

**MANIPUR JANGIRKILLA JOINT FOREST MANAGEMENT
COMMITTEE (JFMC)**

**KHORAGHAT RANGE, PARBATJHORA FOREST DIVISION
KOKRAJHAR DISTRICT, ASSAM**

MICRO-PLAN

(2016-17 to 2025-26)

Prepared by Manipur Jangirkilla 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

MANIPUR JANGIRKILLA JOINT FOREST MANAGEMENT COMMITTEE
Parbatjhora Forest Division, Bogribari Forest Circle

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

Table of Contents

Section No	Heading	Page No
1	Introduction	1
2	Village Socio-Economic Profile	2-5
3	Livelihood Opportunity Analysis	6
4	Livelihood Development Plan	10
5	Forest Development Plan	12-23
6	List of Appendices -List of beneficiaries identified for livelihood generation activities. 1) Agarbatti Making	24

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 (AFD)</i> - 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 (RGVN)</i> 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 Manipur Jangirkilla JFMC	<p>This document gives the Micro-Plan for the Manipur Jangirkilla JFMC, which is located in the Kokrajhar district of Assam and in under Social Forestry Division, Kokrajhar and location of JFMC fall within the jurisdiction of Parbatjhora forest division.</p> <p>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 Manipur Jangirkilla Joint Forest Management Committee (JFMC) has been formed to cover the existing community dwelling in Manipur and Jangirkilla, two villages located under the jurisdiction of Parbatjhora Forest Division but JFMC is run by Suparighat Forest Division. The area covered by the above JFMC falls within the Bogribari VCDC, 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>Manipur Jangirkilla</td></tr> <tr> <td>Habitation</td><td>Manipur Jangirkilla</td></tr> <tr> <td>Name of the Gram Panchayat / VCDC</td><td>Mahamaya</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</td></tr> <tr> <td>Forest Range</td><td>Khoraghat</td></tr> <tr> <td>Forest Beat</td><td>Makrihora</td></tr> <tr> <td>Year of Formation</td><td>2015</td></tr> <tr> <td>Description of Boundary of JFMC</td><td>North: Mahamaya Parbatjhora Road South: Mahamaya River West: Bhalukjhora Debitola Part III East: NH 31, Bogribari village</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	Manipur Jangirkilla	Habitation	Manipur Jangirkilla	Name of the Gram Panchayat / VCDC	Mahamaya	Revenue Circle	Bogribari	District	Kokrajhar	Forest Division	Parbatjhora	Forest Range	Khoraghat	Forest Beat	Makrihora	Year of Formation	2015	Description of Boundary of JFMC	North: Mahamaya Parbatjhora Road South: Mahamaya River West: Bhalukjhora Debitola Part III East: NH 31, Bogribari village
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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>Zakir Hussain Paramanic</td></tr> <tr> <td>Name of Member Secretary</td><td>Mr. Babul Chandra Das</td></tr> <tr> <td>Name of Treasurer</td><td>Salma Begum</td></tr> <tr> <td>No. of Members in Executive Committee</td><td>Male: 8 Female:6</td></tr> <tr> <td>No. of Members in the General Body</td><td>137+137=274(One male and one Female from each household)</td></tr> </table> <p>Source: JFMC Records</p>	Name of President	Zakir Hussain Paramanic	Name of Member Secretary	Mr. Babul Chandra Das	Name of Treasurer	Salma Begum	No. of Members in Executive Committee	Male: 8 Female:6	No. of Members in the General Body	137+137=274(One male and one Female from each household)										
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Households & Population Structure	<p>The JFMC consisting of two villages has a total of 137 households. The number of female headed households is 20. The total population is 1245, of which 761 are male and the 484 are female members. Out of 137 HH, 132 HH belong to Muslim community and 5 belongs to OBC.</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> <p>(1) The average number of persons in a household is 9.08.</p> <p>(2) The sex ratio is 636 females per 1000 males in the village.</p>
Education & Skills Development	<p>Over 75 % of the population is reported to be literate. Most of the community members have received education upto ME (32%) and attaining of education afterwards 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> <p>(a) Livestock rearing (b) Agarbatti making (c) Bee keeping</p> <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 layer soil in low lying area and loamy soils in plain areas. <p>The soil is reported to be non-fertile and production of crops are not satisfactory.</p>
Water	<p>The area is drained by the river Makrijhora which flows from the adjoining mountains of Bhutan into the project area before joining the River Brahmaputra to the south. This is a perennial river.</p> <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 Hill Sal Type under Northern Tropical Moist Deciduous Forest. The main tree species are <i>Segun(teak)</i>, <i>Gomari</i> (<i>Gmelina arborea</i>), <i>Azar</i>, <i>Bhelkor</i>, <i>Arjun</i> (<i>Terminalia arjuna</i>) etc. The forests can yield a range of NTFP like leafy vegetables, ferns, medicinal plants, bamboo, thatch etc.</p> <p>Additional details in this regard are given at the ‘Forest Development Plan’.</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>Firewood plantation 25.46% Forest degraded 22.72% Paddy field 25.54% Pond 0.57% Road 2.10% Settlement area 17.18%</p>

	Stream 0.50% Tree Clad area 2.79% Water body 3.14%
Land Holdings	The type of households as per land-holding is given at Table-3 of Record-I. From the same, it is seen that: 20% HH have farming lands
Livestock	The total number of livestock in the village is 721. The main types of livestock possessed by the households include: Cows: 107 Goats: 107 Bulls : 19 Poultry: 488 Table-4 of Record-I may be referred to for the details in the above connection.
Village Infrastructure & Communication Facilities	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. From the above table, the following have been noted with regard to village infrastructure: Physical Infrastructure: The habitation is deprived of basic physical infrastructure like paved roads, electricity, water supply, community hall etc. Education & Health Facilities: There are minimal educational facilities in the village. Health facilities is not satisfactory one. Public transport is not available, and the community members have to use bicycles to move around. Govt. Offices: The government offices (such as Police station, Village Council Development Committee, Revenue office, Forest Beat office etc.) are located at a considerable distance. Financial Inclusion: Bank is far away from their places. Post office facility they get within the village.
Agricultural Crops	The details of the agricultural crops grown in the village is available at Table-6 of Record-I. The above shows that the following are the main crops grown in the village. Kharif Crops: Sali Paddy, Chinese Paddy, Boro and summer paddy (ahu) Topioca Rabi Crops: Leafy vegetables Fruits: Mango, jack fruit etc. Vegetables: Bottle gourd, White gourd, Bitter gourd, Teasle Gourd, Brinjal, Chilli, Spine core, Cabbage, Cauliflower, Radish etc.
Crop Production Profile	Table-7 of Record-I may be referred to for the production and yield details of the crops grown in the village. Very few villagers have farming land for producing crops.

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: Makrijhora at 1 km away (b) Weekly / Bi-weekly Market: : Bogribari, Mahamaya (c) Major Market: : Gauripur at 20 km away</p>
Water Resources	<p>The water resources are tabulated at Table-10 of Record-I. The main water resources with the water availability is as follows:</p> <p>(a) tube well (Water Availability: Perennial / Seasonal) (b) stream (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 Nos.137 Source: Forest (b) KEROSENE-Households Depending: 10-15 Nos. Source: Open Market and PDS</p>
Socio-economic status	<p>Social set-up: The village is inhabited by minority community.</p> <p>Economic Condition: Villager's main source of earning is daily wage earning with 72%. Very few are associated with service sector. Service sector (2%) comprises of school teacher, school helper (contractual as well as permanent). Non farming sector consist of masonry, tailoring, electrician, business, animal husbandry etc. where approximately 12% are associated. Farming practice is very less because only 14% of family has farming lands only.</p>
Maps	<p>Appendix-1 gives the following maps, based on PRA exercise:</p> <ul style="list-style-type: none"> • Village Map • Village Social Map (with the names and particulars of members in PRA) • Village Resource Map

4. Livelihood Opportunity Analysis

PRA Exercise	<p>Team from IIE Guwahati carried out PRA exercise in Manipur Jangirkilla village as follows:</p> <p>Date: 10th June, 2016 Location: Playground Numbers Present: 60</p> <p>In Presence of: JFMC office bearers, Village Headman, community members, Forest Department personnel, etc.</p>
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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	<p>Different tools were used and outcomes obtained. These include:</p> <p>Social Mapping Wealth Ranking Time Line review Seasonality of Livelihoods Venn Diagram</p> <p>Appendix-3 furnishes detailed information of the above.</p>																																		
Ranking	<p>Ranking exercise has been done for the following:</p> <ul style="list-style-type: none"> • Livelihoods & Skills Development • Entry Point Activities (EPA) <p>Appendix-3 To elaborate the above. From the same, it is stated that:</p> <p>Ranking of Livelihoods & Skills Development</p> <ol style="list-style-type: none"> 1. Livestock rearing 2. Agarbatti making 3. Bee keeping 4. Masonry <p>Ranking of EPA</p> <table border="1"> <thead> <tr> <th>Rank</th><th>Village EPA as ranked</th><th>Details (Appendix-3 has additional particulars)</th><th>Probable source of funding/Deptt.</th></tr> </thead> <tbody> <tr> <td>1</td><td>Community hall</td><td>Community meetings can be organised properly.</td><td>EPA from APFBC</td></tr> <tr> <td>2</td><td>Drinking Water</td><td>Easily accessible and quality drinking water</td><td>EPA from APFBC/ NRDWP</td></tr> <tr> <td>3</td><td>Fishery/ Fishery breeding centre</td><td>A land of 2 ha has been proposed.</td><td>EPA from APFBC / Linkage with fishery department</td></tr> <tr> <td>4</td><td>Electricity</td><td>Quality power supply can be obtained.</td><td>Linkage with electricity dept.</td></tr> <tr> <td>5</td><td>Dairy farm</td><td>Production of milk and dairy products</td><td>Linkage with veterinary dept. and dairy dept.</td></tr> <tr> <td>6</td><td>Sanitation</td><td>Household sanitation in village</td><td>Swach Bharat Mission/PHED</td></tr> <tr> <td>7</td><td>Road Connectivity</td><td>Village adjoining roads are in bad condition.</td><td>PMGSY/PWD</td></tr> </tbody> </table>			Rank	Village EPA as ranked	Details (Appendix-3 has additional particulars)	Probable source of funding/Deptt.	1	Community hall	Community meetings can be organised properly.	EPA from APFBC	2	Drinking Water	Easily accessible and quality drinking water	EPA from APFBC/ NRDWP	3	Fishery/ Fishery breeding centre	A land of 2 ha has been proposed.	EPA from APFBC / Linkage with fishery department	4	Electricity	Quality power supply can be obtained.	Linkage with electricity dept.	5	Dairy farm	Production of milk and dairy products	Linkage with veterinary dept. and dairy dept.	6	Sanitation	Household sanitation in village	Swach Bharat Mission/PHED	7	Road Connectivity	Village adjoining roads are in bad condition.	PMGSY/PWD
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	<ul style="list-style-type: none"> ✓ 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 for installation/setting up and commissioning of toolkits/equipments/machineries.
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Livelihood Opportunities	<p>Livelihood Opportunities were identified as follows:</p> <p>Livestock NTFP Skills Development Credit Facility</p> <p>Additional discussion about the above has been given below.</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) Most people don't have farming lands (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, other inputs, manures (bio) and fertilizers etc.</p> <p>The opportunities are:</p> <p>(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> <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.
Livestock	<p>Table-13 furnishes additional information about opportunities for livestock rearing.</p> <p>The main constraints are:</p> <p>(a) Unable to buy fodder from market due to poor financial condition. (b) Trees fodder n 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</p> <p>The opportunities are:</p> <p>(a) Higher income from livestock rearing. (b) A huge demanded market for milk is available as Kokrajhar district head quarter and nearby towns of Dhubri district.</p> <p>The suggested programme is:</p> <p>Poultry Livestock rearing</p>
NWFP	<p>The opportunities for NWFP are tabulated at Table-14 under Record-2</p> <p>The main constraints are:</p> <p>(a) Less availability of NWFP</p>

	<p>(b) No technical know-how (c) No processing units</p> <p>The opportunities is: (a) Availability of fertile fallow land</p> <p>The suggested programme are: (a) Plantation of fruit trees, (b) Medicinal and Aromatic plants, herbals etc.</p>
Specialized Skills	<p>For skills development, the opportunities are tabulated at Table-15 under Record-2</p> <p>1. Cattle rearing and dairy farming</p> <p>The main constraints are: (a) Lack of product diversification (b) Lack of research on product quality (c) Lack of TQM techniques.</p> <p>The opportunities are: (a) Providing good communication facility (b) Training of the skill holder (c) Financial assistance from govt.</p> <p>The suggested programme are:</p> <ul style="list-style-type: none"> • 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	<p>Table-16 under Record-2 discusses this aspect.</p> <p>The main constraints with the reasons are: (a) Lack of financial institution (b) Higher rate charged by the private money lender.</p> <p>The opportunities are: (a) Setting up modern financial institution preferably banks/post office. (b) Adequate awareness.</p> <p>The suggested programme is: (a) Setting up modern bank in the nearby areas.</p>
Strategic Interventions	<p>Summarizing the suggested programmes at above as strategic interventions for the Livelihood Development Plan:</p> <p>1 Agriculture & Horticulture: Tractor operation training, Agri-skill development programme, Training on insecticides, pesticides, hybrid cultivation</p> <p>2. Livestock: Piggery, Poultry</p>

	<p>3. NWFP: Plantation of Fruit Trees, Medicinal Plant etc.</p> <p>4. Specialized Skills: Training on Modern Tools and Equipment, Providing modern technology to the villagers, Skill Up gradation on <i>Agarbatti Making, Honey Bee</i> & 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.</p> <p>5. Credit facility: Setting up modern banks in the nearby areas</p>
Framework of Livelihood Opportunity Analysis	<p>Framework of Livelihood Opportunity Analysis has been done with the help of the following criteria:</p> <ul style="list-style-type: none"> • Livelihood assets • Livelihood context • Priority ranking on potential livelihood <p>The livelihood situation of Manipur Jangirkilla 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 –</p> <ul style="list-style-type: none"> • Natural Capital • Physical Capital • Social Capital • Human Capital • Financial Capital
Natural Capital	<p>The major natural capital of Manipur Jangirkilla JFMC is Mahamaya Reserve Forest and the Makrihora stream which is flowing through.</p> <p>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 stream water. (Refer table 10, 11, table 3 of FDP for further details)</p>
Physical Capital	<p>Majority of the people in the Manipur Jangirkilla JFMC are daily wage earner. Involvement in farming activities are less. (14%). Detailed land holding pattern is described in the table 3/annexure 6.</p> <p>The village has 12 numbers of semi-pucca houses and the remaining houses are thatch houses. Among the various sources of energy consumption such as Biomass, kerosene, electricity, LPG and candle, villagers depend mainly 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)</p> <p>There are one LP, one ME and one High school present within the JFMC area. No other education institution is present. (Refer to table 5)</p> <p>In case of water sources, 20 HH have access to tube well.</p>
Social Capital	<p>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.</p> <p>Only two female SHGS are there in the village.</p>
Human Capital	<p>75 per cent of total population of the JFMC are educated and 32 per cent of them have crossed upper primary level school education.</p>

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. 70 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 Manipur Jangirkilla JFMC are identifies on the basis of following criteria: <ul style="list-style-type: none"> 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

5. Livelihood Development Plan

Income Generating Activities	The main income generating activities as planned at the village are: Farm Sector : 1.Poultry 2.Horticulture Non-Farm sector: 1. Agarbatti making 2.Driving 3. Electrician 4. Bee keeping
SHG Activities	SHGs of the village can plan the following activities: 1. To create awareness. 2. To organise and form groups 3. To involve the villagers in Livelihood Activities collectively.
Exposure Trips	Exposure trips may be planned.
Summary of Action Plan	As attached in next page.
Convergence	The planned initiatives may be converged with the following schemes of the Government of India: (a) National Rural Employment Guarantee Scheme - for rural employment (b) Rashtriya Krishi Vikas Yojana (RKVY) - for agricultural and allied

	<p>developmental activities</p> <p>(c) Rashtriya Krishi Sinchay Yojana (RKSY) - for irrigation, including watershed development</p> <p>(d) National Rural Livelihoods Mission</p> <p>(e) Skills Development schemes</p> <p>(f) Other schemes for rural development and livelihoods as found appropriate.</p> <p>(g) MGNREGA/Job Card related works with DRDA</p> <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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6. Forest Development Plan of Manipur Jangirkilla 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 Manipur Jangirkilla 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 JFM Forests of the Manipur Jangirkilla 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 Manipur Jangirkilla JFMC have been summarized below.

Table-1: Conditions of the Forests of Manipur Jangirkilla JFMC

Identification	Area of JFMC Forest (Ha)	Distance from Village (Km)	Condition of Forest [Good - Forest with crown density of 40% of more Else 'Degraded']	Frequency of Use by Community [2-3 m / 3-6 m / 6-9 m / Over 9 m]
(A) Assigned Forest				
RF / PF Name: Mahamaya Beat: Makrijhora Compartment: Nil	203.98	0.5	Degraded	Over 9 m
(B) Other Planted Area				
Location: Type of Forest: VF / Other _____	Outside the JFMC	Nil	Nil	Nil

Source: Proforma-3, Table 3.1 / Discussions with Forest Department personnel & Community members

1.2. Forest Soil Type

The forests of Manipur Jangirkilla 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 Manipur Jangirkilla 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 Manipur Jangirkilla 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 Manipur Jangirkilla 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 Forest.

Table-3: Existing Composition of Flora in the Manipur Jangirkilla JFMC

Parameter	Local Name(s)	Biological Name(s)
Major Forest Species	Segun(teak)	<i>Tectona grandis</i>
	Sal	<i>Shorea robusta</i>
	Arjun	<i>Terminalia arjuna</i>
	Bohera	<i>Terminalia belerica</i>
	Ghora neem	<i>Melia azedarach</i>
Associates	Gomari	<i>Gmelina arborea</i>
Shrubs	Dhekia	<i>Ferns</i>
	Jharmoni bann	<i>Eupatari</i>
Medicinal Plants	Arjun	<i>Terminalia arjuna</i>
	Segun(teak)	<i>Tectona grandis</i>
	Gomari	<i>Gmelina arborea</i>
	Honararu	<i>Cassia fistula</i>
	Hilikha	<i>Terminalia chebula</i>
	Neem	<i>Azadirachta indica</i>
	Amla	<i>Phyllanthus emblica</i>
	Bohera	<i>Terminalia belerica</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 Manipur Jangirkilla JFMC.

2.1. Past Protection Measures of the JFMC

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

- (a) Number of households involved: 60
- (b) Number of people involved: 70
- (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 Manipur Jangirkilla JFMC

Name of Forest Produce	Average Household Requirement		Source (how met at present)
	Frequency of Requirement	Approx. Qty	
Firewood	Once in a week	50-55 kg	Forest
Timber for House	Once in a year	2-3 Qnty/yr	
Small timber for Implements	Nil		
Pole / Bamboo	Once in a month	2-3 bamboo / per month	Forest
Fodder from Forest	Cattle Grazing inside forest		Forest
NTFP	Rarely		
Others	-		

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

There are 137 households in the Manipur Jangirkilla JFMC. From the above table and this number of households, it is inferred that the total annual requirements of the Manipur Jangirkilla village for forest produce for own use is as follows:

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

Name of Forest Produce	Community Requirement (Kg per annum) (*)	Remarks
Firewood	160000	Throughout the year
Timber for House	9000	Dec - March
Small Timber for Implements	-	
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 Manipur Jangirkilla JFMC is given in the following table.

Table-5 (A): Collection & Marketing of Forest Produce by Villagers of the Manipur Jangirkilla 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	-			
Others				

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 [Manipur Jangirkilla JFMC]

Name of Forest Produce	Surplus Marketed (Kg)	How marketed	Average Income per HH from sale of Forest Produce
Firewood	1575kg	Makrijhora market	1600-2000/month
Timber for House	-	-	
Small timber for Implements	-	-	
Bamboo	32-50 pc/per month	Makrijhora 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 Manipur Jangirkilla 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 Manipur Jangirkilla 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	150000 kg	1400	162575
Timber for House	110400 kg	-	110400
Small timber for Implements	-		
Bamboo	1656 pcs	384-600pcs	2040-2256pcs
Pole	-		
Fodder from Forest	-		
NTPF	-		
Others	-		

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 Manipur Jangirkilla JFMC have been summarized below.

Table-7: Protection Problems of the Manipur Jangirkilla 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	Yes	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 Manipur Jangirkilla 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 Manipur Jangirkilla 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 Manipur Jangirkilla JFMC from the issues discussed earlier at Sub-section 3.1

Table-8: Protection Plan of the Manipur Jangirkilla 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	Few Patches	Autumn-Winter	High
Illicit Felling	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 Manipur Jangirkilla JFMC (with high / medium priority) are as follows:

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

4.2. Types of Operations Proposed

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

Table-9: Types of Operations Proposed in the Manipur Jangirkilla 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				

Treatment	Required (Yes/ No)	Responsibility of JFMC (Yes / No)	Month / Year when can be done	Extent of Area proposed for Treatment (Ha)
Trees				
Watershed Treatment	Yes	Yes	Nov-March	Nil
Water Reservoirs				
Grass & Silvi-pasture				
Bamboo Plantation	Yes	Yes	Mar-April	
Seed Sowing	Yes	Yes	Jun/July	Nil
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 Manipur Jangirkilla 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 Manipur Jangirkilla 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, Teak, Gamari,	4m x 4m
Block Plantation (Firewood)	50	High	Sal, Teak, Gamari, Sissoo, Ghoraneem,	2m x 2m
NTFPs (Medicinal Plants)	125	High	Neem, Amla, Mahua, Bahera	2m x 2m
Enrichment Plantation	-	-		
Direct Plantation	-	-	-	-

Treatment	Area in Ha under Plantation Module	Priority for Block Plantation	Species	Spacing (metre x metre)
Other	-	-	-	-
TOTAL AREA (in ha)	200	-	-	-

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 Manipur Jangirkilla 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 Manipur Jangirkilla 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

Table-10 (C): NTFP Plantation-Annual Targets of Forest Improvement in Manipur Jongirkila JFMC (Year-1 to Year 10)

Name of Plantation	: NTFP Plantation
Plantation Period	: 2016-17 to 2025-26 (10 Years)
Plantation Area	: 125 ha
Spacing	: 2m X 2 m-2500 plants per ha
No. of Plants to be Raised	: 3,12,500 (62,500 annually)
Number Blocks	: 5 Numbers (25 ha each)
Species	: Amla, Hilikha, Bhomora, Bohera, Mango, Guava, Neem, Arjun, etc

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, Partition of land into blocks, Land development, Soil Working @ Rs 1000/ha, 3 wired barb fencing 2800 RM @ Rs56.36/RM
2 nd Year	Block Plantation 2m x 2m, 2500 plants/ha-during the season of April-June ; GPS marking of the area; cultural operation and weeding
3 rd Year	Block Plantation 2m x 2m, 2500 plants/ha-during the season of April-June ; GPS marking of the area; Cultural operation, weeding, vacancy filling;
4 th Year	Same as above
5 th Year	Same as above
6 th Year	Same as above
7 th Year onwards	Pruning; Replacement of dead/struggling saplings trees, harvesting of fruits and medicinal parts

4.5 Nursery Development Plan

The Nursery Development Plan for Manipur Jangirkilla 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 Manipur Jangirkilla JFMC. This includes the Departmental Nursery involved in JFMC works.

Table-11 (A): JFMC Nurseries of the Manipur Jangirkilla 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. Saplings availed from both departmental and JFMC nursery.
		2016-17	25,000	Provide sapling for vacancy filling to be undertaken in the 2017-18
		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 under taken 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 Manipur Jangirkilla 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 Manipur Jangirkilla 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 Manipur Jangirkilla JFMC

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

(C) NTFP / Medicinal Plantation

Table-12 (C): Maintenance Plan of NTFP / Medicinal Plantation in the Manipur Jangirkilla JFMC

Year(s)	Treatment
1 st to 7 th Year & onwards	Action Plan for Block Plantation of Non Timber Forest Produce

4.7 Miscellaneous Operations Plan

The miscellaneous operations planned in the Manipur Jangirkilla JFMC are given below.

Table-13: Miscellaneous Operations in the Manipur Jangirkilla 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 Manipur Jangirkilla 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 Manipur Jangirkilla 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 Manipur Jangirkilla 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/Harvest
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 Manipur Jangirkilla JFMC.

Table-15: Sharing Mechanism for Manipur Jangirkilla JFMC

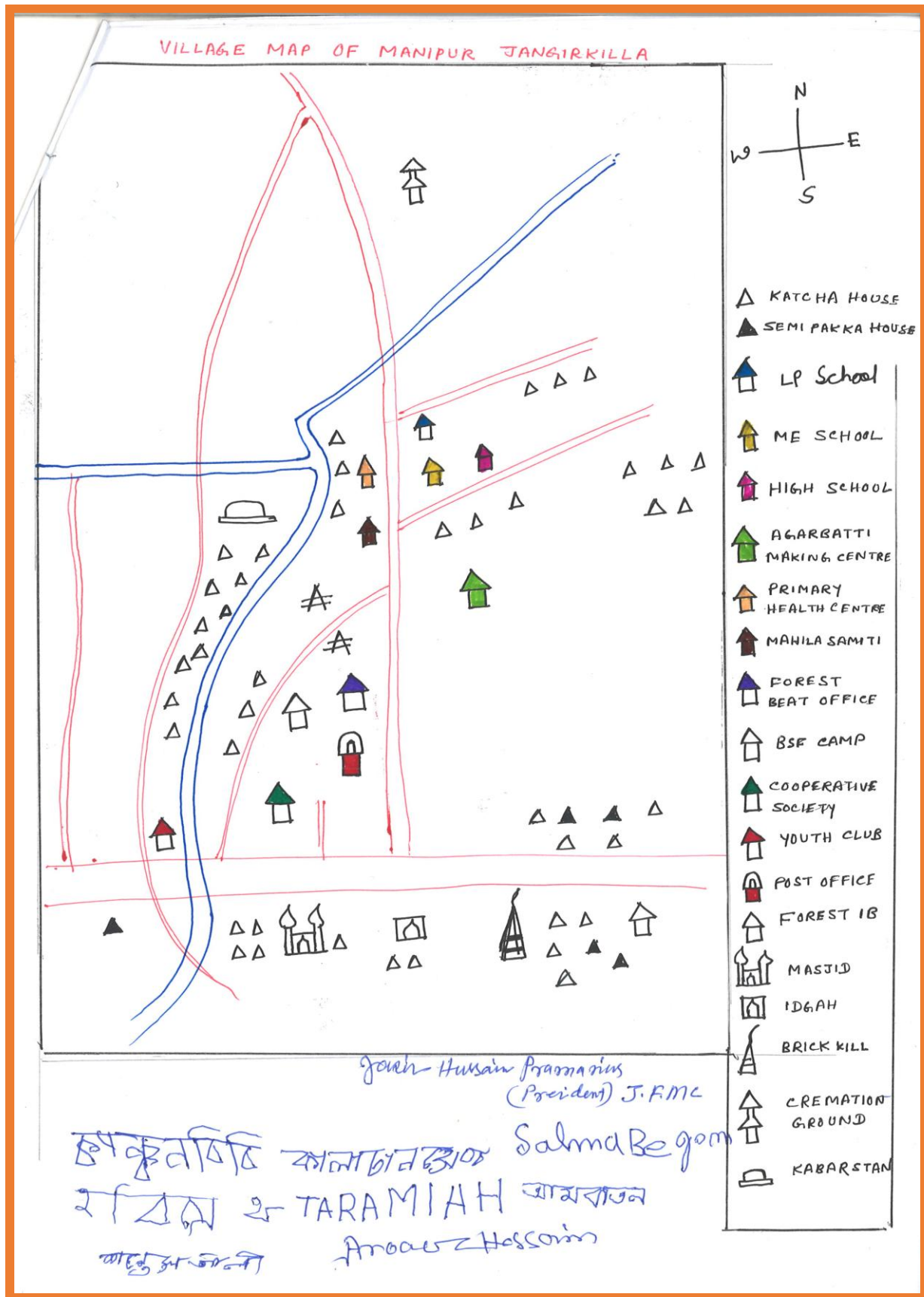
Method	Items
To be shared equally	NTFP, Sal, firewood(as revenue sharing)
To be freely collected by the members	Firewood,
Other Methods	Processing of NTFPs

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

Appendix 1

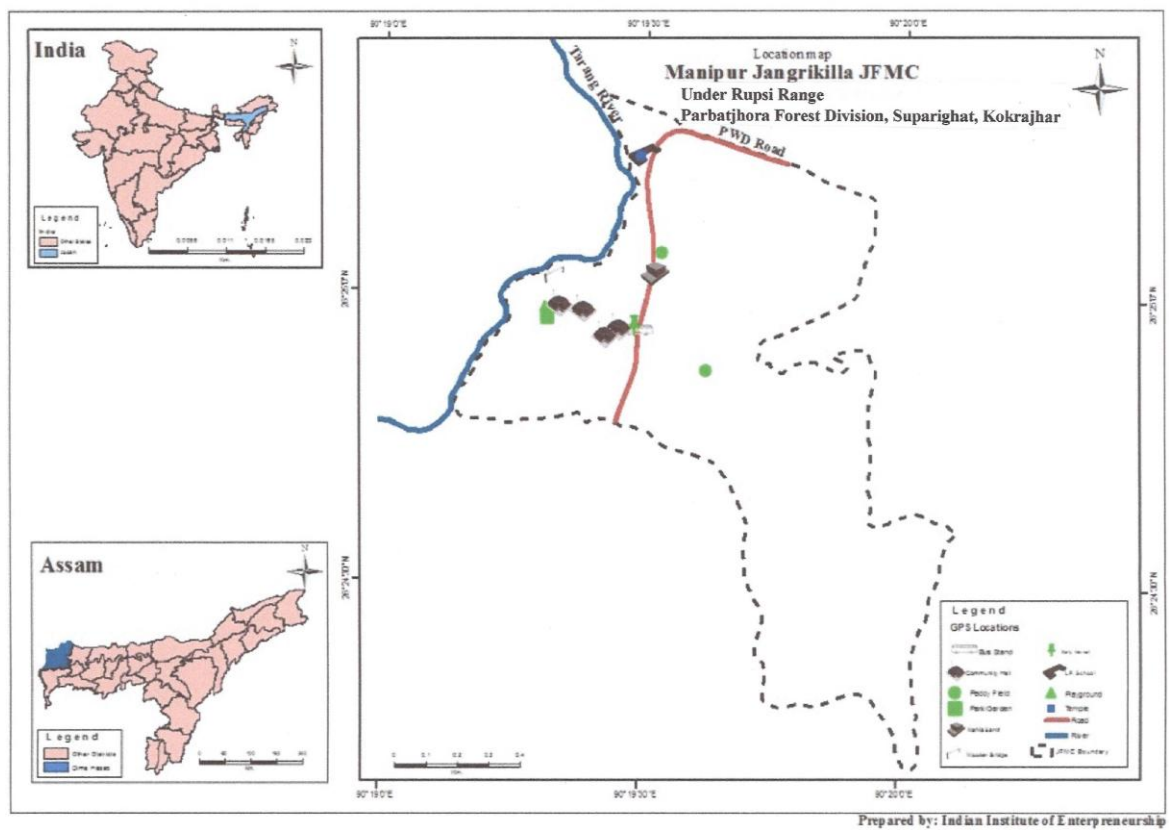
1. Social map

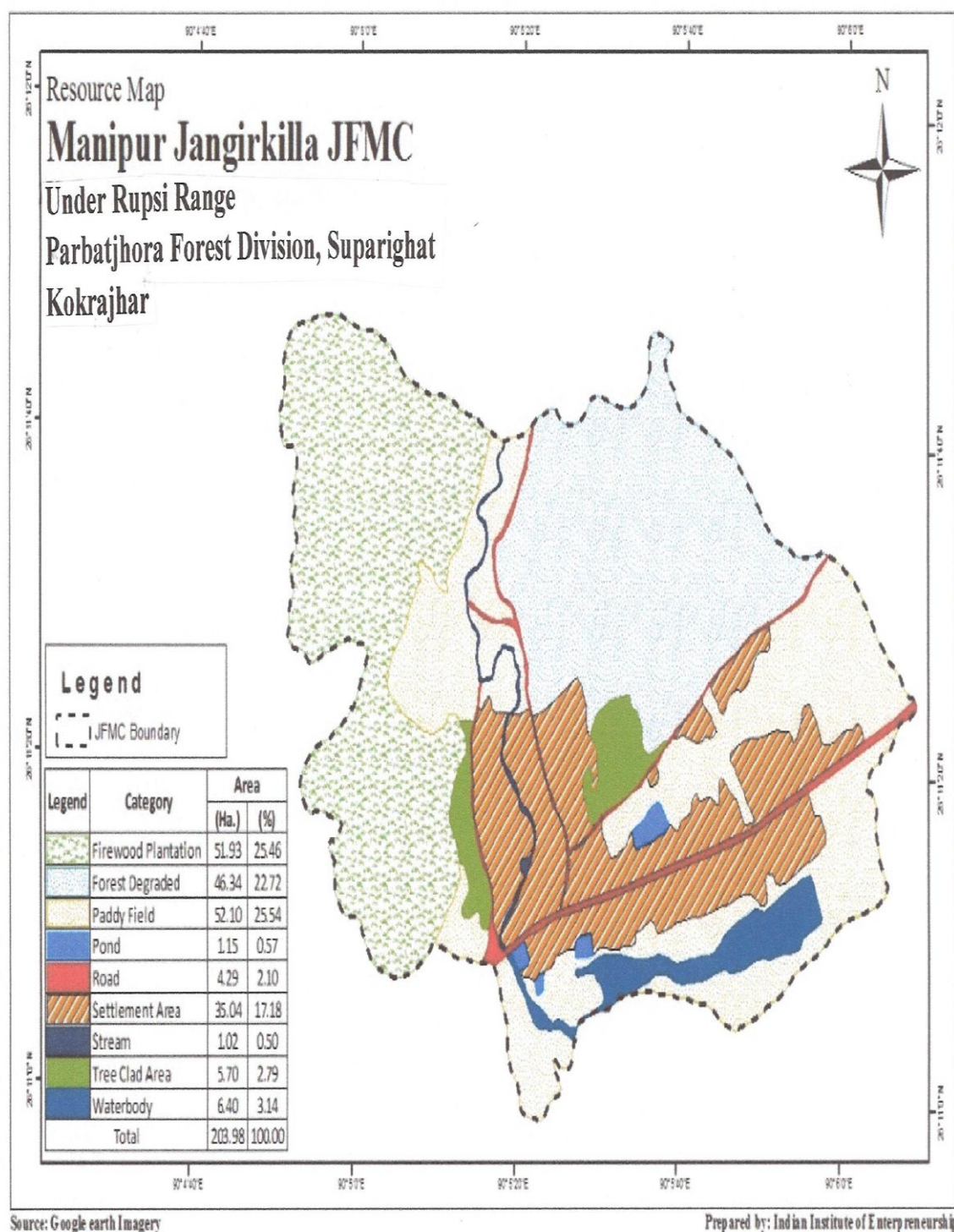


2. Resource Map:



Appendix 2





Appendix 3

PRA ACTIVITY

Location and Timing of Participatory Rural Appraisal:

Numbers of participants :	60
Time :	11 am, 10 th June 2016
Venue :	Playground

Table – 3.1 Brief about the villages under Manipur Jangirkilla JFMC

Sl. No.	Name of the Village	No. of households	Population		
			Total	Male	Female
1	Manipur Jangirkilla	137	1245	761	484

Source: Field Survey

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

- Social Mapping
- Wealth Ranking
- Time Line Review
- Seasonality Analysis
- Chapatti diagram

3.1 Social Mapping:

Social mapping is used to visualise the socio-economic aspects of the Manipur Jangirkilla 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

Social information	Village	Manipur Jangirkilla
	Total Population	1245
	Male	761
	Female	484
	Total households	137
	Numbers of semi pucca Houses	12
	Numbers of Pucca Houses	0
	Numbers of IAY Houses	0
Landmarks	Bridges	1
	Stream	1
	River	0
	PHE	0
	PHC	1
	Power Transformer	0
	Community hall	0
	LP School	1
	ME School	1
	High school	1
	Anganabadi school	0
	Forest IB	1
	Cooperative Society	1
	Youth club	1
	Mahila Samiti	1
	Agarbatti Making Center	1
	Forest Beat Office	1
	BSF Camp	1
	Post Office	1
	Mahjid	1
	Idgah	1
	Kabarsthan	1
	Cremation Ground	1

Findings of social map:

- The participants of social mapping have identified 137 households. Out of which 12 are semi pucca houses.
- Other than the class based division of the households, important places like community hall, schools, and playground, a church, church office, water tank, and location of transformers, river, stream, and bridges are mapped.
- Main sources of water for the villagers are ring well privately owned.
- Provision of Education facility up to school level is satisfactory in the village as there are three are primary, upper primary and high school in the village. However, the nearby collage is situated outside the village which is 5km away.
- People of the JFMC are belonging to the Muslim community.

3.2 Wealth Ranking:

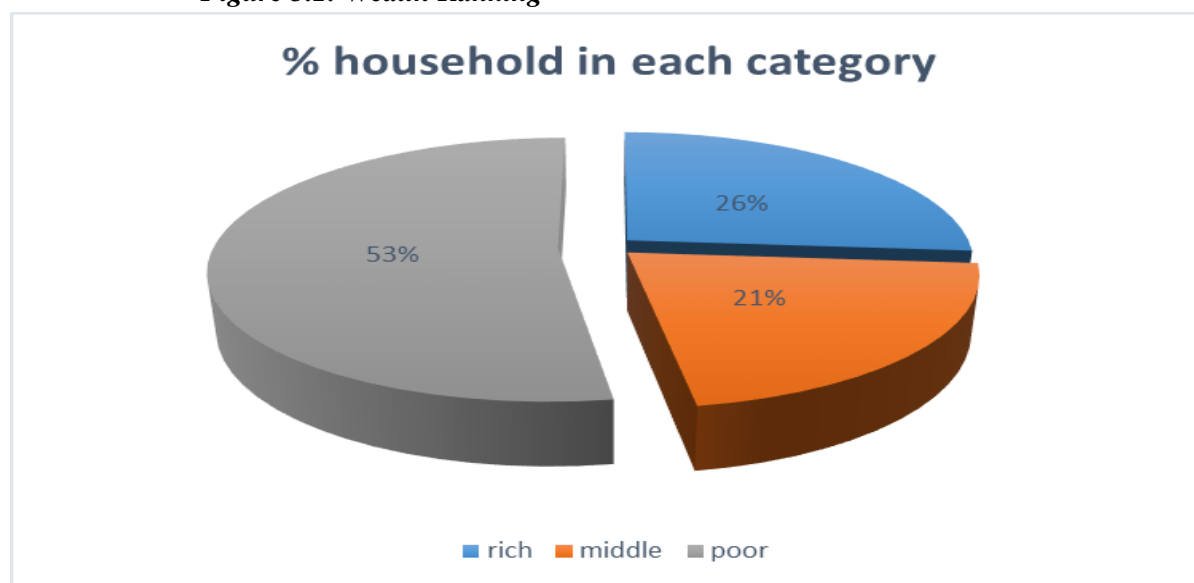
Wealth ranking, or well-being ranking, involves community members identifying and analysing the different wealth groups in a community. It enables evaluators to learn about the socioeconomic stratification of project beneficiaries and local people's definitions and indicators of wealth/well-being.

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

- a) Land holding
- b) Occupation
- c) Types of houses

As such about 53 per cent people are poor, about 21 per cent are belong to middle class and about 26 per cent are categorised to be rich. Poor people are mainly irregular wage earners, sometimes they lease (adhi lua) others land. In the rich category people are included who have minimal amount of 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:

Year	Event	Type
1591-1663	The place has an embankment which was constructed during the Mirjumla time.	Construction
1960	Forest Beat Office	Establishment
1970	Makrihora Jame Masjid	Construction
1972	Cooperative Society	Formed
1983	Mahila samiti	Establishment
1995	Public Health Center	Establishment
1998	Aparupa Youth Club	Construction
2001	Plantation by District Rural Development Agency (DRDA)	Activity
2003	Plantation by Forest Development Agency (FDA)	Activity

The forest beat office was established on 1960. In 1970, Makrihora Jama-Masjid was constructed.

Cooperative society was formed in the year 1972. JFMC has an active Mahila Samiti which was established in 1983. Public Health Center is established in 1995.

The first Joint Forest Management Committee (JFMC) was formed in 2003. In this line, first forest plantation was done in 50 hectares plot of land in 2005. After that in 2009, first medicinal plantation was done in 80 hectares of land.

Two plantation activity was carried out at the JFMC, one is in 2001 by District Rural Development Agency (DRDA) and other one by Forest Development Agency (FDA) in the year 2003.

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.

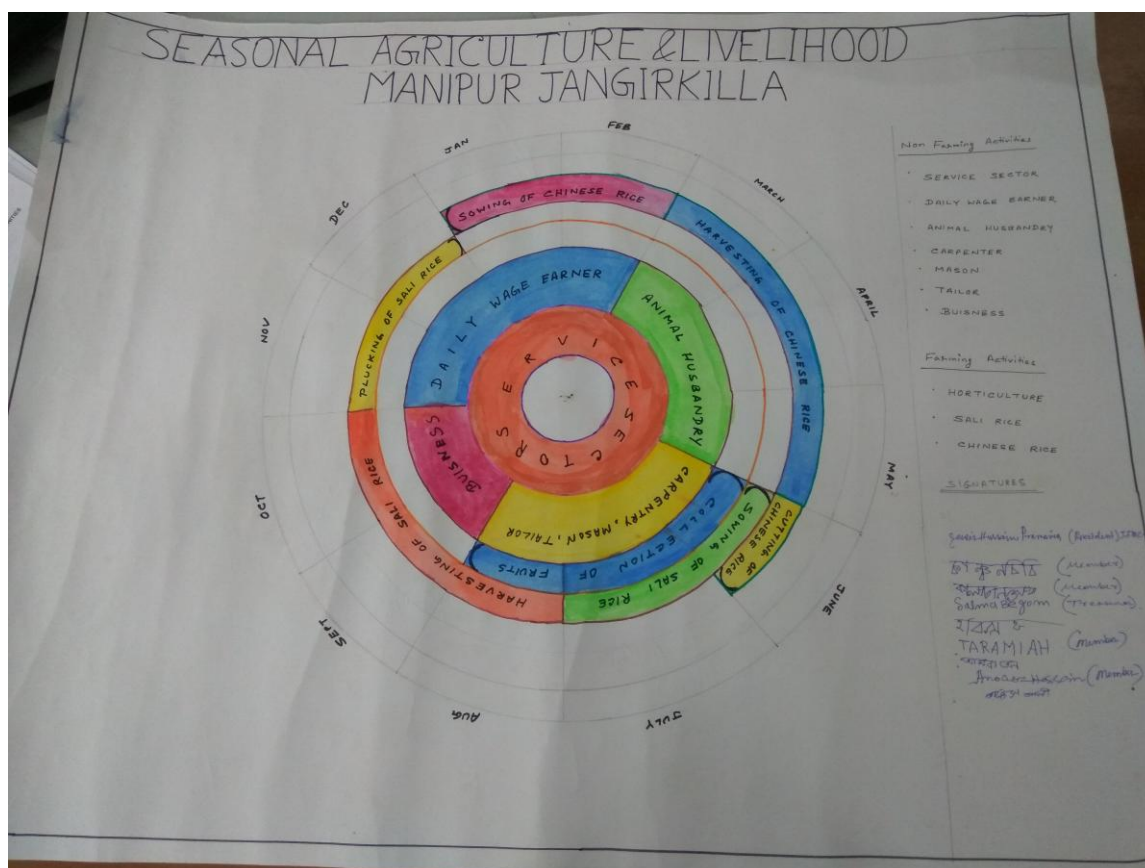
Seasonal mapping mainly covers the seasonal variation of crops. In seasonal mapping, we considered agricultural crop and the timing of three activities viz. showing, cropping and harvesting criteria and

collected the details throughout the year. From the seasonal mapping, it has been noticed that the main crops grown in the village are Betel Nuts, Turmeric, Ginger, Pineapple and Banana.

Table 4.3 Seasonal cropping pattern

Agricultural crop	Sowing	Harvesting	Plucking/Cutting
Sali Rice	June-July	Aug-Oct	Nov-Dec
Chinese Rice/Ahu/Boro	Jan-Feb	March-May	June
Service Sector	Throughout the year		
Daily wage earner	Throughout the year		
Non Farming sector	Throughout the year		
Animal Husbandry			
Carpentry			
Tailor			
Masonry			
Daily wage earner	Throughout the year		

Figure 3: Seasonal Agricultural Pattern



Learnings:

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

3.5 Venn Diagram



3.6 Chapatti Diagram



Priority Ranking- EPA and Livelihood

Priority Matrix Ranking of Manipur Jangirilla JFMC for Potential Livelihood Activities

Potential Livelihood Activities	Livestock (A)	Beekkeeping (B)	Agarbatti Making (C)	Masonry (D)	Electrician (E)	Driving (F)	Horticulture (G)	Carpentry (H)				
Livestock (A)	X	A	D	A	A	A	A	A			7	1st
Beekkeeping (B)		X	C	B	B	B	B	B			5	3rd
Agarbatti Making (C)			X	C	C	C	C	C			6	2nd
Masonry (D)				X	D	D	D	D			4	4th
Electrician (E)					X	F	G	H			3	7th
Driving (F)						X	G	F			1	6th
Horticulture (G)							X	G			7	5th
Carpentry (H)								X			1	6th

Signature of Villagers.

Janis Hussain Pramanis (President) J.F.MC

Salma Begom Amroez Hossain
 ১৭/০৫/২০২০
 ২০২০-২০২১ TARAMIAH আমরোজ হোসেন

EPA activity :

Priority Matrix Ranking of Mamupur Jangikilla JFMC for Entry Point Activities

Entry Point Activities	Community Hall (A)	Drinking water (B)	Fishery (C)	Nursery (D)	Electricity (E)	Road (F)	Sanitation (G)	Dairying (H)			Rank	Position
Community Hall (A)	X	B	C	A	A	A	A	A			5	3
Drinking water (B)		X	C	B	B	B	B	B			6	2
Fishery / Fishery Breeding Center (C)		X	X	C	C	C	C	C			7	1
Nursery (D)				X	E	F	D	D			2	5 ^x
Electricity (E)					X	E	E	E			4	4
Road (F)						X	G	H			1	6
Sanitation (G)							X	H			1	6 ^x
Dairying (H)								X			2	6

Jayin Hussain Premadasa (President) J.F.M.C

স্বাক্ষরিত কালচলিত/৩/০৭ Salma Begom Anwar Hussain
২১/১১/১৮ TARAMIAH জাভাভাভন

Annexure 4

PHOTOGRAPHS



Preparing Village Map through PRA exercise



Grazing land



With the villagers after the PRA activity

Annexure 5

LIST OF JFMC MEMBERS

list of Village Dev. Fund.
Executive Committee.
Manipur Jangpangkila J.F.M.C.

1. বাকুল শ্রীমাথ স্বাক্ষর	→	সভাপতি
2. (মঃ) মোহাম্মদ আলী	→	সম্পাদক
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Abdus Sattar Miah 21/5/09

Usab Khan.

Manipur J.F.M.C.

Salapara Saljha J.F.M.C.

P. D. A. Dhud.

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	Manipur Jangirkilla	2015	15	Zakir Hussain Paramanic	Babul Ch. Das			Yes		

Table 2: Village wise population data:

Table -2: Demographic status of the project villages

Name of village	No. Of Household	OBC		MINORITY		Total all categories
		Male	Female	Male	Female	
Manipur Jangirkilla	137	15	9	746	475	1245

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

Name of the JFMC	Types of Farmers according to land holding				
	Large Farmer (> 10 hectare)	Small Farmer (5-10 hectare)	Marginal farmer (< 5 hectare)	Landless	Total
Manipur Jangirkilla	0	0	5	132	137

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

	Village wise numbers of cattle's or type of animal									
	Cows	Buffaloes	Goats	Sheep	Bulls/Oxe	Camel s	Pigs	Hens/ Cocks	Duc k	Total
Manipur Jangirkilla	107		107	Nil	19	Nil	Nil	322	166	721

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	NH 31	Attached with the village	Good
2	Electricity	Bilasipara	15 km	Poor
3	Gas connection	Bilasipara	15 km	Poor
4	Transport	Makrihora	1km	Good
5	Primary health centre	Makrihora	1km	Poor
6	School	Manipur Jangirkilla		Good
7	Post Office	Manipur Jangirkilla		Good
8	Bank	Bogribari	5km	Good
9	Anganwadi Centre	Manipur Jangirkilla		Poor
10	Village Council Development Committee	Bogribari	5km	Good
11	Revenue Office	Bogribari	5km	Poor
12	Police Office	Bogribari	5km	Good
13	Forest Office(Beat)	Parbatjhora	1.5 km	Good
14	Bus Facility	Makrihora	1 km	Good
15	Railway Station	Dhubri	28 km	Good
16	Drinking water	Manipur Jangirkilla		Poor
17	District Head Quarter	Dhubri	28 km	Good

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

	Rain Fed	
Season	Name of the crop	Area (in ha.)
Kharif	Sali rice, Chinese rice	52.10
Others	Vegetables, Fruits	20

Table 7: Crop Production Profile of Manipur Jangirkilla JFMC:*Table- 7 Crop production profile of Manipur Jangirkilla JFMC*

Type of crop	Total Production (approx) in quintals	No of household growing	Average production (quintal/ ha) approx.	Area under crop (ha) approx.
Paddy	911.75	27	34	52.10

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

ypes	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	Makrihora	1
Weekly Market	Salbari	5
Major Market	Gauripur	20
Forest Corporation Sale Depo	NA	
Tendu Patta PHAD	NA	
Fish Market	Makrihora	1
Medicinal Plant collection Center	NA	
Forest Corporation Medicinal plant Collection Centre	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	20	Not adequate, water has iron.	Drinking
Stream	1	Not adequate	Irrigation Livestock rearing
River	NA		

Table 11: Energy consumption:*Table11 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	137	12	Forest	Major
Kerosene stove	10	3	Market	Secondary
Gobar/Bio gas	NA			
LPG	7	6	Authorized agency	Secondary
Electric Heater	NA			

Additional Table: Education profile

Categories	% of total population
Illiterate	25
Up to ME	32
Up to X	5
X pass	5
12 pass	2
Graduate	7
Infant	25
Total	101

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 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 Food plans, Medicinal Plant etc.
Unsustainable extraction	<ul style="list-style-type: none"> • NA 	<ul style="list-style-type: none"> • Availability of fertile fallow land 	
Low rates	<ul style="list-style-type: none"> • NA 		
Value addition	<ul style="list-style-type: none"> • No processing units • Non availability of required resources • No technical know-how 		

Table 15: Specialised skill

Table 15: Specialised skills: Bamboo Agarbatti Making

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	Program me
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 	

