



**TIPKAI JOINT FOREST MANAGEMENT COMMITTEE (JFMC)
KHORAGHAT RANGE, PARBATJHORA FOREST DIVISION
KOKRAJHAR DISTRICT, ASSAM**

**MICRO-PLAN
(2016-17 to 2025-26)**

Prepared by Tipkai Joint Forest Management Committee

**assisted by
Assam Forest Department
&
COMPELO
(IIE, RGVN and CML)**

July 2016

Approved

[Signature]

**Divisional Forest Officer
Parbatjhora Forest Division
Suparighat**

List of Acronyms

Acronym	Full Form
APFBC	Assam Project on Forest and Biodiversity Conservation
AFD	<i>Agence France de Développement</i>
BPL	Below Poverty Line
COMPELO	Consortium for Micro Planning and Enhancing Livelihood Opportunities
EPA	Entry Point Activities
GIS	Geographical Information System
Ha	Hectare
IIE	Indian Institute of Entrepreneurship
JFMC	Joint Forest Management Committee
Kg	Kilogram
Km	Kilometre
NGO	Non-Governmental Organization
NTFP	Non Timber Forest Product
PDS	Public Distribution System
PRA	Participatory Rural Appraisal
Rs.	Indian Rupees
SHG	Self Help Group
VCDC	Village Council Development Committee

TIPKAI JOINT FOREST MANAGEMENT COMMITTEE
Parbatjhora Forest Division

Micro-Plan for 10 Years
[Livelihood Development Plan & Forest Development Plan]

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1. Introduction

About the Project	<p>The vision of the Assam Project on Forest and Biodiversity Conservation (APFBC) is ‘to enable sustainable forest and biodiversity conservation and management in Assam through multi-scale integrative planning and involvement of forest dependent communities in target areas and giving fillip to their livelihood activities through sustainable use of forest and non-forest resources’. The project’s objective has been stated as: ‘In collaboration with the forest dependent communities, to restore forest eco-systems to enhance the forest dependent community’s livelihoods and ensure conservation and sustainable use of biodiversity’.</p> <p>The above project is being mainly funded by the <i>Agence France de Développement</i> (AFD) - i.e. the French Development Agency, with co-funding from the Government of Assam. The Assam Project on Forest and Biodiversity Conservation Society (APFBC Society) has the mandate for planning, implementation, monitoring, coordination and management of all the activities under the above mentioned project.</p>
Micro-Planning & Livelihood Development	<p>In order to promote livelihood activities through market potential based value addition; the present project intends to take up activities like entrepreneurship promotion, product processing value addition and marketing under this project. This has become necessary on account of the pressures on existing forest resources due to the growth of population. There is a need to explore value addition to the existing forest and biodiversity products and services, based on the market potential. In addition, non-forest based livelihoods need to be explored and the capacities of the community members need to be built-up through skills development initiatives.</p> <p>A consortium comprising of Indian Institute of Entrepreneurship (IIE) Guwahati, <i>Rashtriya Gramin Vikas Nidhi</i> (RGVN) and Centre for Microfinance and Livelihood (CML) has been formed to implement (<i>inter-alia</i>) the micro-planning and livelihood development under the above project. The above consortium has been titled as ‘Consortium for Micro Planning and Enhancing Livelihood Opportunities’ - COMPELO in short.</p> <p>As per project guidelines, this micro-plan includes ‘various operations of village and forest development ... livelihood support of forest dependent members and keeping sustainable forest management as the broad objective’. It includes <u>both</u> forest development and livelihood development.</p>
Micro-Plan for the Tipkai JFMC	<p>This document gives the Micro-Plan for the Tipkai JFMC, which is located in the Kokrajhar district of Assam. The JFMC falls under the jurisdiction of Khoraghat Range of Parbatjhora Forest Division. The profile of the community is given in the next section. The present micro-plan has been prepared by members of the community, including both male and female members. This document has emerged as an outcome of a Participatory Rural Appraisal (PRA) process undertaken by the community and personnel of Indian Institute of Entrepreneurship (IIE) Guwahati in June 2016. The micro-plan has been compiled by IIE based on the project guidelines. The document has been discussed and finalized for adoption in July 2016.</p>

2. Village Socio-Economic Profile

Location	<p>The Tipkai Joint Forest Management Committee (JFMC) has been formed to cover the existing community dwelling in five villages namely Diphu, Srilanka, Tipkai, Gomaribeel, Singhal located Mahamaya Reserve Forest under Parbatjhora Forest Division. The area covered by the above JFMC falls within the Bogribari Revenue Circle of Kokrajhar District of Assam.</p> <p>Appendix-1 gives the Village Map.</p>																						
Key Information	<p>The key information of the JFMC is furnished below.</p> <p>Table-A: Key Information of the JFMC</p> <table> <tr> <td>Name of the JFMC</td><td>Tipkai</td></tr> <tr> <td>Habitation</td><td>Tipkai</td></tr> <tr> <td>Name of Revenue Village</td><td>Tipkai Bondar</td></tr> <tr> <td>Name of the Gram Panchayat / VCDC</td><td>Tipkai</td></tr> <tr> <td>Revenue Circle</td><td>Bogribari</td></tr> <tr> <td>District</td><td>Kokrajhar</td></tr> <tr> <td>Forest Division</td><td>Parbatjhora Division, Suparighat</td></tr> <tr> <td>Forest Range</td><td>Khoraghat</td></tr> <tr> <td>Forest Beat</td><td>Tipkai</td></tr> <tr> <td>Year Formed</td><td>2015</td></tr> <tr> <td>Description of Boundary of JFMC</td><td>North: Tulsijhora Part II South: Mahamaya Parbatjhora Road West: Doibari Part II East: River Sibi</td></tr> </table> <p>Source: JFMC Records & Discussions during PRA Exercise in June 2016</p> <p>Additional details are given at Table-1 of Record-I (Given at Annexure)</p>	Name of the JFMC	Tipkai	Habitation	Tipkai	Name of Revenue Village	Tipkai Bondar	Name of the Gram Panchayat / VCDC	Tipkai	Revenue Circle	Bogribari	District	Kokrajhar	Forest Division	Parbatjhora Division, Suparighat	Forest Range	Khoraghat	Forest Beat	Tipkai	Year Formed	2015	Description of Boundary of JFMC	North: Tulsijhora Part II South: Mahamaya Parbatjhora Road West: Doibari Part II East: River Sibi
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Brief Details of the Executive Committee & General Body	<p>The brief details of Executive Committee & General Body of the JFMC are contained in the table, which is given below.</p> <p>Table-B: Brief Details of Executive Committee & general Body</p> <table> <tr> <td>Name of President</td><td>Swmpark Brahma</td></tr> <tr> <td>Name of Member Secretary</td><td>Mandeep Basumatary</td></tr> <tr> <td>Name of Treasurer</td><td>Sarat Mushahary</td></tr> <tr> <td>No. of Members in Executive Committee</td><td>Male: 9 Female:6</td></tr> <tr> <td>No. of Members in the General Body</td><td>244 (one male and one female members in each household)</td></tr> </table> <p>Source: JFMC Records</p>	Name of President	Swmpark Brahma	Name of Member Secretary	Mandeep Basumatary	Name of Treasurer	Sarat Mushahary	No. of Members in Executive Committee	Male: 9 Female:6	No. of Members in the General Body	244 (one male and one female members in each household)												
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Households & Population Structure	<p>The JFMC consisting of five villages namely Diphu, Srilanka, Tipkai, Gomaribeel and Singhal with a total household of 122. The number of female headed households is 6. The total population is 620 of which 300 are male and the 320 are female members. Out of 122 HH, 37 belong to general caste, 19 belong to SC and 66 belong to ST.</p> <p>Table-2 of Record-I may be referred for further details in the above regard.</p> <p>From this, it is inferred that:</p> <ol style="list-style-type: none"> (1) The average number of persons in a household is 4.5. (2) The sex ratio is 1066 females per 1000 males in the village.
Education & Skills Development	<p>Over 75 % of the population is reported to be literate. Most of the community members have received education up ME (51%) and attaining of education after that, is gradually seen decreasing.</p> <p>Livelihood skills are usually acquired under various settings – formal & informal. In the JFMC area, informal means for skills development is the traditional norm. People have traditional skills in the following areas:</p> <ol style="list-style-type: none"> (a) livestock rearing (b) weaving (c) Eri spinning <p>Government has been active in promoting formal skills development programmes in the country as well as in the state. The village has not reported receipt of benefits of any such programme has been carried out in the habitation or in nearby areas.</p>
Soil	<p>The soil type of the project area includes:</p> <ul style="list-style-type: none"> • Alluvial soil in low lying (clayey soils) and plain areas (loamy soils). <p>The soil is reported to be non-fertile and production of crops is not satisfactory.</p>
Water	<p>The Brahmaputra Valley is also marked by the presence of wetland, locally called as ‘Beels’, which are rich in fish and other aquatic resources.</p>
Climate: Temperature & Rainfall	<p>The maximum temperature during the summer is 38 ° C. The minimum temperature during the winter is 8°-9 ° C.</p> <p>The annual rainfall is about 3000 mm. About two-thirds of the rainfall usually occurs during the rainy season (June-September). The village has high levels of humidity (over 90%) during the rainy months and low levels in the winter (Below 30%).</p>
Forest & Bio-diversity	<p>The local forests have been broadly classified as Wet plain Sal type under Moist Tropical Seral Type. The main tree species are <i>Sal</i>, <i>Segun</i>, <i>Gomari</i> (<i>Gmelina arborea</i>), <i>Azar</i>, <i>Bhelkor</i>, <i>Arjun</i> (<i>Terminalia arjuna</i>), Ghora Neem etc. The forests can yield a range of NTFP like leafy vegetables, ferns, medicinal plants, bamboo, thatch etc.</p>

Land Use Pattern	<p>Appendix-2 gives the land-use pattern of the village. From the same, it is seen that the land-use in the village is as follows:</p> <p>Cultivated wasteland (low line)12.24 % Firewood Plantation 9.23% Forest degraded 27.90% Paddy field 9.59% Fishery 0.11% Road 1.86% Playground 0.12% Private plantation area 0.67% Settlement area 26.81% Tree clad area 10.68% Proposed medicinal plantation 0.79%</p>
Land Holdings	<p>The type of households as per land-holding is given at Table-3 of Record-I. From the same, it is seen that:</p> <ul style="list-style-type: none"> • 55 % of the households are landless • 30% of the households are marginal farmers • None of the households belong to large categories.
Livestock	<p>The total number of livestock in the village is 721. The main types of livestock possessed by the households include:</p> <p>Cows: 112 Goats: 78 Pigs : 83</p> <p>Table-4 of Record-I may be referred to for the details in the above connection.</p>
Village Infrastructure & Communication Facilities	<p>In any community; the availability of basic infrastructure enables the development of sustainable livelihood options. The present condition of infrastructure in the village is not satisfactory. This is borne out by Table-5 of Record-I, which gives the present status of the village infrastructure.</p> <p>Physical Infrastructure: People are deprived of electrification. Though there is one Public Health Engineering, the centre is inactive for long.</p> <p>Education & Health Facilities: Educational institutions like schools and colleges are within the JFMC and easily accessible throughout the village. Public Health Centre is within the village but health facilities is not satisfactory one.</p> <p>Govt. Offices: Few government offices (such as Police station, Village Council Development Committee, Forest Beat office etc. are within the village.)Revenue office is outside the village at a distance of 26km.</p> <p>Financial Institution: Facilities for financial institution like bank is outside the village at a distance of 7 km. Post office is inside the village.</p>
Agricultural Crops	<p>The details of the agricultural crops grown in the village is available at Table-6 of Record-I.</p> <p>The above shows that the following are the main crops grown in the village.</p> <p>Kharif Crops: Sali Paddy, Yam Rabi crops: Leafy vegetables</p>

	Vegetables: Bottle guard, white guard, bitter guard Others: Bamboo, jack fruit, jamun, etc.
Crop Production Profile	<p>Table-7 of Record-I may be referred to for the production and yield details of the crops grown in the village.</p> <p>The maximum numbers of households are involved in growing crops like rice and mustard.</p> <p>The production and yield of crops is given as follows:</p> <p>(a) Paddy : Production 800 Quintals Yield 18 q /ha</p>
Fodder Availability	<p>The matter of fodder availability in the village is dealt with at Table-8 of Record-I. The above shows that the main sources of fodder in the village are as follows:</p> <p>(a) Crop residue (b) Grazing in forest (c) Household wastage (d) Green fodder</p>
Markets	<p>Table-9 of Record-I shows the location of the different markets from the village. The main markets used by the community are as follows:</p> <p>(a) Grocery / PDS: Tipkai, within the village (b) Weekly / Bi-weekly Market: : Tipkai, within the village (c) Major Market: : Gosaigaon at 22 km away</p>
Water Resources	<p>The water resources are tabulated at Table-10 of Record-I. The main water resources with water availability is as follows:</p> <p>Katcha ring well (Water Availability: Perennial/ Seasonal)</p>
Energy Consumption	<p>Table-11 of Record-I shows the major sources of energy in the village. The same have been listed below.</p> <p>(a) FUEL WOOD- Households Depending 122 Nos. Source: forest (b) KEROSENE-Households Depending: 10 Nos. Source: Open Market and PDS</p>
Socio-economic status	<p>Social set-up: The village is inhabited by tribal community. They do not have a caste system. The society is not marked by deep social divisions. The observed position of women is satisfactory.</p> <p>Economic Condition: Villager's main source of earning is daily wage earning with 62.50% (people uses to go Kokrajhar, Dhubri for wage earning). Very few are associated with service sector. Service sector comprises of school teacher, school helper (contractual as well as permanent). Non farming sector consist of carpentry, masonry, tailoring, business, animal husbandry etc. where 45.83% are associated.</p>

Maps	Appendix-1 gives the following maps, based on PRA exercise: <ul style="list-style-type: none"> • Village Map • Village Social Map (with the names and particulars of members in PRA) • Village Resource Map
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3. Livelihood Opportunity Analysis

PRA Exercise Team from IIE Guwahati carried out PRA exercise in Tipkai JFMC as follows:

Date: 5th June, 2016 **Location:** Forest Beat Office, Tipkai

Numbers Present: 60

In Presence of: JFMC office bearers, Village Headman, community members, Forest Department personnel, etc.

Objective of PRA The objective was to study the existing household conditions and obtain other primary data about the community for developing the livelihood options and the forest development plan.

Tools Used & Outcomes of the PRA Different tools were used and outcomes obtained. These include:

Social Mapping
Wealth Ranking
Time Line review
Seasonality of Livelihoods
Venn Diagram

Appendix-3 furnishes detailed information of the above.

Ranking Ranking exercise has been done for the following:

- **Livelihoods & Skills Development**
- **Entry Point Activities (EPA)**

Appendix-3 elaborates the above. From the same, it is stated that:

Ranking of Livelihoods & Skills Development

1. Livestock rearing
2. Weaving
3. Cane and bamboo
4. Tailoring
5. Carpentry
6. Masonry

Ranking of EPA

Rank	Village EPA as ranked	Details (Appendix-3 has additional particulars)	Probable source of funding/Deptt.
1.	Sanitation	Providing HHL (House Hold Latrine) - Low cost, septic and sanitary type.	Swachh Bharat Mission/ PHE
2.	Roads of village	Forest road improvement within Plantation of 2 km	EPA from APFBC
3.	Drinking Water	At least 4 ring well	EPA from APFBC/ NRDWP
4.	Electricity supply	Uninterrupted electricity supply to each household	ASEB/APDCL
5.	Culvert	Construction of one culvert towards the entrance of Gomaribeel from the village road	PWD
6.	Community hall	40ft X 35ft with platform and store house	EPA from APFBC
7.	Credit facility	Within the village	BANK

- ✓ An arrangement of working capital worth Rs. 2 Lacs should be arranged from the EPA fund for promoting livelihood activities.
- ✓ A community work shed cum JFMC office to be set up within the JFMC boundaries.
- ✓ A low cost livestock rearing shed have to be arranged from the EPA fund for promoting a common community livelihood activity.

Livelihood opportunities	<p>Livelihood Opportunities were identified as follows:</p> <p>Agriculture & Horticulture Livestock NTFP Skills Development Credit Facility</p>
Agriculture & Horticulture	<p>Table-12 under Record-2 may be seen in this connection for opportunities in the areas of agriculture and horticulture.</p> <p>The main constraints are:</p> <p>(a) Very negligible use of fertilizers and pesticides, insecticides. (b) Lack of irrigation facilities (c) Lack of agricultural infrastructure, modern tools and equipment's viz, power tillers, tractors etc. (d) Non usages of high yielding seeds etc.</p>

	<p>The opportunities are:</p> <ul style="list-style-type: none"> (a) Application of proper and controlled pesticides and insecticides. (b) Introduction of new and advance technology (c) Well-structured training programme. The villagers are inherited with the skill of cultivation. All they need is improvisation of their skill level. <p>The suggested programmes are:</p> <ul style="list-style-type: none"> • Tractor operation training • Agri-skill development programme. • Training on insecticides, pesticides, hybrid cultivation etc.
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Livestock

Table-13 furnishes additional information about opportunities for livestock rearing.

The main constraints are:

- (a) Unable to buy fodder from market due to poor financial condition.
- (b) Trees fodder and crop residue are available only for 3-6 months. Green fodder is also not available for the whole year.
- (c) No veterinary care clinic
- (d) Lack of knowledge about the proper rearing of live stock

The opportunities are:

- (a) Higher income from livestock rearing.
- (b) A huge demanded market for milk is available as Kokrajhar district head quarter and West Bengal state is not too far from the JFMC.

The suggested programme is:

- (a)Piggery
- (b)Poultry

NWFP

The opportunities for NWFP are tabulated at **Table-14** under Record-2

The main constraints are:

- (a) Less availability of NWFP
- (b) No technical know-how
- (c) No processing units

The opportunities is:

- (a) Availability of fertile fallow land

The suggested programme are:

- (a)Plantation of fruit trees,
- (b)Medicinal Plant / Medicinal and Aromatic plants etc.

Specialized Skills For skills development, the opportunities are tabulated at **Table-15** under Record-2 like i) livestock rearing, ii) weaving

The main constraints are:

- (a) Lack of product diversification
- (b) Lack of research on product quality
- (c) Lack of TQM techniques.

The opportunities are:

- (a) Providing good communication facility
- (b) Training of the skill holder
- (c) Financial assistance from govt. / or other sponsorship agencies.

The suggested programme are:

- Training on Modern Tools and Equipment
- Providing modern technology to the villagers
- Skill Up gradation & Training on New Product Development and Product Diversification
- Setting up a raw material bank
- Providing a bulk buy arrangement of the finished product with institutional buyers.

Credit Facility **Table-16** under Record-2 discusses this aspect.

The main constraints with the reasons are:

- (a) Financial exclusion
- (b) Higher rate charged by the private money lender.

The opportunities are:

- (a) setting up modern financial institution
- (b) Adequate awareness.

The suggested programme is:

- (a) Setting up modern financial institution in the nearby areas.

Strategic Interventions Summarizing the suggested programmes at above as strategic interventions for the Livelihood Development Plan:

- 1 **Agriculture & Horticulture:** Tractor operation training, Agri-skill development programme, Training on insecticides, pesticides, hybrid cultivation
2. **Livestock:** Piggery, Poultry
3. **NWFP :** Plantation of fruit trees, Medicinal Plant etc
4. **Specialized Skills:** Training on Modern Tools and Equipment in livestock rearing, weaving etc. Providing modern technology to the villagers, Skill Up gradation & Training on New Product Development and Product Diversification, Setting up a raw material bank, Providing a bulk buy arrangement of the finished product with institutional buyers.
5. **Credit facility:** Setting up modern financial institution in the nearby areas

Framework of livelihood Opportunity Analysis has been done with the help of the following criteria:

- A) Livelihood assets
- B) Livelihood context
- C) Priority ranking on potential livelihood

The livelihood situation of Tipkai JFMC has been analysed during the PRA exercise using sustainable livelihood framework of DFDI (Department of Funding for International Development). The existing livelihood situation of JFMC is outlined in terms of –

- Natural Capital
- Physical Capital
- Social Capital
- Human Capital
- Financial Capital

NATURAL CAPITAL:

The major natural capital of Tipkai JFMC is Mahamaya Reserve Forest.

Majority of the people are dependent on the forest for firewood, green fodder, timber etc. For farming purpose and for livestock rearing, the villagers use the river water.

(Refer table 10, 11, table 3 of FDP for further details)

PHYSICAL CAPITAL:

Majority of the households in the Tipkai JFMC are involved in daily wage earning. Farming activities are very less as land holding is minimal in the JFMC. 30% of the household are marginal farmers. 55% are landless. Detailed land holding pattern is described in the table 3/annexure 6.

The village has 5 numbers of semi-pucca houses and 5 numbers of pucca houses and the remaining houses are thatched houses. Among the various sources of energy consumption such as Biomass, kerosene, electricity, LPG and candle, villagers depend on the firewood and kerosene for household and other uses. Although, some of the household have LPG, but reliability is very less. (Refer to table 10, 11) There is two LP schools, one ME School, one High School and one Junior College present within the JFMC area. (Refer to table 5)

In case of water sources, 20 per cent HH have access to katcha ring well.

SOCIAL CAPITAL:

The villagers are not fully involved in the JFMCs functioning due to lack of awareness on their roles, functions, and specific benefits they are going to receive.

There is one weaver's training centre in the JFMC. One orphanage home is present in the JFMC. Ramkrishna mission ashram is present in the JFMC.

HUMAN CAPITAL:

75 per cent of total population of the JFMC are literate and out of this 51 per cent of them have crossed upper primary level school education.

FINANCIAL CAPITAL:

There is no government bank or lending institution available in the JFMC area or in the nearby areas. However, villagers lend from informal lending groups, relatives etc.

20 numbers of people have bank account in commercial banks, but they are not aware of the benefits of financial inclusion.

Livelihood Context:

Livelihood activities of the Tipkai JFMC are identified on the basis of following criteria:

- a) Contribution of particular livelihood activity in the total income of the JFMC
- b) Percentage involvement of income group in a particular livelihood activities
- c) Priority ranking of the potential livelihood activities

4. Livelihood Development Plan

Income Generating Activities	<p>The main income generating activities as planned at the village are:</p> <p>Farm Sector :</p> <ol style="list-style-type: none"> 1. Poultry and Piggery 2. Lac cultivation 3. Horticulture <p>Non-Farm sector:</p> <ol style="list-style-type: none"> 1. Handloom/ Weaving 2. Driving 3. Electrician 4. Sericulture 5. Small Business
SHG Activities	<p>SHGs of the village can plan the following activities:</p> <ol style="list-style-type: none"> 1. To create awareness. 2. To organise and form group 3. To involve the villagers in Livelihood Activities collectively. 4. To involve themselves in earning activities.
Exposure Trips	<p>Some exposure trips may be planned:</p> <p>Source: Table-34 of Record-4</p>
Summary of Action Plan	As attached in next page.

Convergence	<p>The planned initiatives may be converged with the following schemes of the Government of India:</p> <ul style="list-style-type: none"> (a) National Rural Employment Guarantee Scheme - for rural employment (b) Rashtriya Krishi Vikas Yojana (RKVY) - for agricultural and allied development (c) Rashtriya Krishi Sinchay Yojana (RKSJ) - for irrigation, including watershed development (d) National Rural Livelihoods Mission (e) Skills Development schemes (f) MGNREGA/DRDA (g) PHE etc (h) Other schemes for rural development and livelihoods as found appropriate. <p>The above convergence will yield synergies for the present plan, as well as help in sustaining the planned works in the post-project period.</p>
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5. Forest Development Plan of Tipkai JFMC

This Forest Development Plan has been prepared after a detailed PRA exercise at the village level as a part of the Micro-Plan of Tipkai JFMC. The objective of this plan is to provide for the sustenance of the conservation and bio-diversity values, environmental functions and productive potential of the forests assigned to the JFMC; while meeting the consumption and livelihood needs of the community in a sustainable manner.

1. Status of the JFMC Forests

The micro-plan takes into consideration the following categories of the JFMC Forests of the Tipkai JFMC:

- (a) Forest areas assigned to the JFMC by the Forest Department; and
- (b) Areas planted / to be planted on community lands and other lands outside the notified forest area.

The status of both the above categories of JFMC forests is briefly discussed below.

1.1. Forests & Their Conditions

The details of the status of forest areas assigned to the JFMC have been furnished at Table-3.1 under Proforma-3 ('Forest Development Plan'), which has been attached as Annexure to this micro-plan. After considering other areas planted (or to be planted), the conditions of the forests of the Tipkai JFMC have been summarized below.

Table-1: Conditions of the Forests of Tipkai JFMC

Identification	Area of JFMC Forest (Ha)	Distance from Village (Km)	Condition of Forest [Good - Forest with crown density of 40% of more	Frequency of Use by Community [2-3 m / 3-6 m /
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			Else 'Degraded']	6-9 m / Over 9 m]
(A) Assigned Forest				
RF / PF Name: Tipkai Beat: Tipkai Compartment: Nil	75 Ha	0 km	Degraded -155 Ha, Good- 25 Ha	Over 9 m
(B) Other Planted Area				
TOTAL	65 Ha			

1.2. Forest Soil Type

The forests of Tipkai JFMC are located in loamy type(s) of soil. Some salient points of the forest soil type have been given in the following table.

Table-2: Forest Soil Type in Tipkai JFMC

Parameter	Status in Assigned Forests	Status in Other Planted Areas
Fertility Level	Less fertile	Nil
Soil Erosion Status	low	Nil
Presence of:		Nil
(a) Silt	Nil	Nil
(b) Mud-flat	Nil	Nil
(c) Newly accreted land	Low	Nil
(d) Sand dune	nil	Nil

Source: Proforma-3, 'B. Forest Soil Type' / Discussions with Forest Department personnel & Community members

For the Tipkai JFMC; the salient points of the forest soil type are summarized below:

- (a) Loam soil
- (b) Less fertile

1.3. Existing Composition of Flora

In the forests of the Tipkai JFMC, the existing composition of the flora has been given as follows. It may be noted that the local forests are classified as Tropical Moist Deciduous Forests.

Table-3: Existing Composition of Flora in the Tipkai JFMC

Parameter	Local Name(s)	Biological Name(s)
Major Forest Species	Segun	<i>Tectona grandis</i>
	Gomari	<i>Gmelina arborea</i>
	Arjun	<i>Terminalia arjuna</i>

	Bhelkor	<i>Trewia nudiflora</i>
	Ghora neem	<i>Melia azedarach</i>
Shrubs	Dhekia	<i>Ferns</i>
	Jharmoni bann	<i>Atropa bellodonna</i>
Medicinal Plants	Arjun,	<i>Terminalia arjuna</i>
	Hilikha	<i>Terminalia chebula</i>
	Neem	<i>Azadirachta indica</i>
	Amla	<i>Phyllanthus emblica</i>

Source: Proforma-3, 'C. Composition of Existing Fauna & Flora' / Discussions with Forest Department personnel & Community members

2. Other Inputs for the Forest Development Plan

The following sub-sections discuss the other inputs for the Forest Development Plan of the Tipkai JFMC.

2.1. Past Protection Measures of the JFMC

The measures taken by the Tipkai JFMC for forest protection in the past have been discussed as follows.

- (a) Number of households involved: 46
- (b) Number of people involved: 80
- (c) Summary of the measures: Patrolling
- (d) Any formal mechanism: Not available

[**Source:** Proforma-3, 'JFMC Status - viii + ix' / Discussions with Forest Department personnel & JFMC members]

2.2. Domestic Requirements of Forest Produce

The dependency of the local community on forest produce for household requirements is available in the table given at below.

Table-4 (A): Domestic Requirement of Forest Produce per Household of the Tipkai JFMC

Name of Forest Produce	Average Household Requirement		How met at Present	Source
	Frequency of Requirement	Approx. Qty		
Firewood	Once in a week	40-50 kg		Tree
Timber for House	Once in a year	1-2 qntl/yr		
Small timber for Implements	Nil			

Pole / Bamboo	Once in a month	1-2 bamboo / per month		Forest
Fodder from Forest	Cattle grazing inside forest			Forest
NTFP	Rarely			
Other	-			

Source: Proforma-3, Table-3.2 / Discussions with Forest Department personnel & Community members

There are 122 households in the Tipkai JFMC. From the above table and this number of households, it is inferred that the total annual requirements of the Tipkai village for forest produce for own use is as follows:

Table-4 (B): Total Domestic Requirement of Forest Produce - All Households of the Tipkai JFMC

Name of Forest Produce	Community Requirement (Kg per annum) (*)	Remarks
Firewood	140000	Throughout the year
Timber for House	110000	Dec - Jan
Small Timber for Implements	-	Occasional
Pole / Bamboo	1500 bamboo	
Fodder from Forest	-	
NTFP	-	
Other _____		

Source: Table - 4(A) at above & Total Household Number from Community records

(*) = Approx. Qty. of Average Household Requirement (from Table-4 (A) x _____ Households

2.3. Collection & Marketing of Forest Produce by Villagers

Apart from use in the households, the community dependency on forest produces also includes the collection of such items for sale in local markets. The collection and marketing of forest produce by villagers of Tipkai JFMC is given in the following table.

Table-5 (A): Collection & Marketing of Forest Produce by Villagers of the Tipkai JFMC

Name of Forest Produce	Collection for Marketing			Location of Collection
	Season / Months	No of Households Collecting	Average Qty. Collected (Kg)	
Firewood	Dec/ Jan	3-4	400-500	Forest
Timber for House				
Small timber for Implements	-			

Bamboo	Once a month	4-5	8-10 pc	Forest
Pole	-			
Fodder from Forest	-			
NTFP	-			
Other _____				

Source: Proforma-3, Table-3.3 / Discussions with Forest Department personnel & Community members

In the above connection, the following table gives additional pertinent information.

Table-5 (B): Collection & Marketing of Forest Produce - Additional Information [Tipkai JFMC]

Name of Forest Produce	Surplus Marketed (Kg)	How marketed	Average Income per HH from sale of Forest Produce
Firewood	1300kg	Tipkai	1600-2000/month
Timber for House	-	-	
Small timber for Implements	-	-	
Bamboo	32-40 pc/per month	Tipkai market	800-1250/month
Pole	-	-	
Fodder from Forest	-	-	
NTFP	-	-	
Other _____			

Source: Proforma-3, Table-3.4 / Discussions with Forest Department personnel & Community members

2.4. Total Requirements of Forest Produce - Domestic Use & Marketing

The total requirements of forest produce by the community members of the Tipkai JFMC have been summarized below - based on the information in the previous sub-sections.

Table-6: Total Requirements of Forest Produce by Villagers of the Tipkai JFMC

Name of Forest Produce	Community Requirement (Kg per annum) From Table-4(B)	Surplus Marketed (Kg) From Table-5(B)	Total Requirements (Kg)
Firewood	180000 kg	1570	162575
Timber for House	110400 kg	-	110400

Name of Forest Produce	Community Requirement (Kg per annum) From Table-4(B)	Surplus Marketed (Kg) From Table-5(B)	Total Requirements (Kg)
Small timber for Implements	-		
Bamboo	1656 pcs	384-600pcs	2040-2256pcs
Fodder from Forest	-		
NTFP	-		
Other _____	-		

Source: Tables 4 (B) & 5 (B) of this Section, given at the previous pages

3. Forest Protection Issues

3.1. Protection Problems

The protection issues of the forests of Tipkai JFMC have been summarized below.

Table-7: Protection Problems of the Tipkai JFMC

Type of Problem	Relevant (Yes / No)	Significant (Yes / No)
Grazing - Local Animals	Yes	yes
Grazing - Animals from Other Area	Yes	yes
Illicit Felling of Timber	No	No
Smuggling of Timber	No	No
Accidental Fires	Yes	Yes
Encroachment of Forest Lands	No	No
Others- firewood collection	Yes	Yes

Source: Proforma-3, Table-3.5 / Discussions with Forest Department personnel & Community members

Thus, it is seen that the significant forest protection issues facing the above JFMC are:

- (a) Grazing - Local Animals
- (b) Grazing - Animals from Other Area

3.2. Reasons for Degradation of the Forest

In the Tipkai JFMC, the reasons for degradation of forest are as follows:

- (a) Cutting of trees
- (b) Grazing of cattle

[Source: Proforma-3, Table-3.6 / Discussions with Forest Department personnel & Community members]

4. Components of the Forest Development Plan

The following sub-sections discuss the main components of the Forest Development Plan of Tipkai JFMC; viz. the plans for Protection, Forest Improvement (Treatment), Nursery Development, Maintenance and Miscellaneous Operations.

4.1. Protection Plan

The Protection Plan given at below, discusses the measures for the protection of the forests of Tipkai JFMC from the issues discussed earlier at Sub-section 3.1

Table-8: Protection Plan of the Tipkai JFMC

Protection Work [to be filled from Table 3.7 of Proforma-3 as applicable]	Location in Forest Area	Quantification of the Measures [Length, Area, Size etc.]	Timing	Priority [High / Medium / Low]
Social Fencing	Boundary	Along the Demarcation of the Plantation Area	Grazing Season	High
Fire Protection	Within the Forest	-	Autumn-Winter	High
Illicit Felling	Within the forest	Within the forest	Summer	Low

Source: Proforma-3, Table-3.7 / Discussions with Forest Department personnel & Community members

Thus, it is seen that the significant protection measures planned to be undertaken in the Tipkai JFMC (with high / medium priority) are as follows:

- (a) Fencing
- (b) Fire protection
- (c) Patrolling

4.2. Types of Operations Proposed

The types of operations proposed for the treatment of degraded areas of the JFMC Forest of Tipkai JFMC are given hereunder.

Table-9: Types of Operations Proposed in the Tipkai JFMC

Treatment	Required (Yes/ No)	Responsibility of JFMC (Yes / No)	Month / Year when can be done	Extent of Area proposed for Treatment (Ha)
Restoration of Degraded Forests	Yes	Yes	April - August	
Protection to Cut Stumps of Trees				
Watershed Treatment	Yes	Yes	Oct-March	Nil
Water Reservoirs				
Grass & Silvi-pasture				
Bamboo Plantation	Yes	Yes	Mar-April	
Seed Sowing	Yes	Yes	Jun/July	Nil

Treatment	Required (Yes/ No)	Responsibility of JFMC (Yes / No)	Month / Year when can be done	Extent of Area proposed for Treatment (Ha)
Root & Shoot Cutting & Plantation	Yes	Yes	Jun/July Oct-Nov	Nil
Cut Back & Coppice Treatment				
Physical Fencing	Yes	No	Sep- Nov	Nil
Social Fencing	Yes	Yes	Throughout the year	50 ha
Other Activities				

Source: Proforma-3, Table-3.9 / Discussions with Forest Department personnel & Community members

Thus, it is seen that the following are the treatment operations which have been proposed in the forest area of the Tipkai JFMC:

- (a) Seed Sowing
- (b) Root & Shoot Cutting & Plantation

4.3. Forest Improvement Plan - Advance Works & Creation

The pertinent details in the above connection have been tabulated as follows.

Table-10: Forest Improvement Planned in the Tipkai JFMC

Treatment	Area in Ha under Plantation Module	Priority for Block Plantation	Species	Spacing (metre x metre)
Assisted Natural Regeneration (with plantation in gap)	25	High	Sal, Bohera, Arjun,	4m x 4m
Block Plantation (Firewood)	50	High	Teak, Gamari, Sissoo, Ghoraneem, Bohra, Bhelkor	2m x 2m
Sowing of Neem, Amla, Mahua, Bahera (Medicinal Plants)	Nil	Nil	NTFPs	2m x 2m
Other	-	-	-	-
TOTAL AREA (in Ha)	75	-	-	-

Source: Proforma-3, Table-3.8 / Discussions with Forest Department personnel & Community members

4.4. Forest Improvement- Annual Targets

The annual targets in the above connection are given below for a ten year period

Table-10 (A): Firewood Plantation- Annual Targets of Forest Improvement in Tipkai JFMC (Year-1 to Year-5)

Name of Plantation	: Firewood Plantation
Plantation Period	: 2016-17 to 2020-21 (5Years)
Plantation Area	: 50 ha
Spacing	: 2m X 2m -2500 plants per ha
Number Blocks	: 1 block
Species	: Teak, Ajar, Khoroi, Arjun, Ghoraneem, Bamboo (Jaati, Kako, Bholoka, Bijili)

Financial Year	Activities
2016-17	Identification of suitable site for regeneration-examine possibilities of natural seed fall-determine intensity and nature of biotic interference. Demarcation of land. Land development, Soil Working. Block Plantation 2m x2m, 2500 plants/ha.
2017-18	Maintenance of plantation
2018-19	Maintenance of Plantation
2019-20	Maintenance of Plantation
2020-21	Maintenance of Plantation
2021-22	Felling of trees in the 1 st , 5 th , 9 th , 13 th , etc rows and planting/seed sowing in these felled rows.
2022-23	Felling of trees in the 2 nd , 6 th , 10 th , 14 th , etc rows and planting/seed sowing in these felled rows.
2023-24	Felling of trees in the 3 rd , 7 th , 11 th , 15 th , etc rows and planting/seed sowing in these felled rows
2024-25	Felling of trees in the 4 th , 8 th , 12 th , 16 th , etc rows and planting/seed sowing in these felled rows
2025 onwards	Repeat of activities of 20121-22 to 2024-25 continuously

Table-10 (B): Block Plantation of Sal Mixed with Associates-Annual Targets of Forest Improvement in Tipkai JFMC (Year-1 to Year 10)

Name of Plantation	: Block Plantation of Sal Mixed with Associates
Plantation Period	: 2016-17 to 2026-27 (10 Years)
Plantation Area	: 25 ha
Spacing	: 4m X 5m -500 plants per ha
No. of Plants to be Raised	: 12,500+2500 (Vacancy Filling)
Species	: Sal; Associates- Bohera, Arjun, Sida, Haldu.
Rates	: As Approved by APFBCS (to be increased by 20% every two years)

Financial Year	Activities
1 st Year	Identification of suitable site for regeneration-examine possibilities of natural seed fall-determine intensity and nature of biotic interference- Demarcation of land during the month of December-January, Land development, Soil Working @ Rs 1000/ha
2 nd Year	Block Plantation 4m x 5m, 500 plants/ha-during the season of April-June ; GPS marking of the area
3 rd Year	Vacancy filling during the season of April-June Weeding; Cultural operation
4 th Year	Same as above
5 th Year	Same as above
6 th Year	Cultural operation
7 th Year	Jhuming and Cultural operation
8 th Year	Same as above
9 th Year	Same as above
10 th Year	Same as above

4.5 Nursery Development Plan

The Nursery Development Plan for Tipkai JFMC depends on the following types of Nurseries:

(a) JFMC Peoples' Nursery (incl. Departmental Nursery)

The details are given below.

JFMC Nurseries

The following table gives the details of the nurseries of the Tipkai JFMC. This includes the Departmental Nursery involved in JFMC works.

Table-11 (A): JFMC Nurseries of the Tipkai JFMC

Location of Nursery	Sp. Planted	Year of Development	Number of Seedlings	Remarks
Within the Village	Gomari, Teak, Goraneem, Bhelkhor, Jamun, Arjun, Bohera, Bamboo etc.	2015-16	1,25,000	Provide sapling for vacancy filling to be under taken in the 2016-17.Saplins availed from both departmental and JFMC nursery.
		2016-17	25,000	Provide sapling for vacancy filling to be undertaken in the 2017-18

Location of Nursery	Sp. Planted	Year of Development	Number of Seedlings	Remarks
		2017-18	20,000	Provide sapling for vacancy filling to be undertaken in the 2018-19
		2018-19	10,000	Provide sapling for plantation to be undertaken in the 2020-21
		2020-21 onwards	32,000	Planting in the felled rows (1/4 th of area) every year

4.6 Maintenance Plan - 10 Years

The maintenance plan for plantations raised in the Tipkai JFMC is given below. This covers a period of ten years.

(A) Fuel wood Plantation

Table-12 (A): Maintenance Plan of Fuel Wood Plantation in the Tipkai JFMC

Year(s)	Treatment
2016-17 to 2025-26	As provided in Action Plan for Firewood Plantation

(B) Sal- ANR

Table-12 (B): Maintenance Plan of Sal ANR in the Tipkai JFMC

Year(s)	Treatment
1 st to 10 th year	Action Plan for Sal-ANR; Sal with associates

4.7 Miscellaneous Operations Plan

The miscellaneous operations planned in the Tipkai JFMC are given below.

Table-13): Miscellaneous Operations in the Tipkai JFMC

Operation	Required (Yes / No)	Responsibility	Month / Year	Area (Ha)
No such planned	-	-	-	-

Source: Proforma-3, Table-3.13 / Discussions with Forest Department personnel & Community members

5. Expected Benefits

This sub-section furnishes the benefits expected from the forests protected by members of the Tipkai JFMC, as well as the sharing mechanism for the usufruct benefits.

5.1. Expected Benefits Related to Wood & Grass

The above has been tabulated below for the Tipkai JFMC. The benefits are expected from the forests protected by its members under this Forest Development Plan.

Table-14: Expected Benefits from Forests Protected by Members of Tipkai JFMC

Item	Month	Year (Indicative)	Quantity
Firewood	Throughout the year	2020-21	2 quintals annually /household
Timber for House	Throughout the year	2025-26	2-3 trunks per household annually
Small timber for Implements	Throughout the year	2025-26	6-7 pieces per household annually
Bamboo	Throughout the year	2017-18 onwards	100 pieces/household
Pole	-	-	-
Fodder from Forest Trees & Grass			
NTFP	June-July	2021-22 onwards	1 MT
Wages	Planation and its maintenance.	2016-17 onwards	-
Firewood final felling	120/ha in Nov-Dec annually	2021 onwards	-

Source: Proforma-3, Table-3.14 / Discussions with Forest Department personnel & Community members

5.2. Sharing Mechanisms

The sharing mechanism for the benefits is indicated below for members of the Tipkai JFMC.

Table-15: Sharing Mechanism for Tipkai JFMC

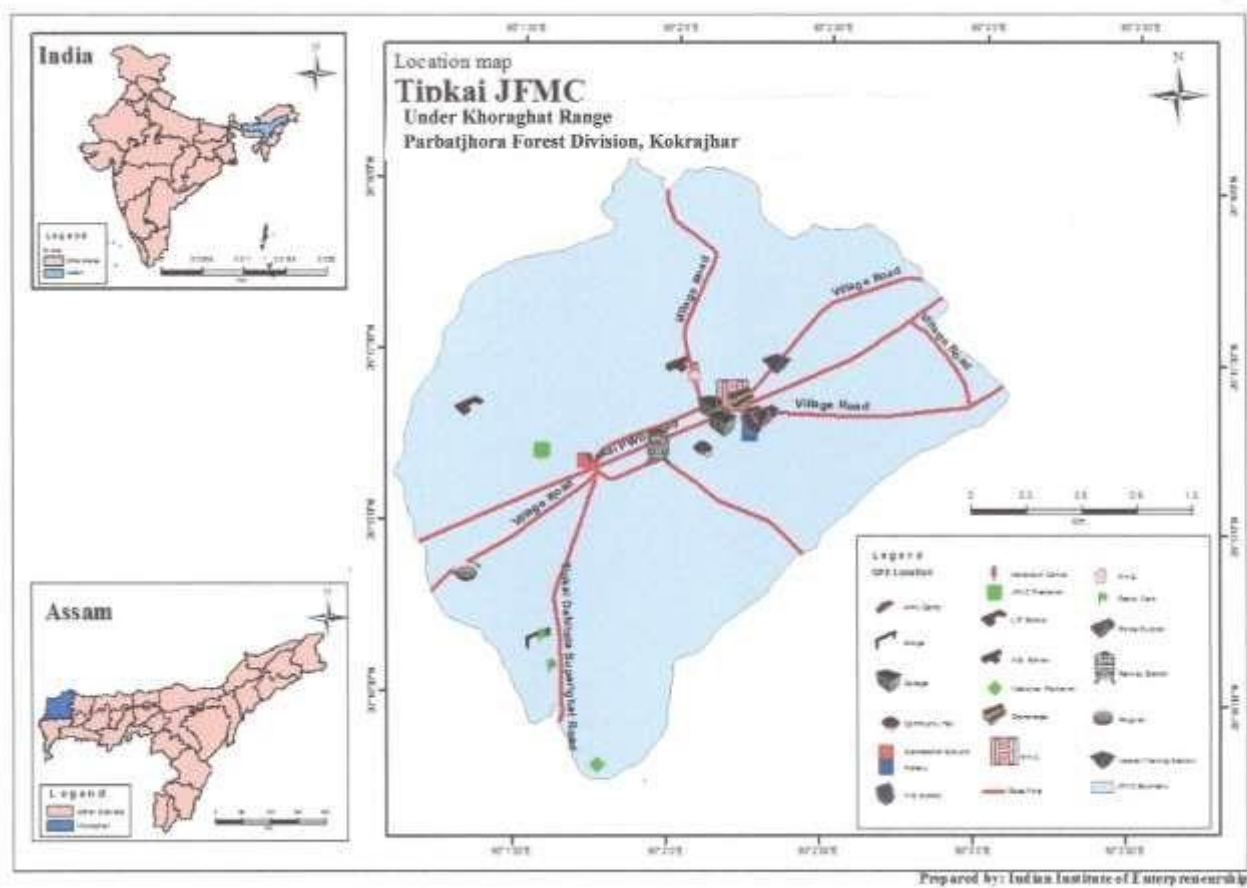
Method	Items
To be shared equally	NTFP, Sal (as revenue sharing)
To be freely collected by the members	Firewood, NTFP
Other Methods	Processing of NTFPs

Source: Proforma-3, Table-3.15 / Discussions with Forest Department personnel & Community members

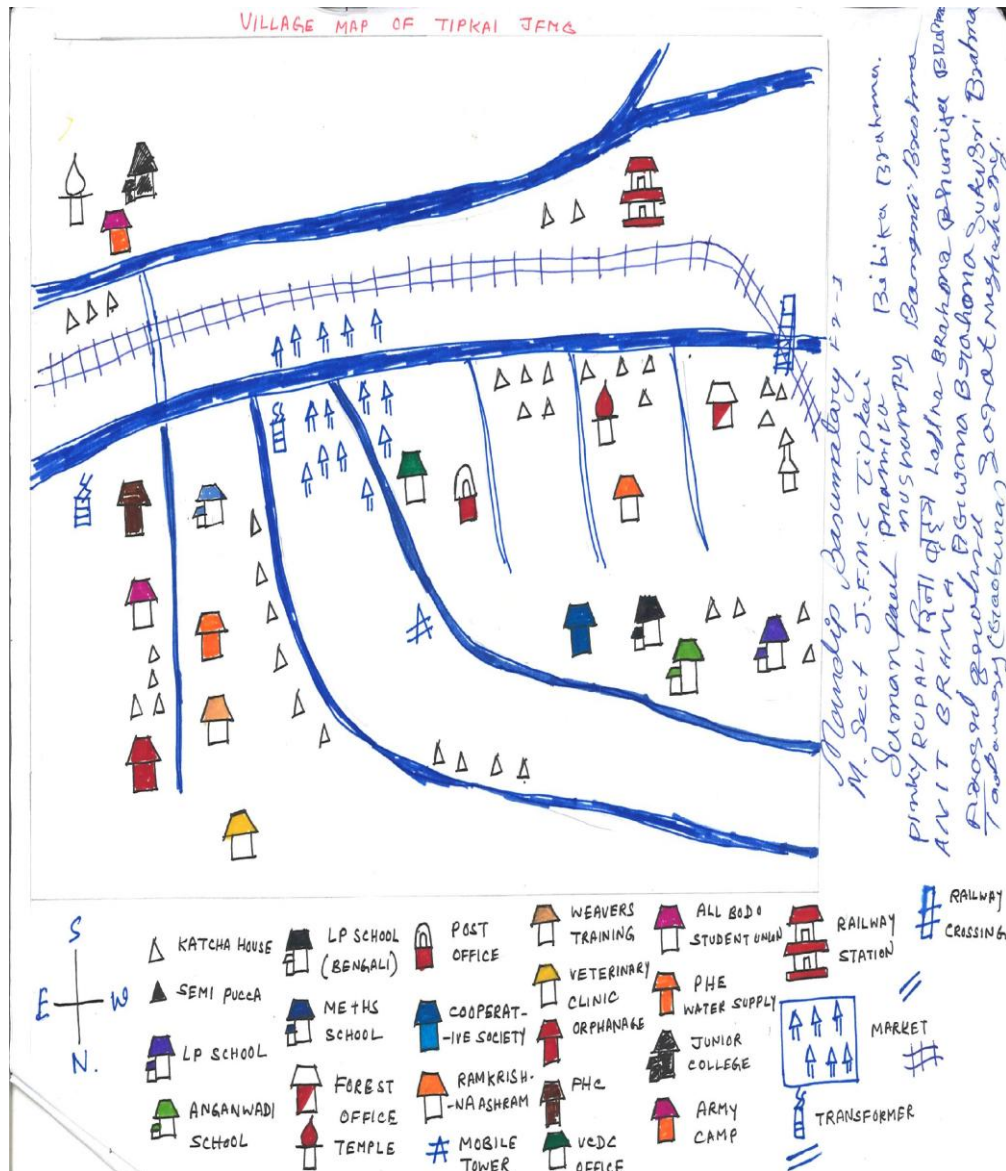
List of Appendices

Appendix No	Heading
1	Maps Village Map Village Social Map Village Resources Map
2	Land Use Map of Village (GIS)
3	PRA Exercise
	Social Mapping Wealth Ranking Time Line review Seasonality of Livelihoods Venn Diagram Chapatti Diagram Priority ranking and EPA
4	Photographs
5	List of JFMC Members
6	Filled Up Tables (Proforma-1 to Proforma-4) Table Nos. 1-37

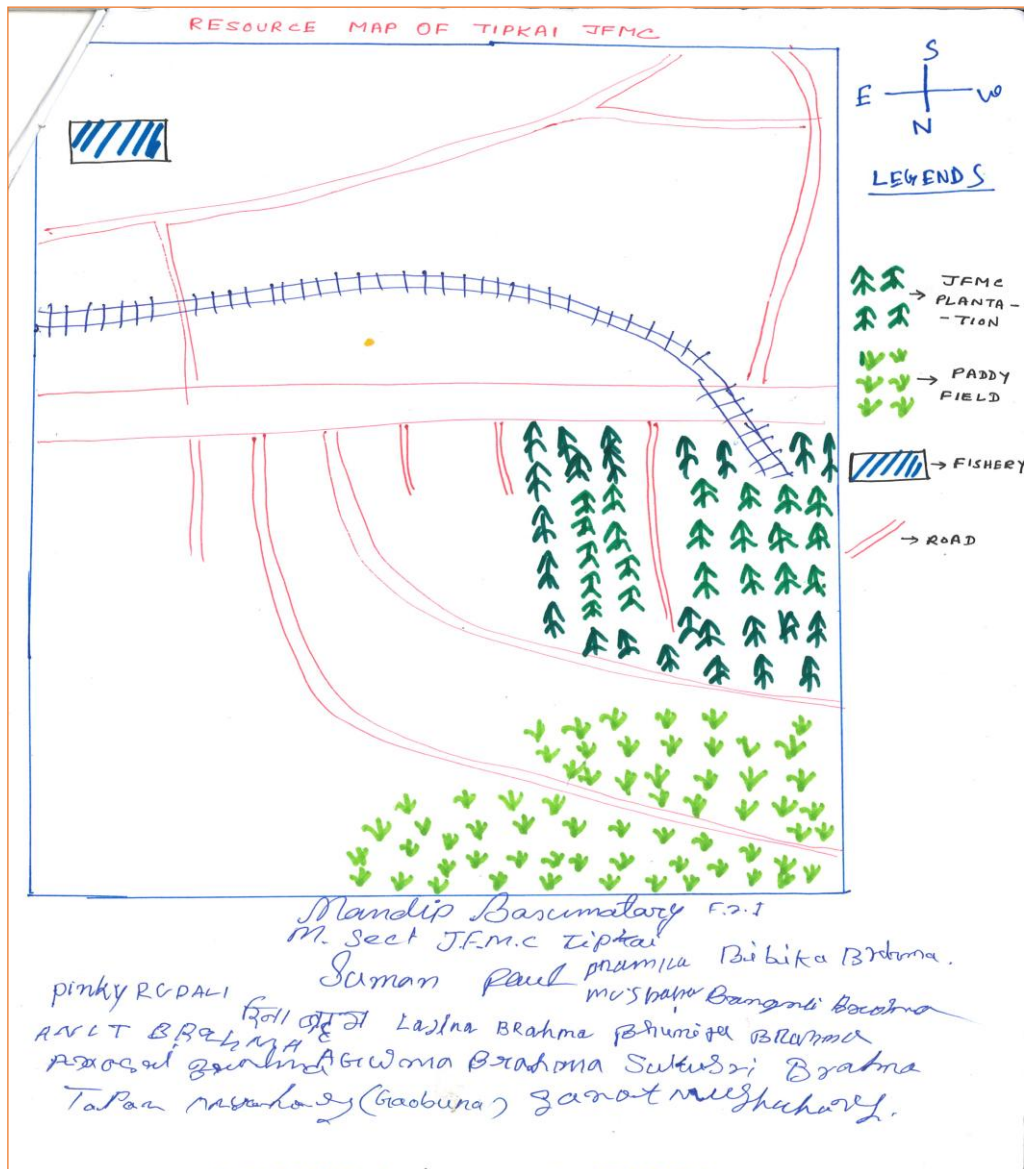
Location map



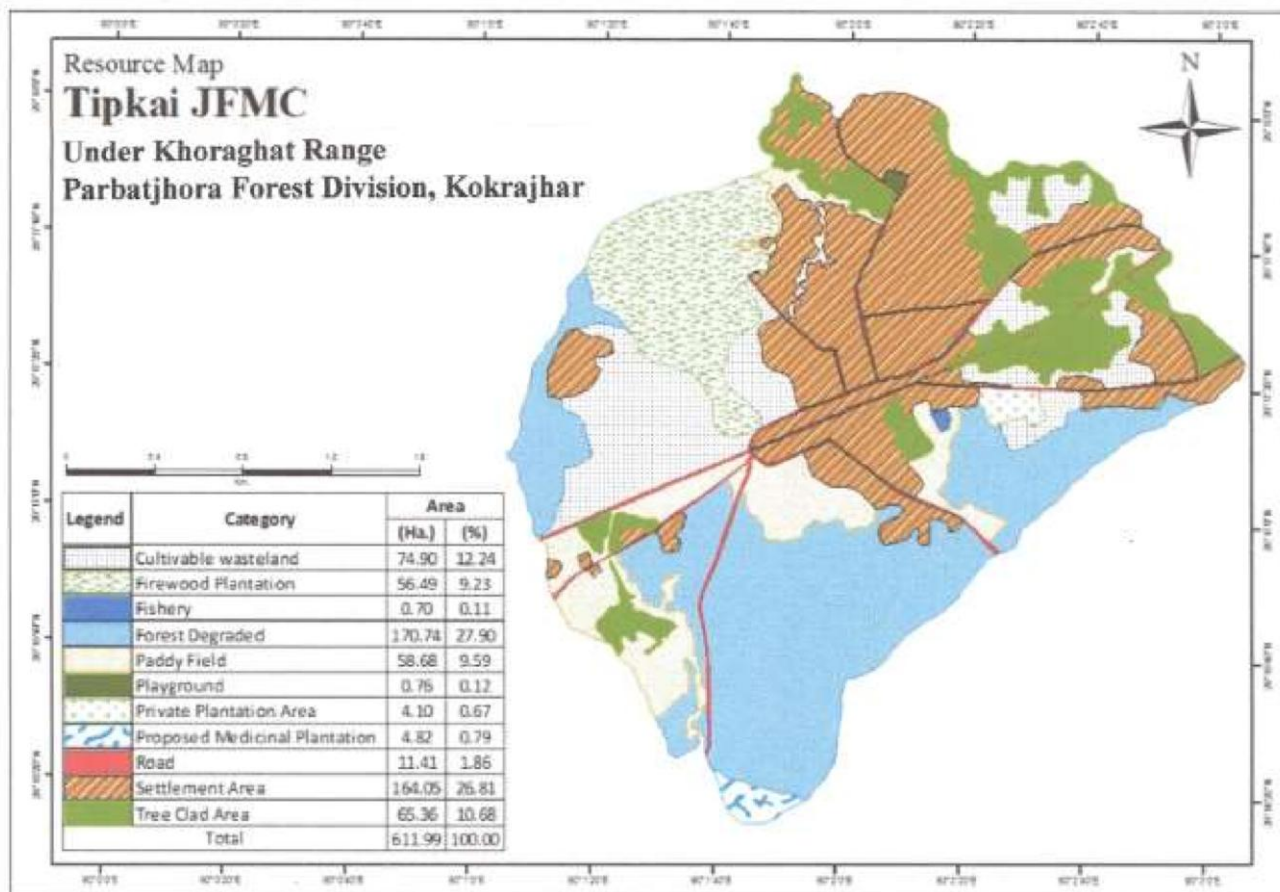
Social map



Resource Map



Land Use map of GIS



Appendix 3

PRA ACTIVITY

Numbers of participants:	60
Time:	11 am, 5 th June 2016
Venue:	Tipkai Forest Beat Office

Table – 3.1 Brief about the villages under Tipkai JFMC

Sl. No.	Name of the Village	No. of households	Population		
			Total	Male	Female
1	Tipkai	122	620	300	320

Source: Field Survey

Different PRA tools used under the exercise of PRA technique are:

- a) Social Mapping
- b) Wealth Ranking
- c) Time Line Review
- d) Seasonality Analysis
- e) Chapatti diagram

3.1 Social Mapping:

Social mapping is used to visualise the socio-economic aspects of the Tipkai JFMC where the housing patterns of the households, the numbers of schools, social infrastructure, and religious beliefs among households. Awareness camp about the project was carried out beforehand. So it was easy to gather people for the PRA process in the community hall. And due to time constraint we have to skip the transect walk. The villagers were enthusiastic about the mapping process and they actively participated in the process.

At first, the people of villagers were asked to draw the main roads of the village and then asked them to locate their houses and locate the important social places and government offices with help of the PRA team members. Two of them voluntarily came out to draw and they were assisted by other villagers and the team members. All the villagers spotted their households in the map. After the mapping process the team members collected the information about the pattern of their households namely pucca, semi pucca, IAY and thatch house.

Table 3.2: Information about the villages

	Village	TIPKAI
Social information	Total Population	620
	Male	300
	Female	320
	Total households	122
	Numbers of semi pucca Houses	5
	Numbers of pucca Houses	5
	Numbers of IAY Houses	0
Landmarks	Bridges	0
	Stream	0
	River	0
	PHE	1
	PHC	1
	Power Transformer	2
	Community hall	0
	LP School	2
	ME School	1
	High school	1
	Junior College	1
	All Bodo Student's Union office	1
	Anganabadi school	1
	Orphanage	1
	Veterinary clinic	1
	Weavers' training centre	1
	Village Council Development Committee	1
	Cooperative Society	1
	Ramkrishna Ashram	1
	Forest Beat Office	1
	Army Camp	1
	Temple	1
	Local Market	1
	Post Office	1
	Transformers	2
	Mobile tower	1
	Cremation Ground	1

Findings of social map:

- The participants of social mapping have identified all 122 households out of which 5 are pucca houses and 5 are semi pucca houses. There is no IAY houses through the entire village. This signifies that the IAY scheme of Government has not achieved considerable coverage of poor people residing in rural area yet.
- JFMC area have schools and colleges inside the village.
- There is one Public Health Engineering centre, but at present it is inactive.

- One Anganwadi school is present inside the JFMC.
- Out of 122 HH, 37 belong to general caste, 19 belong to SC and 66 belong to ST.

3.2 Wealth Ranking:

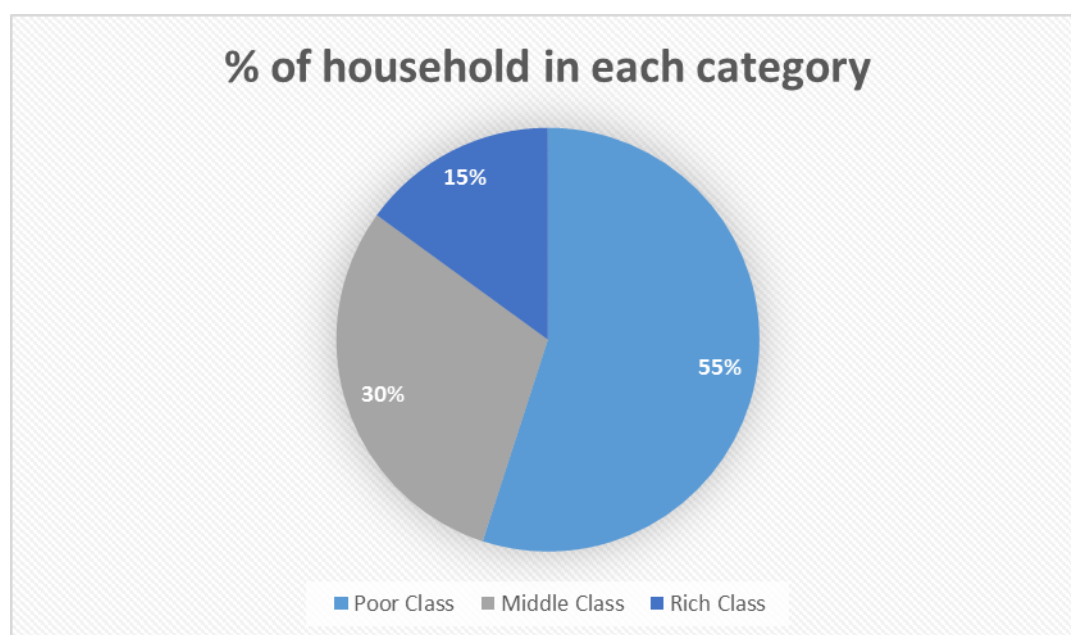
Wealth ranking, or well-being ranking, involves community members identifying and analysing the different wealth groups in a community. It enables evaluators to learn about the socioeconomic stratification of project beneficiaries and local people's definitions and indicators of wealth/well-being.

Wealth ranking was done with the help of the following criteria:

- a) Land holding
- b) Occupation

As such about 55 per cent people are poor, about 30 per cent are belong to middle class and about 15 per cent are categorised to be rich. Poor people are mainly irregular wage earners, sometimes they lease (adhi lua) others land.

Figure 3.1: Wealth Ranking



3.3 Timeline Review

In order to know the past important cum historical events over time, the team has conducted the timeline analysis. The team members discussed about the local events to the village head, elderly

persons and also to some young people to have an idea about how they dealt with those situations and what was the impact of those events on their lives as well as on the development of the village. Our time line illustrates the following events.

Table 3.3: Timeline review

Year	Event	Type
1964	Tipkai HS was established	Establishment
1994	Weaving centre was established	Establishment
1996	People mainly tea tribes community were migrated	Migration
1996,1998,2012	Communal dispute between different communities.	Dispute
2008	Train line was reconstructed	Construction

In the year 1964, Tipkai HS was established. In 1994 weaving centre was established.

Most people in that area are migrated from other places. Major migration was occurred in the year 1996.

History of that JFMC speaks about the communal dispute between different community in the years 1996, 1998 and 2012.

Train line was reconstructed in the year 2008.

3.4 Seasonal Mapping of livelihood activities:

Seasonal calendars drawn by the local people are very useful means of generating information about seasonal trends within the community and identifying periods of particular stress and vulnerability. Best undertaken in the context of a group discussion (to help verify the information obtained), seasonal calendars are often drawn on the ground with the relative trends depicted using stones or seeds, as in a preference-ranking matrix. In other instances, simple line graphs can be drawn to show seasonal increases or decreases. A whole series of seasonal variables can be included in one calendar to give an overview of the situation throughout the year. These variables can include: rainfall, crop sequences, labor demand, availability of paid employment, out-migration, incidence of human diseases, expenditure levels, and so on. Important periods, such as festivals, can also be shown.

Seasonal mapping mainly covers the seasonal variation of crops. In seasonal mapping, we considered agricultural crops and the timing of three activities viz. showing, cropping and harvesting criteria and collected the details throughout the year. From the seasonal mapping, it has been noticed that the main crops grown in the village are Sali rice. Also people cultivate Taro, Turmeric, Betelnut. Good amount of Bamboo are seen in the JFMC. The FGD conducted revealed that other major livelihood options available in the JFMC are daily wage labourer, Livestock rearing (Piggery), shop-keeping, weaving, masonry, tailoring, carpentry which are not seasonal in nature and also included in the table.

Figure 3.2: Seasonal Map of Tipkai JFMC

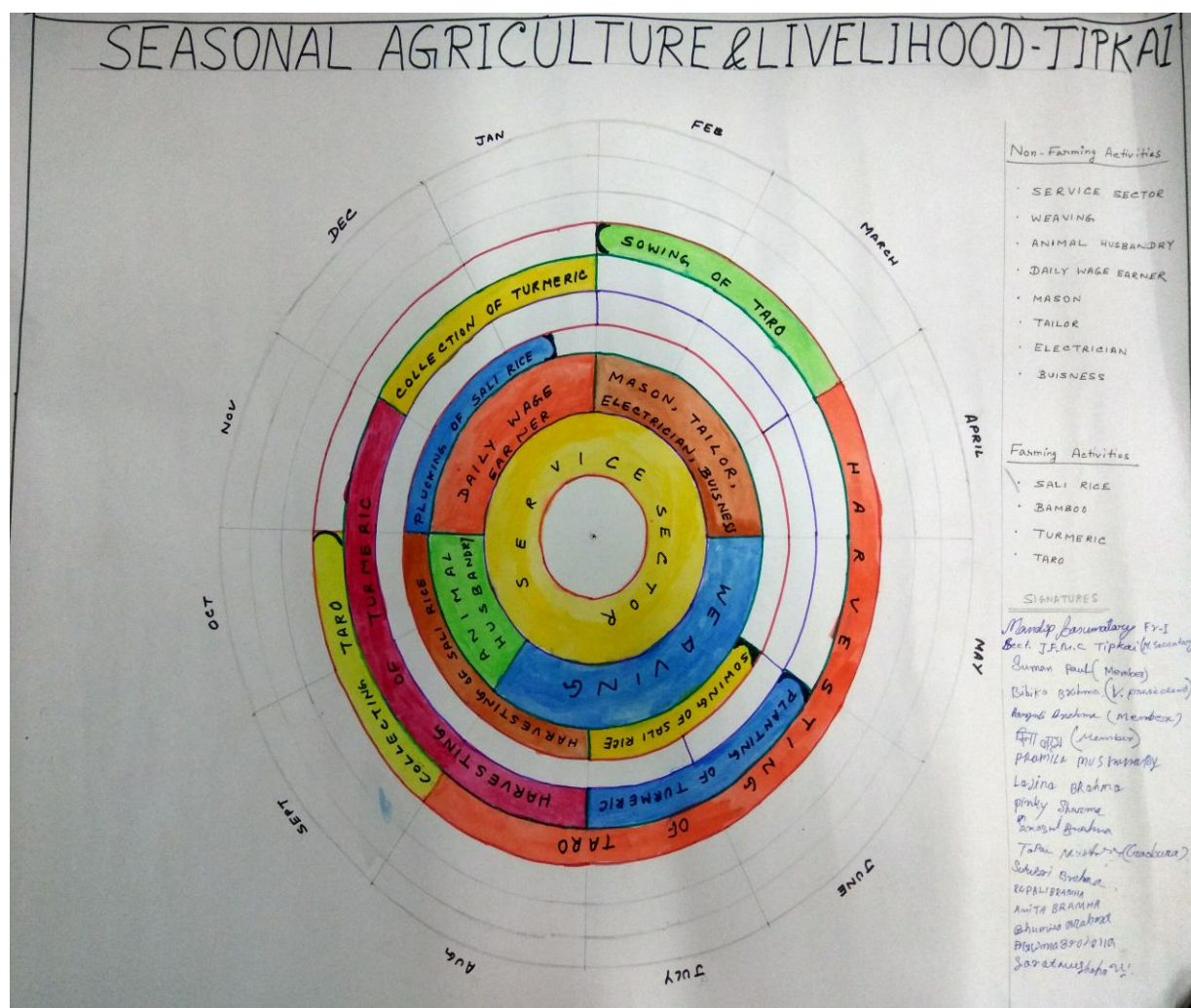


Table 3.4 Seasonal cropping pattern

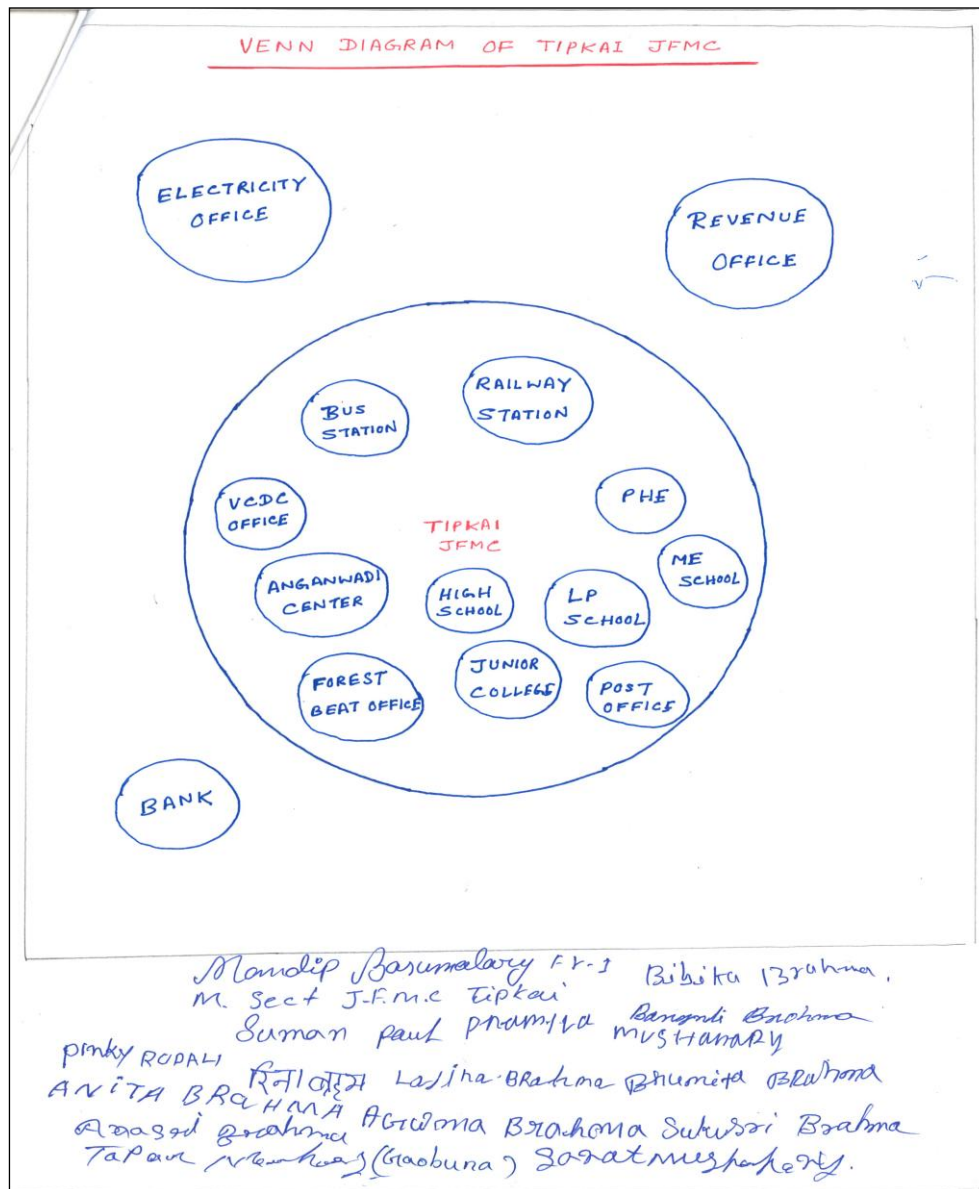
Agricultural crop	Sowing/Planting	Harvesting	Plucking/Cutting/Collecting
Sali Rice	June-July	Aug-Oct	Nov-Dec
Taro	Feb-March	April-Aug	Sep-Oct
Turmeric	June-July	Aug-Nov	Dec-Jan
Bamboo	3-5 years of time will take for maturity		
Betel nut	June	July-Jan	Feb-March

Service Sector	Throughout the year
Non Farming sector	Throughout the year
Animal Husbandry	
Tailoring	
Masonry	
Pottery	
Electrician	
Buisnessman	
Weaving	
Daily wage earner	Throughout the year

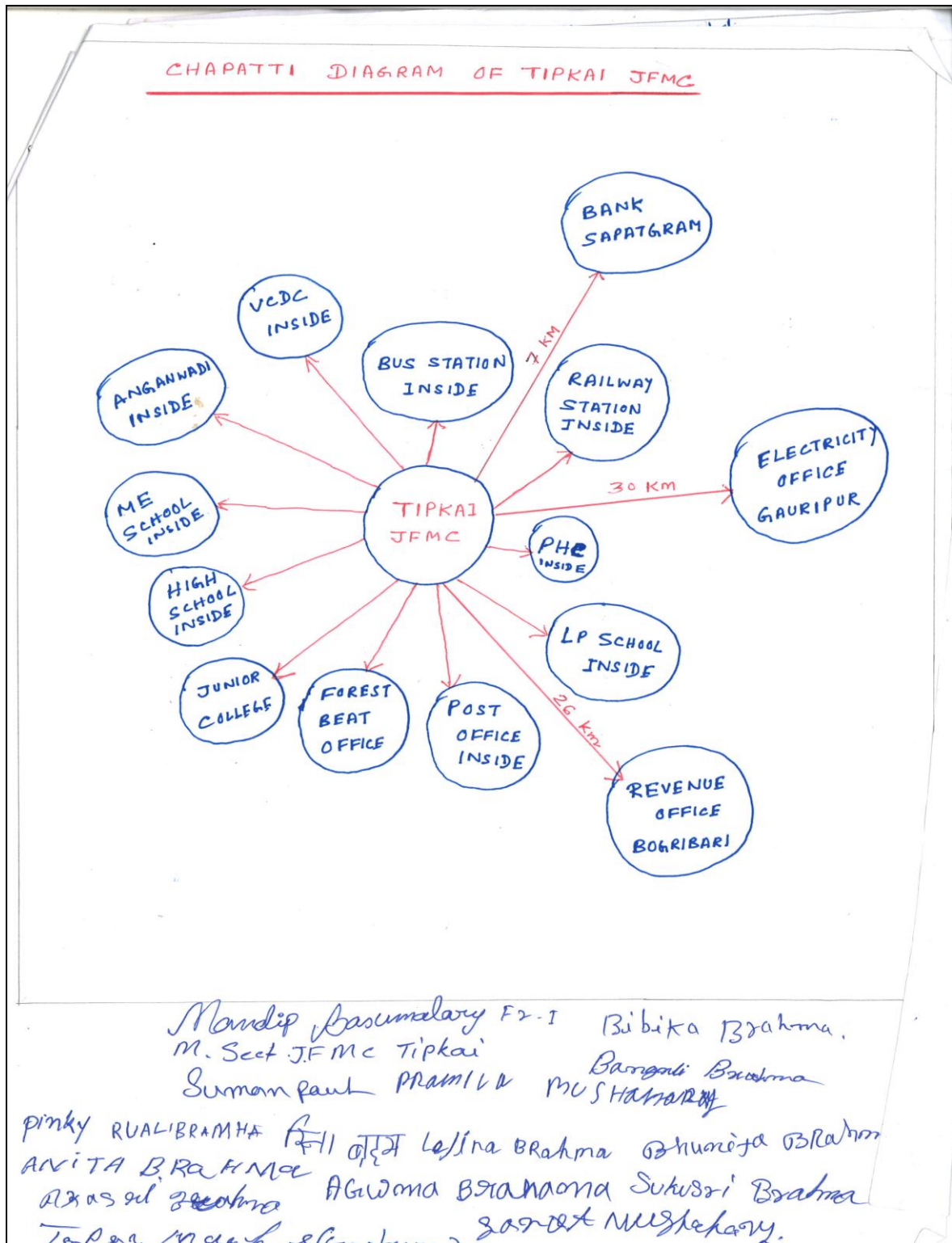
Learnings:

- Water availability is less during the period October to March, so agricultural productivity become less in this period.

3.5 Venn Diagram



3.6 Chapatti Diagram



Priority Ranking- Livelihood and Entry Point Activity(EPA)

Priority Matrix Ranking of **TIPKAI** JFMC for Potential Livelihood Activities

Potential Livelihood Activities	Shetkari (A)	Tailoring (B)	Weaving (C)	Carpenter (D)	Leaving Bamboo (E)	Masonry (F)	Marker	Priority
Live Stock Rearing (A)	X	A	A	A	A	A	5	1
Tailoring (B)		X	C	B	E	B	2	4
Weaving (C)			X	C	C	C	4	2
Carpenter (D)				X	E	D	1	5
Leaving Bamboo (E)					X	E	3	3
Masonry (F)					X	X	0	6

Signature of Villagers:
 Suman Paul Pratihara, Bibika Brahma,
 Pinky Rupali, Rati Pratihara, Laxmi Brahma, Ashmita Brahma, Anit Brahma,
 Agnita Brahma, Apasni Brahma, Subhri Brahma,
 Total 10 members (10 members)

Priority Matrix Ranking of

Lipkai

JFMC for Entry Point Activities

Entry Point Activities	Sanitation (A)	Road (B)	Water (C)	Regular Health Supply (D)	Drinking water (E)	Electricity supply (F)	Community Hall (G)	Bank (H)		Marks	Position
Sanitation (A)	X	A	A	A	A	A	A	A		7	1
Road (B)	X	X	B	b	b	B	B	B		6	2
Water (C)	X	X	X	C	E	F	G	C		2	5+
Regular Health Supply (D)	X	✓	X	X	E	F	D	H		1	7+
Drinking water (E)	X	X	X	X	X	E	E	E		5	3
Electricity supply (F)	X	X	X	X	X	X	F	F		4	4
Community Hall (G)	X	X	X	X	X	X	X	G		2	6
Bank (H)	X	X			X	X	X	X		1	7

Mandep Basumatary F.I. I Bibika Brahma.
M. Sect JFMC Lipkai
Juman Paul Rati Rati
Klasina Brahma Dekumitel Brahma ANITA BRAHMA
Agidona Brahma Sulewzi Brahma Zahatmeshchary.
pinky RUPALI
Anasud Brahma
Tapan Meher
(Gaombura)

Annexure 4

PHOTOGRAPHS



During the PRA mapping



Ongoing Plantation area of Medicinal Plant



Villagers after the PRA activity with Member Secretary Mondip Basumutary

Annexure 5

LIST OF JFMC MEMBERS

SR.NO	NAME	SEX	DESIGNATION
1	Swmpark Brahma	Male	President
2	Bibika Brahma	Female	Vice president
3	Mandeep Basumatary	Male	Forester
4	Suman Paul	Male	Treasurer
5	Sarat Musahary	Male	Member
6	Ratan Musahary	Male	Member
7	Donen Brahma	Male	Member
8	Pramani Narzary	Female	Member
9	Pokhashree Brahma	Female	Member
10	Losina Brahma	Female	Member
11	Bengali Brahma	Female	Member
12	Lakhisaran Brahma	Male	Member
13	Tapan Musahary	Male	Village head
14	Narzary Brahma	Male	Member
15	Pramila Brahma	Female	Member

Annexure 6 (Record I)

Table 1: Basic data of the village:

Table 1: Basic data of the JFMC

Sl.No	Name of JFMC/Village	Date of Establishment	No. of members in executive comt.	Name of President	Name of Secretary	Money in village Dev.Fund.(VDF)	Contribution per family per person	Social fencing used Yes/No	Remarks on special attainments	Grading % of Success of JFMC by RFO
1	Tipkai	2013	37	Swmpark Brahma	Mandeep Basumatary					

Table 2: Village wise population data:

Table -2: Demographic status of the project villages

Sl. No.	Name of village	Households (No.)	Population (No.)			Sex ratio	Avg. HH size
			Total	Male	Female		
1	Tipkai	122	620	300	320	1066	4.5

Source: - Field survey report.

Table 3: Village wise farmer category on the basis of land holding :

Table3 Village wise farmer category on the basis of land holding

	Types of Farmers according to land holding				
Name of the JFMC	Large Farmer (> 10 hectare)	Small Farmer (5-10 hectare)	Marginal farmer (< 5 hectare)	Landless	Total
Tipkai			10		

Table 4: Cattle Population:**Table 4: Cattle Population of the JFMC**

Village wise numbers of cattles or type of animal										
JFMC	Cows	Buffaloes	Goats	Sheep	Bulls/Oxeing	Camels	Pigs	Hens/Cocks	Duck	Total
Tipkai	112		78	Nil	Nil	Nil	83	Nil	Nil	273

Table 5: Village wise Infrastructure:**Table 5 Showing village wise infrastructure**

Sl.No	Infrastructure	Location	Distance from village, if in another location (in kilometres)	Condition and status of present use
1	Main Road	Inside the village	-	Good
2	Electricity	Gauripur	30 km	Poor
3	Gas connection	Gas connection	30 km	Poor
4	Transport	Inside the village	-	Good
5	Primary health centre	Inside the village	-	Poor
6	School	Inside the village	-	Poor
7	Post Office	Inside the village	-	Good
8	Bank	Sapatgram	7km	Good
9	Anganwadi Centre	Inside the village	-	Good
10	Village Council Development	Inside the village		Good
11	Revenue Office	Bogribari	26 km	Good
12	Police Office	Inside the village	-	Good
13	Forest Office(Beat)	Inside the village	-	Good
14	Bus Facility	Inside the village	-	Good
15	Railway Station	Inside the village	-	Good
16	Drinking water	Inside the village	-	Poor
17	JFMC assets community hall	Nil		
18	District Head Quarter	Dhubri	40km	Good

Table 6: Agricultural crops**Table 6 Agriculture Crops**

	Rain fed		Irrigation	
	Name of Crop	Area in ha	Name of Crop	Area in ha
Kharif	Sali Rice	45	NA	
Rabi	Leafy vegetables	Household use	NA	

Table 7: Crop production profile of TIPKAI JFMC:**Table 7 Crop production profile of Tipkai JFMC**

Name of crop	Total production(approx.)in quintals	Number of households growing	Average production(quintal per/ha)
Paddy	20	30	3.12
Vegetables	0.07	80	0.35

Table 8: Fodder Availability (animal)**Table 8 fodder availability of the JFMC**

types	1-3 month	3-6 month	>6 month
Crop residue		✓	
Trees fodder		✓	
Grasses			✓
Green Fodder			✓
Grazing in Forest			✓

Table 9: Location of market from the village

Table 9: Location of market from the village

For Purchase	Location	Distance from village if in other village (in km)
Grocery shop	Tipkai	-
Weekly Market	Tipkai	-
Major Market	Gosaigaon	22
Forest Corporation Sale Depo	NA	
Tendu Patta PHAD	NA	
Fish Market		1
Medicinal Plant collection Center		
Forest Corporation Medicinal plant Collection Center	NA	

Table 10: Water Resources Facility:

Table 10: showing the water resource facility available in the village

Water Source	Number	Water Availability	Uses
Water Harvesting Structure	NA		
Tube Well	NA		
Stream	NA		
River	NA		
Katcha ring well	20	Not adequate, water has iron.	Drinking

Table 11: Energy consumption:*Table 11 showing the Energy Consumption of the JFMC*

Type of Fuel	Number of household depending	Number of months dependent	Sources (local, village, forest, other sources)	Major/ Secondary
Fuel wood	122	12	Forest	Major
Kerosene stove	10	3	Market	Secondary
Gobar/Bio gas	NA			
LPG	7	6	Authorised agency	Secondary
Electric Heater	NA			

Additional table: Education Profile

Categories	% of total population
Illiterate	25
Up to ME	51
X pass	7
12 pass	1
Graduate	1
Infant	16

RECORD: II

LIVELIHOOD OPPORTUNITY ANALYSIS

Table 12: Agriculture and Horticulture:

Table 12: showing the agricultural and horticultural status

Constraints	Reason	Opportunities	Programme
Low Production	<ul style="list-style-type: none"> Traditional way of cultivation. Only one crop undertaken annually (Sali) Very negligible use of fertilizers and pesticides, insecticides. Lack of irrigation facilities. Lack of agricultural infrastructure, modern tools and equipment's viz, power tillers, tractors etc. Non usages of high yielding seeds. 	<ul style="list-style-type: none"> Application of proper and controlled pesticides and insecticides. Introduction of new and advance technology. Well-structured training programme. The villagers are inherited with the skill of cultivation. But an improvisation of skills is the need of the hour. Usage of high yielding seed programme. 	<ul style="list-style-type: none"> Tractor operation training Agri-skill development programme. Training on insecticides, pesticides, hybrid cultivation
Storage and Production	<ul style="list-style-type: none"> Lack of common storing place Lack of cold storage facility due to non-availability of electricity 	<ul style="list-style-type: none"> Helpful in preserving unsold products for a longer period of time. They can store their product and sell it when there is a higher demand. 	<ul style="list-style-type: none"> Packaging Transportation and distribution.
Marketing	<ul style="list-style-type: none"> Lack of transporting facilities for carrying products Less contact with the direct market; much dependency upon middle man No knowledge on marketing know-how, dependence on traditional system of selling. 	<ul style="list-style-type: none"> Smooth transportation facility will help the farmers to carry their products to the nearby markets. Generate highest market price by removing middle men. More knowledge about the current market situation as well as the current value of their products. They can sell their products outside of the state, as the JFMC is located in Assam West Bengal border and Bhutan border is also not far from it. 	<ul style="list-style-type: none"> Buyers sellers meet

Table 13: Livestock**Table 13 Livestock**

Constraints	Reasons	Opportunities	Programme
Less grazing land	<ul style="list-style-type: none"> • Not Applicable 		
Availability of fodder	<ul style="list-style-type: none"> • Unable to buy fodder from market due to poor financial condition • Trees fodder n crop residue are available only for 3-6 months. Green fodder is also not available for the whole year. 	<ul style="list-style-type: none"> • Higher income from livestock rearing. • The villagers can make it as an alternative livelihood opportunity if they have the easy access of livestock fodder. 	
Veterinary care facility	<ul style="list-style-type: none"> • No veterinary care clinic • Lack of knowledge about the proper rearing of live stock 	<ul style="list-style-type: none"> • Disease control • Increases the life span of cattle. • It will also help to aware the villagers and will encourage them for livestock rearing. 	
Production of milk	<ul style="list-style-type: none"> • Less availability of fodder • No scientific knowledge on cattle rearing to increase the milk production. 	<ul style="list-style-type: none"> • Training on the milk production can enhance the skill of milk production. • Availability of supplements like cattle “Milk Booster, Milk Plus” etc. can increase the production of milk in the area. 	
Milk market	<ul style="list-style-type: none"> • Less contact with the direct market for milk • Unaware of the market demand of different milk made products. 	<ul style="list-style-type: none"> • A huge demanded market for milk is available as Kokrajhar district head quarter and West Bengal state is too far from the JFMC. 	

Table 13: NWFP**Table 14 NWFP**

Constraints	Reasons	Opportunities	Programme
Less collection	<ul style="list-style-type: none"> • Less availability of NWFP 	<ul style="list-style-type: none"> • Availability of fertile fallow land 	<ul style="list-style-type: none"> • Plantation of fruit trees, Medicinal Plant etc.
Unsustainable extraction	<ul style="list-style-type: none"> • NA 	<ul style="list-style-type: none"> • Availability of fertile fallow land 	<ul style="list-style-type: none"> •
Low rates	<ul style="list-style-type: none"> • NA 	<ul style="list-style-type: none"> • 	<ul style="list-style-type: none"> •
Value addition	<ul style="list-style-type: none"> • No processing units • Non availability of required resources 	<ul style="list-style-type: none"> • 	<ul style="list-style-type: none"> •

	<ul style="list-style-type: none"> No technical know-how 		
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Table 15: Specialised skill

Table 15: Specialised skills: Handloom

Constraints	Reasons	Opportunities	Programme
Raw material availability	<ul style="list-style-type: none"> Non-Availability of Raw Materials within reachable location (market 7km away) No Storage 	<ul style="list-style-type: none"> Common place for setting a raw material storage 	<ul style="list-style-type: none"> Setting up a raw material bank
Product quality	<ul style="list-style-type: none"> Shortage of High Quality Materials Use of Traditional machineries 	<ul style="list-style-type: none"> Developing Quality Products for new market exploration. 	<ul style="list-style-type: none"> Training on Modern Tools and Equipment. Providing modern technology to the villagers
Marketing potential	<ul style="list-style-type: none"> No standardised market No pricing policy No linkage with the institutional buyers No Product Diversification or New Product Development. 	<ul style="list-style-type: none"> Exploring new markets with diversified products 	<ul style="list-style-type: none"> Providing a bulk buy arrangement of the finished product with institutional buyers.
Credit facilities	<ul style="list-style-type: none"> No linkage with the banks or post office saving banks. Unaware of the development schemes of banks and government 	<ul style="list-style-type: none"> Financial assistance by the Govt. Providing easy access to credit. 	<ul style="list-style-type: none"> Microfinance, Term Loans, Working Capital Arrangement
Product Diversification	<ul style="list-style-type: none"> No Product Diversification or New Product Development. Lack of concept for product diversification. 	<ul style="list-style-type: none"> Developing Demand Based Products, as per the needs of the modern day market. 	<ul style="list-style-type: none"> Skill Upgradation & Training on New Product Development and Product Diversification

Table 16: Credit facility*Table 16 Credit facility*

Constraints	Reason	Opportunities	Programme
Indebtness	Nil	<ul style="list-style-type: none">• Setting up modern financial institution in the nearby areas.	
Rate of interest	<ul style="list-style-type: none">• Higher lending rates charged by the private money lender	<ul style="list-style-type: none">• Subsidised credit arrangement	
Availability of loan	<ul style="list-style-type: none">• Fear of risk taking• No knowledge of documentation	<ul style="list-style-type: none">• Start-ups entrepreneurial venture	
Mortgage difficulty	<ul style="list-style-type: none">• Unavailability of proper documentation of mortgaged property.	<ul style="list-style-type: none">• Proper awareness about documentation in the area	

