sea, and has an approximate geographical area of 200,000 km². The state is also known for its rapid economic and industrial growth.

In 1994, forest coverage in Gujarat was 6.4%, which was significantly lower than the national average of 19.4%. It was evident that urgent interventions were required to stop further degradation of the forests.

In the first phase of the project, the primary focus was on afforestation, wildlife conservation, trainings and research. As a result of phase I, short-term employment of approximately 65 million man days of labour was generated through afforestation activities, with women as the larger beneficiaries. Such employment opportunity helped increase the income of the local communities whose livelihoods are dependent on forests.

According to the post evaluation of the phase I, initiated by JICA, and completed in September 2005, it became apparent that further assistance to Gujarat was needed to realize maximum return from the activities carried out and efforts made for sustainable forest management under Phase I of the project. Accordingly, Phase II of the project was formulated in 2007, the objective of which is to restore degraded forests, improve livelihoods and empower the local people who are dependent on forests by promoting sustainable forest management and community development, thereby improving the environment and alleviating poverty.

▼ A member of Jivan Deep Van Bachat SHG grows mushrooms in village Bavli in Vyara Division



▼ A member of Jai Sita Ram SHG makes a basket from bamboo in village Uchvan in Baria Division



▼ Members of Adaesh Van Bachat SHG make jewellery in village Sajupada in North Dang Division



- ▼ Members of Jai Mata Ji SHG sort and grade custard apple fruit collected from the forest in village in Rajavant Chotaudaypur Division.



- ▼ Delabhai Balobhai Thadui a farmer, JFMC member collects tomatoes in his field in village Panchala in Narmada Division. Tomato seeds were provided through community development activity.



- ▼ A tourist takes a picture as she relaxes next to her tent at Nature Education site in Kevadiya range in Narmada division.



- ▼ Tourists visit the Interpretation Center during their visit to an eco-tourism site in Kevidi Village in Chotoudaypur Division.



In Phase II, 11 tribal districts located in the eastern belt and three non-tribal districts have been selected. The project aims to cover 147,800 hectares of plantations in 13 divisions and undertaking soil and moisture conservation works over 118,400 hectares. The project also envisages wildlife conservation and development which includes protected area management in 7 protected areas, eco-tourism development in 3 sites, and eco-development in 7 protected areas and 6 biodiversity hotspots*.

As part of eco-tourism promotion, the project plans to construct and manage ecolodges, develop nature trails and establish information centres cum gift shop equipped with audiovisual facility in four protected areas of Shoolpaneshwar Sanctuary, Ratanmahal Sanctuary, Jessore Sloth Bear Sanctuary and Vansda National Park.

* Biodiversity hotspots are the richest and most threatened reservoirs of plant and animal life on Earth designated by Conservation International, an international NGO.

UTTAR PRADESH

Participatory Forest Management and Poverty Alleviation Project



EXECUTING AGENCY
Forest Department,
Government of Uttar Pradesh



LOAN AMOUNT
Amount: JPY 13,345 million
Agreement signed: 2008

In this project, afforestation activities will be conducted with the participation of local communities to rehabilitate forests, as they are crucial for the livelihoods of those in need. 80,500 hectares will be targeted for plantation and 800 Joint Forest Management Committees (JFMCs) will be formed. In addition, financial support will be provided to the targeted JFMCs for community development through construction of small infrastructure facilities such as link roads and for livelihood improvement through small-scale income-generation activities. For such village level activities, NGOs have been hired not only to help in forming and educating Self-Help Groups (SHGs) but also to provide and arrange trainings in different vocations and then link them with markets in the towns and cities.

Furthermore, the project also has a component of Children Forest Program, which is an attempt to help children learn the importance of forest conservation through environmental education.

The objective of the project is to restore degraded forests, improve livelihood and empower the local people who are dependent on forests by promoting sustainable forest management through Joint Forest Management (JFM) approach and community development, thereby improving environment and alleviating poverty.



▲ JFMC members working on the forest plantation in Village Rajamau in Hamirpur Division

▼ JFMC conducts a meeting at Rajamau village in Hamirpur Division



▼ GIS laboratory in Lucknow



▼ Students of Sri Krishna Devi girls inter college during their visit to Kukrail forest conducted under the Children Forest Programme in Lucknow



BEST PRACTICES - Children Forest Programme

“Children Forest Programme” is a unique feature of the project, wherein schools (both government and private) in 6 districts of the state are to be covered over a period of 5 years. The programme aims to develop a sense of voluntary tree planting among children, by having them understand the important role forests play in the context of global ecological balance. The CFP is an environmental learning programme that is typically based in schools with children as the main actors. In addition, teachers, parent and others in the community also join the children in making mini-forests on or near the school grounds. As a result of the experience, CFP participants develop a sense of pride and accomplishment in making positive and concrete contributions to their communities. To run the programme, the Uttar Pradesh Forest Department has hired the services of OISCA, a Japanese NGO having its representative office in New Delhi and also other NGOs.

CAPACITY DEVELOPMENT

ODA Loan Project

Capacity Development for Forest Management and Personnel Training



EXECUTING AGENCY

Ministry of Environment and Forests



LOAN AMOUNT

Amount: JPY 5,241 million
Agreement signed: 2008

It has been recognized that one of the factors causing destruction of the forests is the arbitrary use of forest resources by the poor village communities living in or on the fringes of forests, which depend on those resources to make a living. It is therefore vital to promote awareness of



the importance of forest management among the local village residents while planning for forest conservation, and to provide assistance to improve the livelihoods of the poor and their effective use of forest resources in a sustainable manner.

To that purpose, it is critical that the frontline staff of each state's forest department, which implements the project and is in daily contact with local village communities, receives effective and well-structured trainings on the

Technical Cooperation

Project for Capacity Building of State Forest Training Institutions and Central Academy for State Forest Services (CASFoS)

- » Cooperation period: March 2009 to March 2014
- » Counterpart agency: Directorate of Forestry Education, Ministry of Environment and Forests (Dehradun, Uttarakhand) and CASFoS, Dehradun

Background and Objective

By 2001, forest coverage in India had fallen from 40 percent at the beginning of the twentieth century to 23 percent, below the worldwide average of 30 percent. It has been recognized that one of the factors causing destruction of the forests is the arbitrary use of forest resources by the poor village communities, living in or on the fringes of forests, which depend on those resources to make a living. It is therefore vital not only to promote awareness of the importance of forest management among the local villagers but also to provide assistance for improvement of their livelihoods and effective use of forest resources in a sustainable manner.

To this end, it is crucial that the frontline staff of each state's forest department, who are in daily contact with local village communities, receive effective and

well-structured trainings, so that they could be equipped with the latest skills and techniques covering various aspects of the forestry sector, including forest management methods based on a new innovative approach. However, most of the frontline staff currently lack such skills and techniques, and do not yet have adequate experience in sharing techniques with local villagers.

With this background, this Technical Cooperation project aims to improve the in-service training courses at the national level in Central Academy for State Forest Service (CASFoS), Dehradun. Since state forest officers who are trained at CASFoS become leaders and trainers for the frontline staff in their respective states, the quality enhancement of the in-service training courses at CASFoS is quite important and ultimately leads to upgrading the skills of frontline staff all over the country.



latest skills and techniques covering various aspects of the forestry sector, including forest management methods based on a new innovative approach. However, 63 state-operated forest training schools throughout India, that are in charge of providing the training to the frontline staff are ill-equipped to provide appropriate training due to various reasons such as inadequate state budgetary allocations, poor infrastructure and low priority accorded by the forest departments to trainings. The project target region will be more than 10 states in India which are to be selected as per the criteria agreed between MoEF and JICA.

In this project, a full training curriculum will be developed to provide training in the latest technology and skills needed for forest conservation, as well as facilitating the implementation of Joint Forest Management (JFM) with local village community members. ODA Loan funding shall also be used to repair and rehabilitate aging training facilities or construct new ones in the states which have no existing training facilities, as of now.



Project Summary

For this project, Japanese experts who have long experiences in forestry administration are dispatched from Japan's Forestry Agency, Ministry of Agriculture, Forestry and Fisheries, to provide technical supports. The project is initially to review the existing in-service training courses and identify through surveys the needs and challenges of the state-level trainings, followed by development and implementation of need-based model in-service training courses at CASFoS, Dehradun. It also extends support in establishing monitoring and feedback system which helps clarify the impacts of the training courses at CASFoS and improve them systematically.

Project Highlights

This Technical Cooperation project is designed to have synergy effects with the ODA Loan Project “Capacity Development for Forest Management and Personnel Training”. Whereas the Loan project provides funds for improvement of state-level training environment for frontline staff through the rehabilitation of State Forest Training Institutions and through capacity development of frontline forestry staff, the Technical Cooperation project contributes to the enhanced skills of state-level instructors by improving the national-level in-service training course meant for them.

SIKKIM

Biodiversity Conservation and Forest Management Project



EXECUTING AGENCY

Department of Forest,
Environment and Wildlife
Management, Government
of Sikkim



LOAN AMOUNT

Amount: JPY 5,384 million
Agreement signed: 2010

▼ *Red Panda: One of the flagship species unique to Himalayan ecosystem. JICA supports conservation activities of such species.*



The Japan-India commitment for biodiversity conservation has been drawing increasing global interest. The year of 2010 was designated as the International Year of Biodiversity by the United Nations, and Japan hosted the Convention on Biological Diversity, "10th Conference of the Parties" (COP10) in October 2010.

Despite high global biodiversity throughout the world, there are 34 regions (biodiversity hotspots²) that are in critical danger of being destroyed. One of these hotspots is located in the eastern Himalayan region of Sikkim State in India. This objective of the project is to strengthen biodiversity conservation activities and forest management capacity, and to improve livelihood for local people who are dependent on forests, thereby contributing to environmental conservation and harmonized socio-economic development of Sikkim.

In this project, sustainable biodiversity conservation, afforestation and income generation activities including ecotourism for the community development are to be promoted. This is the first project that has a main emphasis on biodiversity conservation among the JICA-assisted projects in the forestry sector in India. The project shall assist activities such as baseline survey of the region, strengthening management skills for protected areas (including strengthening local community organizations), and carrying out a study to facilitate the designation of the Kanchenjunga National Park as a World Heritage site.

² Biodiversity hotspots are the richest and most threatened reservoirs of plant and animal of life on Earth designated by Conservation International, an international NGO.

▼ *Khangchendzonga Biosphere Reserve*



BEST PRACTICES - Technical Support for Formulation of Eco-tourism Policy

As a part of technical support, services of a JICA appointed eco-tourism expert have been provided to help Sikkim formulate its eco-tourism policy that shall serve as the foundation for economic development, without compromising on environmental conservation.

TAMIL NADU

Biodiversity Conservation and Greening Project



EXECUTING AGENCY
Forest Department,
Government of Tamil Nadu



LOAN AMOUNT
Amount: JPY 8,829 million
Agreement signed: 2011

The state of Tamil Nadu is located in the southern part of India and in the Western Ghats Mountain Range which is one of the biodiversity hotspots and with 28 protected areas and 553 endemic species. In addition to 230 redlisted species, many problems are reported, such as man-animal conflict. Among the impoverished residents today struggling to meet their livelihood needs, many are so heavily dependent on forest resources that they have no choice but to turn to deforestation to make a living. In Tamil Nadu, long-term afforestation projects supported by the Japanese ODA Loans have been implemented, and these projects have contributed to increasing the forest and tree cover. However, the forest cover is still only 22 per cent, much below the national target of 33 percent.

Given these circumstances, it is urgent to manage protected areas and forests scientifically for a sustainable forest management system and to improve the livelihoods of people living in forests or on forest fringes while conserving the region's biodiversity. The objective of the project is to strengthen biodiversity conservation by improving the eco-system and management capacity as well as undertaking tree planting outside the recorded forest areas, thereby contributing to environmental conservation and harmonized socio-economic development of Tamil Nadu. Additionally, the tree planting activities are expected to contribute towards reducing the effect of greenhouse gases.

In order to conserve the biodiversity in this state with its many precious endemic species, this project will conserve the ecosystem (by removing invasive and exotic species), strengthen the monitoring systems for fires, poaching, and other threats, establish fences and trenches to reduce man-animal conflict, improve the livelihood of people living in or on the fringes of forests, and carry out community-based ecotourism.

RAJASTHAN

Forestry and Biodiversity Project - Phase II





EXECUTING AGENCY
Forest Department,
Government of Rajasthan



LOAN AMOUNT
Amount: JPY 15,749 million
Agreement signed: 2011

The state of Rajasthan is the driest state in India and two thirds of its geographical area is covered by Thar Desert. Owing to severe climatic conditions, the forest & tree cover of the state at 7.11% is far below the national average of 23.4%. Furthermore, the state, especially Western Rajasthan, faces a major challenge of desertification due to recurrent drought and increasing human and livestock pressures. Past JICA assisted forestry projects in the state have contributed to increase in forest cover and promotion of community participation in conservation and protection of forests. Efforts have also been made to check desertification and to restore ecological status of the desert area by intensive afforestation and silvopasture. However, considering the huge size of the state and adverse climatic and geographic conditions, more efforts are needed to increase forest cover and protect the rich biodiversity of the state.

The new project aims to enhance forest area and livelihood opportunities of the forest dependent people and to conserve biodiversity by undertaking afforestation and biodiversity conservation measures through Joint Forest Management (JFM) approach, thereby contributing to environmental conservation and socio-economic development of the state.

Community mobilization and poverty alleviation initiatives form integral components of the project. The project activities include canal side plantation, sand dune stabilization cum pasture development, silvopastoral plantation and block plantation in desert areas of the state. Rehabilitation of degraded forests, aided natural regeneration, fuel wood and other plantation are to be taken up in the non-desert areas. Biodiversity conservation activities are planned to be taken up in the fringe areas of 7 Protected Areas of the state. Water conservation measures shall go hand in hand with the plantation activities to be taken up under the project.

WEST BENGAL

Forest and Biodiversity Conservation Project



EXECUTING AGENCY

Forest Department,
Government of West Bengal



LOAN AMOUNT

Amount: JPY 6,371 million
Agreement signed: 2012

The State of West Bengal, located in the eastern part of India, has the second highest population density in India. The poverty rate is also higher than the national average.

Overuse of forest resources such as firewood and other forest products required for daily living is ever increasing, applying immense biotic pressure on forest resources and creating rapid degradation of forests. While there is a rising trend in forest coverage, West Bengal's forest cover rate remains at 17.4 percent (2007), a low level as compared to the national average of 23.8 percent. Thus, it is imperative to take remedial actions for restoring the ecology.

Under the project, forest management will be strengthened through Joint Forest Management activities, and the measures to prevent man-animal conflicts and to improve the habitat of wildlife in Protected Areas and surrounding areas will be undertaken. Community development and livelihood improvement activities will also be carried out to improve the socioeconomic conditions of local people, and the institutional capacity as well as infrastructure for the forest department such as hi-tech central nurseries, will be strengthened and improved as necessary to support those activities.

Afforestation is the largest component—about 35% of the project outlay, including Central hi-tech nursery development for taking up plantation in 5 models over 11,470 hectares (ha). Use of Quality Planting Material (QPM) has been envisaged in the project, and development of hi-tech nursery and related nursery operations are central to production of QPM.

▼ A Quality Planting Material of 'Neem'



▼ *Outlay of the Central nursery*



BEST PRACTICES - Forest Management Information System (MIS) on “Online Generation of Plantation Journal”

As a part of the on-going JICA aided West Bengal Forest & Biodiversity Conservation Project, an initiative has been taken towards building a comprehensive and searchable databank of Plantation Journals through an online MIS system. This MIS has made availability of Plantation Journals and MIS data at finger tips, and online Data Analysis and report generation have also become possible. To reduce the common errors during data entry and to guide the operators, inter-linked Master Data set of location, land schedule, models of plantation, species, central nursery locations, soil and moisture conservation works, soil data, etc. have been compiled and interlinked. Establishment of link between MIS & GIS data has been also started as a part of this MIS.

▼ *Training on composting at Arabari, Medinipur*



UTTARAKHAND

Forest Resource Management Project



EXECUTING AGENCY
Forest Department,
Government of Uttarakhand



LOAN AMOUNT
Amount: JPY 11,390 million
Agreement signed: 2014

Uttarakhand has abundant forests and water resources. However, the forests in the state are being degraded due to pressure from an increasing population. The population in rural Uttarakhand has nearly doubled between 1981 and 2011. Since the majority of rural population depends on forest resources for their livelihood, increasing human population and livestock has led to the demand for wood fuel and animal fodder. It is estimated that between 2005 and 2011, 150,000 hectares of forests got degraded in the state.

Besides, in June 2013, heavy rains caused abnormally large floods and landslides in Uttarakhand. In order to safeguard against such damage, it is necessary to implement water and soil conservation measures through afforestation.

The Uttarakhand Forest Resource Management Project aims to enhance forest management, forest restoration and biodiversity conservation, with community participation; improve economic and social well-being of local communities through livelihood improvement activities such as generation and marketing of non-timbre forest produce and development of eco-tourism; strengthen institutional capacity such as of Uttarakhand Forest Department; and carry-out recovery and disaster mitigation, such as restoration of forest roads and building of evacuation shelters, in the areas affected by the floods and landslides.

ABBREVIATION TABLE

AFD:	Agence Française de Développement	MoEF:	Ministry of Environment and Forests
BPL:	Below Poverty Line	NCE:	Networks of Centre for Excellence
CASFoS:	Central Academy for State Forest Services	NGO:	Non Governmental Organization
CCFCs:	Common Community Facility Centres	NTFP:	Non-Timber Forest Produce
CDM:	Clean Development Mechanism	ODA:	Official Development Assistance
CFP:	Children Forest Programme	OFSDP:	Orissa Forestry Sector Development Project
DFID:	Department for International Development	OISCA:	Organization for Industrial, Spiritual and Cultural Advancement
EDC:	Eco Development Committee	PDCs:	Panchayat Development Committees
EPA:	Entry Point Activities	PMU:	Project Management Unit
GIS:	Geographic Information System	PRA:	Participatory Rural Appraisal
IGA:	Income Generation Activities	SFS:	State Forest Services
JBIC:	Japan Bank for International Cooperation	SHGs:	Self Help Groups
JFM:	Joint Forest Management	TAP:	Tamil Nadu Afforestation Project
JFMC:	Joint Forest Management Committee	VFCs:	Village Forest Committees
JICA:	Japan International Cooperation Agency	VFPMC:	Village Forest Protection and Management Committee
JPY:	Japanese Yen	VSS:	Van Sanrakshan Samiti
KfW:	Kreditanstalt für Wiederaufbau		
MIS:	Management Information System		





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Photo: A child runs in the shallow water of river Swan in Una district, Himachal Pradesh.