

Chapter 3: THE TRIPURA FOREST ENVIRONMENTAL IMPROVEMENT AND POVERTY ALLEVIATION PROJECT

3.1 INTRODUCTION

This chapter is an introduction to the Tripura Forest Environmental Improvement and Poverty Alleviation Project. It gives in brief the project's mandate and outlines some of its activities in the last nine and a half years since its inception. It also summarises the best practices and the methodology followed for achieving the targets. This chapter is based mainly on the project documents. These include minutes of various meetings, copies of presentations made to various authorities, Management Information System Reports, periodical progress reports, base line survey document, publications and newsletter of the project, field survey and inspection reports, independent assessment of assets document, and information contained in the project's website. In addition, several officers working with the project have constantly added to my knowledge and the information about the project.

The state government of Tripura entered into an agreement with the Japan International Cooperation Agency (JICA), earlier called Japan Bank for International Cooperation for implementing the project called The Tripura Forest Environmental Improvement and Poverty Alleviation Project.

The objectives of the project are to

- a) Improve forest density
- b) Improve income and livelihood options of target households
- c) Conserve soil and improve water regime
- d) Conserve biodiversity

For the purpose, a society called the Tripura Forest Environmental Improvement and Poverty Alleviation Society (TFIPAS) was formed. It is a society registered under the Societies Act 1860. The composition of the Governing body is given in the Table 1.

Chief Secretary, Govt. of Tripura	Chairperson
Principal Chief Conservator of Forests, Tripura	Member
Principal Secretary, Finance Dept. Tripura	Member
Member (Technical Expert-Forestry/Admn. & Fin.) National Rain-fed Authority, New Delhi	Member
Member (Technical Expert-Animal Husbandry) National Rain-fed Authority, New Delhi	Member
Principal Secretary, GA (P&T) Dept., Tripura	Member
Chief Wildlife Warden, Tripura	Member
Principal Secretary, Rural Development Dept., Tripura	Member
Principal Secretary, Health & FW Dept., Tripura	Member
Principal Secretary, Animal Resource Development, Dept., Tripura	Member

Commissioner & Secretary, Tribal Welfare Dept., Tripura	Member
Commissioner & Secretary, Industries and Commerce Dept., Tripura	Member
Chief Executive Officer, TTAADC	Member
Chief Executive Officer & Project Director, Tripura JICA Project	Member
Secretary, Fisheries Dept., Tripura	Member
Director, (P&I), Tripura JICA Project	Member Secretary

Table 3.1 Composition of Governing Council of TFIPAS: Govt. of Tripura

The project period for the Tripura JICA project is ten years, from 2007-08 to 2016-17. It was initially envisaged for a period of 8 years but was subsequently extended by another two years. Seven districts of Tripura state have been covered under the project. The project covers 456 villages/ hamlets. Most of these villages are ADC (Autonomous District Council) villages. The total budget of the project is JPY 9.2 billion. The exchange rate of 1 rupee is 2.52 JPY so the budget of the project in Indian rupees is about 360 crores.

The JICA has given JPY 7725 million as loan at the rate of 0.75% interest. The repayment period is 30 years after a grace period of 10 years. The loan is shared by Government of India and Government of Tripura at 90% and 10% respectively. The remaining portion of the total budget is a grant.

3.2 TARGETS

The target of the project was to form 464 Joint Forest Management (JFM) committees through which the activities would be completed. Wherever JFMCs already existed, the project envisaged to use the same for its activities. For implementation of the project, microplans were to be prepared for each JFMC.

The project also envisaged conducting a Baseline study in its initial phase to enable it to scientifically chalk out future plans.

The targeted villages were also to be surveyed using the Global Positioning System (GPS) and JFMC boundaries defined. The project envisaged to target 36000 families who would be managing about 80000 hectares of forest land through JFMCs as well as RoFR land.

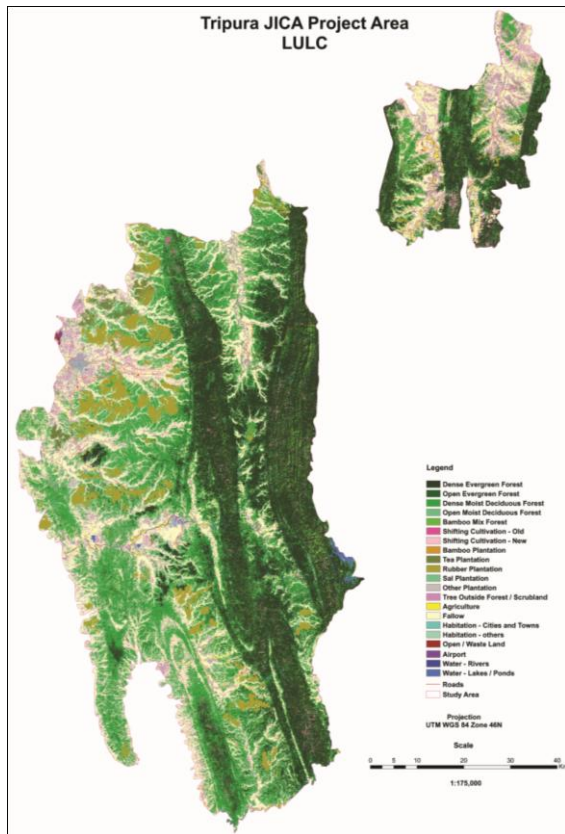


Figure 3.1 Forest map of Tripura

In collaboration with the forest department, the project envisaged regeneration of forest land of 53000 hectares through JFMCs. Out of this, 16200 hectares was to be done through Artificial Regeneration (AR) and the remaining 36800 hectares was to be done through Aided Natural Regeneration (ANR)

In the JICA headquarters in Agartala, the state capital, a web enabled management information (MIS) software was to be developed and used in the project. A website of the project was hosted at address www.tripurajica.com. In the Project Management Unit (PMU), an IGA (Income Generating Activities) Monitoring cell was also established.

The project had a target of undertaking Agroforestry in 8297 hectares of forest land.

For training and Capacity Development, many Vocational Training Centres were to be established and the project envisaged to train over 90000 people in various activities.

It sought to develop infrastructure for various Income Generating Activities. It planned to develop check dams for fisheries, pig shelters for piggery work, market sheds and other centres for value addition of products.

Another study by a third party for independent assessment of the assets created as a mid term review was also envisaged.

3.3 BASE LINE STUDY

In order to design effective strategies and interventions to achieve the objectives of the JICA project, a comprehensive database at the JFMC level pertaining to some key objectively verifiable indicators (OVIs) needed to be designed. Such an exercise was deemed essential to enable continuous monitoring of the progress of the project and undertaking mid-term corrective measures. The baseline data was to act as a bench mark for assessing the present status depicting the current social, economic, health and educational status before the execution of the project and impact assessment after the project interventions.

A socio economic base line survey was conducted by Society for Social Service Chhattisgarh in 2011-12, a Non-Governmental Organisation (NGO) based in Chhattisgarh.

The baseline survey completed the first phase of its survey in 2013-14 where 278 villages were surveyed. In the second phase of the survey conducted in 2014-15, 341 villages including 61 control villages were surveyed.

Some of the findings of the study are enumerated below:-

3.3.1 Profile of the JFMC Villages

Most villages had over half of the total area of the village covered under forest.

Over 53 percent of the 280 villages covered had less than 100 households in the village and over one-thirds of the JFMCs covered had between 100-200 households.

Most of the households in over 92 percent of the JFMCs belong to ST category.

The land holding pattern among these households reveals that a majority of the households was landless.

Many of the villagers had livestock. On an average, less than 2 litres of milk was produced per cow, which was used for domestic consumption, very little milk was sold.

The economic status of the people is in lamentable condition. More than half of the families in 26 percent of the JFMC villages were below the poverty line and in 22 percent of the JFMC villages, 41-50 percent of the families were said to be BPL.

The villagers depend on the forest for sources of fuel / energy also as the fire wood collected from the forests is the major source of energy. More than 75 percent of the households in 94 percent of the villages use firewood collected from the forests.

The nearest forest produce market is within 3 kms distance for 44 percent of the JFMC villages.

Most of the people were aware of MNREGA and benefiting from the scheme.

3.3.2 Profile of Households:

The primary occupation of the majority of the JFMC households is agricultural labour.

Though JFMC membership is high, only 11 percent of the total JFMC households have SHG membership.

Around 58 percent of the households had 2 persons in the 19-65 yrs age group which is considered as the 'earning group'.

Most of the boys and girls in 6-14 years age group were enrolled in schools. However, none of the girls in 4 percent of the JFMC households and none of the boys in 1 percent of the households were going to schools, but were engaged in supplementing the household income.

The economic profile of the households presents a very gloomy picture. Nearly 46 percent of the JFMC households have kutcha houses. More than 58 percent of the JFMC households do not have electricity connections at all. Major proportion of 93 percent of the households is using wood as fuel.

Ownership of vehicles and agricultural implements was negligible indicating the economical backwardness of the households.

3.3.3 Dependence on Forests

Around 68 percent of the JFMC households are engaged for 2 to 3 months in collecting forest products while 24 percent of the JFMC and control households are engaged for more than 120 days in collecting forest products.

Forty three percent of the JFMC households in all the divisions collect all forest products for 4 -6 hours per day, 35 percent households collect for 3 to 4 hours and 23 percent collect for less 3 hours.

The responsibility of collecting forest products primarily lies on the women folk in the majority of the households. Women in 70 percent of the JFMC households and 73 percent of the control households shoulder the responsibility of collecting various forest products.

Very few households were engaged in processing and value addition of NTFPs.

3.3.4 Economic Status of the Households

People living nearer to the forests depend more on the forests for their livelihood. Nearly 99 percent of the households in the JFMC earn their income from forestry.

Nearly 42 percent of the households in all the divisions earn an income of more than 30000 annually by selling the forest products like fire wood, vegetables, fruits, bamboo, etc.

An analysis of the expenditure pattern reveals that almost all the households spend less than 50 percent of their income. Larger pie of the expenditure is on food items only. Around three-fourths of the households spend less than 5 percent on clothes and 72 percent spend less than 5 percent on education. Interestingly, only 15 percent of the households spend 11-25 percent of the income on agriculture.

The study concluded that given the economic, educational and developmental background of the region, it is necessary that more interventions are necessary to bring the tribes of Tripura on par with the other sections of the society.

3.4 APPROACH

The project has followed a systematic approach for the SHGs. The following steps have been followed for the same:-

Formation, Registration, Basic training for gradation of the SHGs

Handholding through IGA support staff.

Gradation by a committee under DFO involving Banks and DRDA

Selection of IGAs- Animal Resource based, Fishery, and NTFP Skill development training on chosen activities.

Sanction of loan from Revolving Fund (RF)

Micro enterprises by the SHGs

Recovery of loans

Linking with Banks, TRLM, and NERLP

Continuous monitoring by IGMAC using mobiles and IT technology.

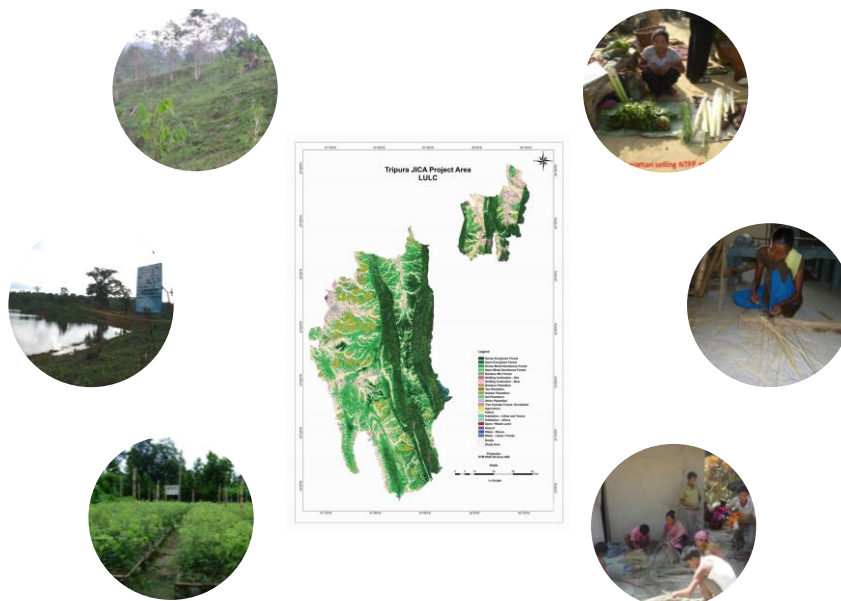


Figure 1 Activities

3.5 SELF HELP GROUPS

The project formed 463 Joint Forest Management Committees in by 2013-14. In many cases the JFMCs that were already in existence were reorganised. The documentation and other works of the JFMCs were strengthened and made more viable. Regarding formation of Self Help Groups too, the project target was 1400. However till end of 2016, 1541 SHGs had been formed, thereby exceeding the target.

The project envisaged to provide a one time grant in the form of a Revolving Fund placed at the disposal of the JFMC. The RF provided was Rs 1 lakh for each JFMC. (It was however subsequently enhanced to Rs 1.5 lakh per JFMC). The JFMC in turn gives loans at very low rates of interest to the SHGs under it from the RF grant. The SHGs on an average has 10-12 members each from 10- 12 households. They take up an income generating activity for which the project does further handholding. The SHG uses the loan to set up its IGA, and on making profits, returns the loan to the JFMC. The SHGs are graded based on their performance and given further loans.

Regarding the current financial outlays, Rs 689 lakhs have been transferred by the project as RF account to the JFMCs. The total number of project activities running are to the tune of 3051.

1445 SHGs have passed I gradation and 408 SHGs have passed II gradation. The loan given by the project is Rs 538.11 lakhs. In addition other agencies too have given loan to the project worth Rs 172.04 lakhs. The state government has also in a fund convergence initiative extended further loans to the SHGs. The total savings by the SHGs by end of 2016 was Rs 145 lakhs. The JICA has also recovered loan amount of Rs 211.21 lakhs from 864 SHGs.

Most SHG have taken up second third and even subsequent cycle of activities for IGA, which is a sign of sustainability. In addition to the project, SHGs are taking loans from other sources local commercial banks. The all women SHGs are getting linked with NERLP and NRLM.

Over 400 decentralised people's nursery were also developed in all the areas where 35 lakhs saplings were raised and sold at the cost of Rs 4 each. (pic). These nurseries were invariably run by women SHGs.



Figure 2 Decentralised People's nursery

3.6 REGROUPED VILLAGES

The project took up a large number of activities in the regrouped villages. The state government had earlier resettled various tribes of nomadic jhum cultivators into combined hamlets of villages. Earlier they were living in dispersed areas and were therefore not getting any benefits of the state social and welfare schemes. These hamlets are invariably now located around a road head. These areas where the nomadic Jhum cultivators are now settled are known as the regrouped villages. These villages could now avail the benefit of having medical facility, school, housing etc. The project also incorporated 16 of such regrouped villages in its ambit. It provided to about 2000 families kitchens in their homes. 47 places, tube wells (submersible / ring wells) were provided. (pic). 67 SHGs were formed were also formed in these Regrouped villages. Out of these, 46 SHGs took loans of Rs 10.3 lakhs for Income Generation Activities. A pre primary school building was made by the project in one such regrouped village. In three villages, market sheds were developed. (pic) In others 134 units of check dams were built. The project has given special emphasis to development in these villages as the raison de atre of having these regrouped villages by resettling Jhum cultivators and engaging them in alternate means of livelihoods is in alignment with the project's goals. Jhum (slash and burn) is an activity that quickly degrades the forest wealth and leads to very slow regeneration. One of the objectives of the project is to prevent degeneration of forests by proving more sustainable alternate means of livelihoods to the forest fringe dwellers.

3.7 TRAINING FOR INCOME GENERATING ACTIVITIES

The project right from the beginning aimed to build capacity of the local people in such a manner that the activities undertaken by the project are sustainable in the long term. A lot of effort and inputs were dedicated to training and capacity development.

For training purpose, standardised business plans were prepared. The training was carried out in TOT (Training of Trainers) mode through standardised study materials and audio-visuals.

The training material was in local language. The linkage of various resources like check dams, plantations, CCFCs, mini CCFCs and IGAs was done. Members of each SHGs were also given training in accounts. Specific IGA support staff was allotted to groups of SHGs. Value addition and subsequent marketing of products through crafts and other outlets Fairs and online sites was also done.

The project has exceeded its target for imparting training to the SHGs and JFMC members. Against a target of 90,147 people it actually trained 90,485 people.

The following Income Generating activities are currently ongoing under IGA part of the project.

- Dairy
- Goatery
- Poultry

- Broom making
- Nursery for seedlings
- Piggery
- Fishery
- Vermi composting
- Tailoring
- Duckery
- Handlooms
- Handicraft
- Bee keeping
- Bamboo
- Candle making
- Mushroom farming
- Other NTFP



Figure 3 Mushroom farming

As per project documents, 203 lakh man days were generated by the project upto Sept 2016. The artisan development programme ran from 2012 to 2014. The project trained and developed (pic) over 1000 artisans in making bamboo furniture, bamboo jewellery, bamboo turning, bamboo mat products, root carving (pic), handloom and terracotta. For further support in marketing, seven sales outlets were opened. Out of these, three outlets are in the state capital, Agartala, including one in the Project Management Unit. The remaining four outlets have been opened in Baramura, Tepania, and Matabari, which is a pilgrimage town and attracts many visitors.

Under the project, 85 trainings have been conducted for agarbatti making in which 3278 people were trained. The training was conducted with the help of Tripura Bamboo Mission. Initially agarbattis were made only manually subsequently in 2013- 14, 5 semi mechanised stick rolling unit were set up through TBM. Presently, three such units are functional.



Figure 4 Agarbatti rolling machine

Two trainings for bamboo root carving were conducted by the project and twelve artisans were trained and developed in this craft. Bamboo root carving craft is a beautiful craft unique to Tripura where the Bamboo roots are chiselled into masks and busts and the natural rhizome portion is shaped into the hair or moustache (PIC)

Twelve people in one SHG were trained in bamboo basketry making with Muli bamboo which is a variety of bamboo which is very widely prevalent.

For fishery as well as ecological purpose, soil and water conservation was targeted in a big way. Several check dams were constructed after scientific GIS surveys to check watershed lines etc. as a result a total water area of 1452 hectares was created. This has an annual fishery potential of 2802 MT. In order to ensure scientific fish farming by the SHGs, joint surveys of the check dams in collaboration with the fisheries department were conducted to assess their suitability for fish farming. 626 hectare of water area was identified in various JFMCs and Fingerlings were distributed in collaboration with the state fisheries department. This initiative has invoked a very positive response among the SHGs.



Figure 5 Check dam under construction



Figure 6 Pisciculture in check dams

3.8 PLANTATIONS AND AGROFORESTRY

The project undertook raising of 1140 hectares of enrichment plantations in the existing areas of the project. Commercially important NTFP species like Gandhaki, black cardamom, Black pepper, broom grass etc, were grown as assisted regeneration.

GIS based mapping of project areas was also done and the boundary maps of the 463 JFMCs prepared on a scale of 1:5000.

Agro forestry was implemented in a scientific manner. This project had a target of 8300 hectares. The plantations were taken up in clusters in RoFR lands by making them into Joint Liability Groups. Nine agro forestry models were created. The unit cost per hectare of these models came to Rs 52,000 to Rs 56000/. Out of this, Rs 22,000/ was met from JICA funds and the rest came through MGREGA through fund convergence. Workshops were organised through Panchayats, TTAADC, Blocks, Agriculture and Horticulture Departments.

The agroforestry models were developed in such a manner that there were one or two main crops and one or two intervening crops. These were designed based on the soil condition, climate, humidity and the existing pattern of flora on the land. (Table 2)

Agro – Forestry Models of Tripura JICA Project			
MODEL	MAIN CROP	INTER CROP	COST PER HA (IN RS.)
Model - 1	Jackfruit, Bamboo	Maize, Pineapple	49,000
Model - 2	Lemon, Gamar	Pigeon Pea, Ginger	52,000

Model - 3	Areca nut, Bamboo	Sesame, Maize, Black Pepper	50,000
Model - 4	Litchi, Lemon, Acacia	Maize, Turmeric	49,000
Model - 5	Jackfruit, Teak	Maize, Ginger	51,000
Model - 6	Mango, Bamboo	Maize, Pineapple	51,000
Model - 7	Areca nut, Agar	Turmeric, Black Pepper	53,000
Model - 8	Banana, Acacia	Turmeric	52,000
Model - 9	Orange, Acacia	Papaya, Turmeric	52,000

Table 1 Agroforestry models

The agroforestry part of the project too has been successful. Many local NTFPs are becoming increasingly providing commercial gains to the collectors and producers.

3.8.1 Wild cardamom (Black cardamom)

From 2014-15, systematic harvest of *Amomum aromaticum* (black cardamom) was started. Awareness for the same had to be created. Raw cardamom is now sold at Rs 18- 20 as against Rs 3-4 earlier. Dried cardamom is sold for Rs 280- Rs 380 per kg. from 2017 onwards. The project has planned for further value addition.

Awareness generation campaigns were undertaken for the best practices for this product's use and harvesting. In JICA publications, caution was sounded that the wide harvesting of large cardamom from the forest of Tripura could be a short lived affair unless appropriate measures were taken for its systematic cultivation and harvesting. It was shown that cultivation of large cardamom makes a financially viable proposition with an attractive rate of return. It made a perfect fit for cultivation in the RoFR land as beneficiaries were already accustomed to using blanks in the forest land for cultivating such cash crops. The need for assessment of the available resources in the forests and measures to be taken for its systematic regeneration were given.

Large cardamom has been known to be used as early as the sixth century BC in ayurvedic preparations. It has various physiological and pharmacological properties. It is used as a traditional medicine for bad breath, tooth gum and oral disorders, indigestion, urinary problems and depression. Scientific research and future scope of further medicinal properties of large cardamom was also shown. It is used as aroma therapy for fighting stress related problems. It has been scientifically proved that the extract of the rind showed anti-microbial activity against *Staphylococcus Aureus*. It was found that the essential oil isolated was effective against majority of microorganisms. The Perils of indiscriminate harvesting of large cardamom without suitable regeneration were discussed in meetings. Interaction with JFMCs and local traders in Tripura was organised. Marketing is done further by the local traders to traders in Gujarat and UP (Lucknow). The rate of royalty for collection by the forest dwellers was fixed by the State Government and marketing leads also arranged by the project.

3.8.2 Gandhaki

For Gandhaki, an aromatic plant with medicinal uses, about 330 hectares plantation was done in the project area. An oil extraction unit (pic) was set up in 2014. In 2014-15, JFMCs of Kailashahar sold Gandhaki worth Rs 24.12 lakhs. The NTFP Centre for Excellence (NCE)

is facilitating harvesting and aiding in the value addition of Gandhaki through JFMCs and SHGs. Rate of collection in tender is Rs 20/ per kg for green rhizomes and Rs 131/ per kg for dried rhizomes.

3.8.3 Broom grass

It is understood that 2835 metric tonnes of Broom grass worth Rs 14 crores was collected and sold by JFMC/ SHG members from 2011 to 2016. According to project documents, 22 mini CCFCs were constructed and 560 people trained in broom making. In addition a further 570 hectare fresh broom grass plantations were raised in 2016- 2017. For the year 2015-16, approximately 8 lakh brooms will be formed. 4500 families have directly benefited from direct collection. The value addition will generate employment for another 1000 families.

3.8.4 Bamboo

Kanak Kaich is a locally available variety of bamboo which is used for producing a whole range of furniture: tables, chairs, sofa sets, cots, room partition, handicrafts etc. The use of Kanak Kaich in furniture has evolved very rapidly in the last few years. JICA project endeavoured to use Kanak kaich to help transform the rural economy. It also promoted its management in an eco-friendly and sustainable manner. The harvesting, treatment, processing, value addition, marketing were attempted in a scientific manner. These included activities like straightening in smoke and application of natural preservatives, the correct month of harvesting and procedure for cleaning and drying after harvesting. Various meetings between the traders and JFMCs were organised. Demonstrations cum training in some SHGs were also organised. The project used CFLE for technology transfer for treatment of Bamboo. Two SHGs were identified for this technology transfer.

It is believed that Kanak Kaich bamboo can give an annual return on Rs. 2 lakh per hectare when planted and managed properly.



Figure 7 Bamboo harvesting and transportation



Figure 8 Bamboo turning work

3.9 NTFP CENTRE OF EXCELLENCE (NCE)

NTFP Centre of Excellence (NCE) has been created by the Govt of Tripura under Tripura JICA Project, in 2008 inter alia, with the objective of promoting and facilitating NTFP activities as a means of livelihood for the masses on a sustainable basis, dissemination of technology information and development of enterprise and to assist in marketing of NTFP.

The Board of Management of the NCE are given in Table 3

i.	Chief Executive Officer & Project Director, Tripura JICA Project- Chairman;
ii.	Director (Industries & Commerce), Tripura- Member;
iii.	Director (Handloom, Handicrafts & Sericulture), Tripura- Member;
iv.	Director (ICAR), Lembuchhara, Agartala- Member;
v.	Head of Bamboo Cultivation & Research Centre, Tripura University, Agartala- Member;
vi.	Secretary, Crafts Council of Tripura- Member;
vii.	Representative of Lead Bank of Tripura- Member;
viii.	Deputy CEO, Khadi & Village Industries Commission (NER Zone), Guwahati- Member;
ix.	Director, Indian Institute of Entrepreneurship, Guwahati- Member; and
x.	Director, NTFP Centre of Excellence, Agartala- Member Secretary.

Table 2 Management Board of NCE

The NCE seeks to address the issue of NTFPs and value addition in a comprehensive manner, with the following broad objectives:

- increasing the productivity of bamboo, cane & other Non-timber Forest Produce (NTFP) in the region through assured provision of quality planting material (QPM) and technical services;
- promoting livelihood improvement & poverty alleviation activities on an industrial scale and establishment of community common facility centres (CCFCs);
- capacity building of various stakeholders in handling bamboo, cane & other NTFPs; and
- facilitating marketing through establishing public-private partnership (PPP).
- facilitate database generation and management of the NTFP
- to promote and facilitate NTFP activities as a means of livelihood for the masses on a sustainable basis and to develop bamboo and cane based entrepreneurship
- to disseminate technology information and enterprise development;
- to assist in marketing;
- to train forest fringe dwellers in farming, cultivation and management of bamboo and cane for development and marketing of handicrafts and also timber and non-timber forest produce; and
- to take up capacity building for harnessing the rich biodiversity of the North-east States.



Figure 9 Website of NCE

Towards the objective of value addition and marketing of NTFP as a sustainable income generating activity, Community Common Facility Centres (CCFCs) are set up at various locations in Tripura under Tripura JICA Project.

The NTFP Centres of Excellence (called NCE) have also been established for bamboo and cane research and production and NTFP research and production in collaboration with the

forest department of Tripura. The activities of the NCE include establishment of bambusetum (204 germplasms), production of quality bamboo planting stock, establishment of Cane Arboretum and selection of Candidate plus plants and their centralization. This is being done to maintain the biodiversity of the area.

The NTFP research and production centre ensures that the important NTFPs are promoted and has also developed a NTFP museum cum interpretation centre with live specimens of NTFPs and various species of bamboos.

is envisaged to become a premier institution in its area of specialization providing services not only within the state but also in the entire North-eastern Region in future. The centre is working in the area of research and production, resource survey, training and extension, value addition and marketing of NTFPs in Tripura.

Over the years, the Centre has emerged as an important hub for disseminating technical knowledge about sustainable management of NTFPs through market survey, newsletter, pilot trials, setting up community common facility centres (CCFCs), facilitating scientific harvesting, value addition and marketing of NTFPs of economic importance and product certification in NTFP sector. It lays special emphasis on practical training, and skill development and developing models for NTFP based economic activities.

The website developed by NTFP Centre of Excellence is envisaged to serve as a platform for sharing of information among policy makers, researchers, academicians and other stake holders who are directly or indirectly involved in management and conservation of NTFP resources of the Region.

The information provided is useful in generating awareness about NTFPs, the need for sustainable conservation and also gather feedback and suggestion from the varied cross section of the society for holistic development of the sector.

3.10 VALUE ADDITION AND MARKETING

3.10.1 Marketing of handicrafts

The project also launched a new brand called “Crafts & More” for marketing of products made by the artisans developed under the project. A logo for the band was also designed. The products of “Crafts & More” include baskets of various sizes and shapes, bamboo bangles and other jewellery such as earrings and necklaces made of finely weaved bamboo, foot mats, table lamps, table mats, coat hangers, furniture and vases. The project has prepared a software for managing the supply and marketing of “Crafts & More” activities. According to the sales reports, total of products worth 41 lakhs have been sold.



Figure 10 Handicrafts made from bamboo

3.10.2 Distillation Unit at Machhmara under PPP

A distillation unit was set up under the project at Machhmara for value addition of Medicinal & Aromatic Plants (MAPs) especially Sugandhamantri (*Homalomena aromatica*), locally called Gandhaki, which has a promising market in perfumery industry and elsewhere.

Tripura's forests and homesteads abound in Sugandhamantri plants which were being collected and sold to traders by JFMC members at a very low price. These could have otherwise fetched handsome income to the villagers with a minimum amount of value addition. Under Tripura JICA Project, a workshop building has been constructed at Machhmara, North Tripura and machinery has been procured from Barabanki (UP). Since the requisite expertise in running the distillation plant and trade of this NTFP is not available with the local people or the Forest Department, it was decided to involve expert agencies from the private sector, at least till the time local expertise is developed.

A meeting of representatives from 41 JFMCs under Pecharthal Range of Kanchanpur Division, wherefrom the major collection of the plant takes place, was convened in August 2014 under the chairmanship of Director, NTFP Centre of Excellence. The issue was discussed with the stakeholders and an 11-Member Plant-level Working Committee was constituted under the Chairmanship of the local Range Forest Officer. Pecharthal for overall guidance and monitoring of the CCFC. As a result, a proposal was approved by the Government of Tripura for ensuring proper running of the CCFC Machhmara with involvement of experts from private sector in the management and operation of the plant with guarantee of buy back at assured price of the products.

3.11 THIRD PARTY ASSESSMENT OF ASSETS CREATED UNDER TRIPURA JICA PROJECT

The JICA project also took up the work of independent assessment of the assets created under the project. This work was given to a private agency Mott Macdonald for an independent third party assessment of the assets created under the Tripura JICA project. The Report for the same was submitted in July 2014. According to the Terms of References of the work of the proposed study, the assets created in the eight forest Divisions, 34 RMUs and CCFCs under the Tripura JICA project were to be assessed. The study was to undertake stock taking of the assets created or procured for both quantity and quality. It was also to assess the procedure for procurement, construction, plantation, payment and any other proceedings for assets creation, in relation to the project guidelines, governments codes and procedures and internationally accepted practices. It was also to suggest improvement and actions to be taken and to develop a database for the inventory. The items to be assessed and validated were of two types namely construction related assets and forestry related assets. The construction related assets included:-

- PMU and NCE office buildings
- NCE Research stations
- CCFC / Mini CCFC buildings
- DMU and RMU office buildings and staff quarters
- Permanent nurseries
- Vocational training centres
- JFMC office buildings
- Soil and water conservation structures

The Forestry related assets included

- Plantation and Aided Natural Regeneration Area
- Fire line and fencing
- Boundary demarcation
- Polythene bag / manure fertilizers etc
- Wages paid to labourers
- Nursery related infrastructure

The third party gave its detailed findings in 2014. It opined that by and large, the targets and achievements of the Project were being done in a timely fashion. The quality of work was also found good. However, certain suggestions were given like requirement of more training on fish farming and poultry management. More market linkage for these two activities were also required. It commented on the quality of construction of some of the buildings. It also gave suggestions like requirement of bricks soling for road connecting to JFMC, issues regarding availability of drinking water in JFMCs etc. Finding and suggestion were given for several JFMC separately. The construction related activities were also scrutinized and found that in many sites there was requirement of improvement in quality of civil construction by using RCC aggregate instead of brick aggregate. Also the tiling activities of good quality were required to avoid the occurrence of dampness in the ceiling and walls of the buildings. It also found that septic tank was absent in most of the buildings and there was no soak pit in some staff quarters. However, surface drains were present for passage of rain water.



Figure 11 Poultry farming

However, overall, it was found that Tripura JICA project has been successful in convincing and strengthening capacities of Government officials of various line departments (handloom, handicrafts, agriculture, fishery etc) on convergence basis and have implemented its various components in coordination with Government of India schemes. This involves implementation of livelihood generation programs which lead to better design and implementation of livelihood strategies for marginalized and disadvantages sections of the society. The project has been successful in establishing coordination and convergence at the district and state levels and is achieving its intended objective through convergence of various government programs.

3.12 FINANCIAL IMPLICATIONS

The total budget of the project is JPY 9.2 billion. The exchange rate of 1 rupee is 2.52 JPY so the budget of the project in Indian rupees is about 360 crores.

The JICA has given JPY 7725 million as loan at the rate of 0.75% interest. The repayment period is 30 years after a grace period of 10 years. The loan is shared by Government of India and Government of Tripura at 90% and 10% respectively. The remaining portion of the total budget is a grant.

The year financial year wise expenditure and disbursement of funds status uptill October 2016 is given in table 3. As per procedure defined in the MoU, the state government first releases the fund to the society. The society manages the funds for the project. After completion of works for which the funds were provided, the expenses are recorded. Subsequently the vouchers for the same are sent for disbursement to the JICA office in Delhi. The JICA Delhi office, once satisfied, disburses the funds to the state. There is also a non

disbursible element too in the funds given by the state government. This is as per the agreement and is usually used for the administrative expenses.

Financial Achievement till October 2016 (Rs. In crore)						
Year	Fund released by State Government in (Rs. In crore)	Expenditure			Funds disbursed by JICA, New Delhi	Pending Disbursement
		Reimbursable	Non reimbursable	Total Expenditure		
2007-08	4.015	3.84	0.05	3.89	3.84	0
2008-09	20.10	19.84	0.29	20.13	19.84	0
2009-10	31.00	30.39	0.01	30.40	30.39	0
2010-11	32.00	29.45	0.75	30.21	29.45	0
2011-12	39.00	25.51	3.82	29.33	25.51	0
2012-13	46.00	35.03	2.14	37.16	35.03	0
2013-14	40.00	39.59	2.41	41.99	39.59	0
2014-15	25.00	37.17	3.56	40.73	37.17	0
2015-16	40.00	41.55	2.44	43.98	41.55	0
2016-17 (upto Oct'16)	23.00	14.35	2.03	16.38	14.35	0
Total	300.12	276.72	17.50	294.22	276.72	0

Table 3: year wise financial outlays