

**RANGPATHARGAROPARA JOINT FOREST MANAGEMENT
COMMITTEE (JFMC)**

RANGJULI RANGE, GOALPARA FOREST DIVISION

GOALPARA, ASSAM

MICRO-PLAN

(2017-18 to 2026-27)

Prepared by Rangpathar Garopara Joint Forest Management Committee

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

May 2017

Approved

**Divisional Forest Officer
Goalpara Division**

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

RANGPATHAR JOINT FOREST MANAGEMENT COMMITTEE
Goalpara Forest Division

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

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1. Introduction

<p>About the Project</p>	<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>
<p>Micro-Planning & Livelihood Development</p>	<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 and <i>Rashtriya Gramin Vikas Nidhi</i> (RGVN) 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>
<p>Micro-Plan for the Rangpathar JFMC</p>	<p>This document gives the Micro-Plan for the Rangpathar JFMC, which is located in the Goalpara of Assam. The JFMC falls under the jurisdiction of Rangjuli Range of Goalpara 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 February 2017. The micro-plan has been compiled by IIE based on the project guidelines. The document has been discussed and finalized for adoption in June 2017.</p>

2. Village Socio-Economic Profile

Location	<p>The RangpatharGaroparaJoint Forest Management Committee (JFMC) has been formed to cover the existing community dwelling in RangpatharGaropara Village located on the fringe of the AmjongaReserve Forest. The area covered by the above JFMC falls within the DudhnoiRevenue Circle of GoalparaDistrict 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 border="1" data-bbox="470 582 1396 1108"> <tr> <td>Name of the JFMC</td> <td>RangpatharGaropara</td> </tr> <tr> <td>Habitation</td> <td>Garo</td> </tr> <tr> <td>Name of Revenue Village</td> <td>RangpatharGaropara</td> </tr> <tr> <td>Name of the Gram Panchayat / VCDC</td> <td>Puronivita</td> </tr> <tr> <td>Revenue Circle</td> <td>Dudhnoi</td> </tr> <tr> <td>District</td> <td>Goalpara</td> </tr> <tr> <td>Forest Division</td> <td>Goalpara</td> </tr> <tr> <td>Forest Range</td> <td>Rangjuli</td> </tr> <tr> <td>Forest Beat</td> <td>Amjonga</td> </tr> <tr> <td>Year Formed</td> <td>2015</td> </tr> <tr> <td>Description of Boundary of JFMC</td> <td>North: NH 37 East:Kachadol Village West:Puronivita South : Meghalay Border</td> </tr> </table> <p>Source: JFMC Records & Discussions during PRA Exercise in February 2017</p> <p>Additional details are given at Table-1 of Record-I (Given at Annexure)</p>	Name of the JFMC	RangpatharGaropara	Habitation	Garo	Name of Revenue Village	RangpatharGaropara	Name of the Gram Panchayat / VCDC	Puronivita	Revenue Circle	Dudhnoi	District	Goalpara	Forest Division	Goalpara	Forest Range	Rangjuli	Forest Beat	Amjonga	Year Formed	2015	Description of Boundary of JFMC	North: NH 37 East:Kachadol Village West:Puronivita South : Meghalay Border
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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 border="1" data-bbox="470 1411 1396 1724"> <tr> <td>Name of President</td> <td>Napoleon Marak</td> </tr> <tr> <td>Name of Member Secretary</td> <td>KhagenKalita</td> </tr> <tr> <td>Name of Treasurer</td> <td>DiansonSangma</td> </tr> <tr> <td>No. of Members in Executive Committee</td> <td>Male: 8 Female:3</td> </tr> <tr> <td>No. of Members in the General Body</td> <td>94 (one male and one female members in each household)</td> </tr> </table> <p>Source: JFMC Records</p>	Name of President	Napoleon Marak	Name of Member Secretary	KhagenKalita	Name of Treasurer	DiansonSangma	No. of Members in Executive Committee	Male: 8 Female:3	No. of Members in the General Body	94 (one male and one female members in each household)												
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Households & Population Structure	<p>The JFMC consisting of Rangpathar village with a total household of94. 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 5.76. (2) The sex ratio is 862 females per 1000 males in the village. 																						

<p>Education & Skills Development</p>	<p>Over 80 % of the population is reported to be literate. Of this 55.6% completed primary education and 25% secondary level education and 0.85% are graduates.</p> <p>There is one LP School in the village where children get primary level education. After primary education children have to go Meghalaya (5km) and Damra (20km). Higher secondary colleges at Mendipathar (50km). For taking post-graduation education people have to go Tura (200km) and Shillong.</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) Farming (c) Weaving</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>
<p>Soil</p>	<p>The soil type of the project area includes: The soil mostly of alluvial origin comprising silt, sand and clay. The soil is very fertile Himalayan Moist Mixed Deciduous Forest</p>
<p>Water</p>	<p>The forest areas with undulating topography are intercepted with numbers of nullahs and seasonal streams. The water table is considerably high’</p>
<p>Climate: Temperature & Rainfall</p>	<p>The annual average precipitation during the year varies from 1440.4 mm to 2189.3 mm. The month wise numbers of rainy days vary from nil to 20. The highest number of rainy days occurs in the month of July. Very insignificant rainfall is received during the month of November, December, January and February.</p> <p>The temperature varies from 22 degree celsius to 39.1 degree celsius.</p>
<p>Forest & Bio-diversity</p>	<p>Sal with its associates are growing naturally in the area. Different species namely SchimaWallichii, Vitexpeduncularies, Shorearebusta, Holarrhenaantidysenterica, Gmelinaarborea, Syzigiumcumini, Garugapinnata, Emlicaofficinalis, Erythrinaveriegata, Streculiavillosa, AtstoniaScholaris, Cassis Fistula etc have been found in the forest of the JFMC. 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>
<p>Land Use Pattern</p>	<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>Fallow Land 0.75% Forest Area 9.85% Mixed Plantation by villagers 11.16% Paddy Field 59.25% Road 1.95% Settlement Area 17.40</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"> • 11.70 % of the households are landless • 64.89% of the households are marginal farmers • 9.57% of the households belong to large categories.
Livestock	<p>The total number of livestock in the village is 1276. The main types of livestock possessed by the households include:</p> <p>Cows: 276 Goats: 66 Pigs : 132 Poultry: 345</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: At a distance from 3 km towards the village, road connectivity is very poor. Road is katcha..</p> <p>Education & Health Facilities: There is one LP School in the village where children get primary level education. After lower primary education children have to go to distanced places, children use to go Meghalaya (5km) and Damra (20km). Higher secondary colleges at Mendipathar (50km). For taking post-graduation education people have to go Tura (200km) and Shillong.</p> <p>There is no Public Health Centre within the village. People use to go Dudhnoi, which is 9km far from the village.</p> <p>Govt. Offices: All government offices are outside village. Forest beat office and post office in amjonga at a distance of 3 km. Gram panchayat office at Puronivita at a distance of 8 km.</p> <p>Financial Institution: Facilities for financial institution like bank is outside the village at Dudhnoi at a distance of 9 km.</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:Ranjit, Paddy, Yam, turmeric, Ginger Rabi crops: Leafy vegetables Vegetables: Bottle guard, white guard, bitter guard Others: Banana, guava, jack fruit, jamun, lemonetc.</p>
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 Sali, paddy.</p> <p>The production and yield of crops is given as follows:</p> <p style="text-align: center;">(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</p>

	(b) Grazing in forest (c) Household wastage (d) Green fodder
Markets	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: (a) Grocery / PDS: Amjonga, 3 km from the village (b) Weekly / Bi-weekly Market: : Amjonga, 3 km from the village (c) Major Market: : Dudhnoi at 9 km away
Water Resources	The water resources are tabulated at Table-10 of Record-I. The main water resources with water availability is as follows: Katcha ring well (Water Availability: Perennial / Seasonal)
Energy Consumption	Table-11 of Record-I shows the major sources of energy in the village. The same have been listed below. (a) FUEL WOOD- Households Depending 82 Nos. Source: forest, own yard area (b) KEROSENE-Households Depending: 94 Nos.(for lightning houses, than as fuel) Source: Open Market and PDS
Socio-economic status	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. Economic Condition: Villager's main source of earning is daily wage earning with 45%. Very few are associated with service sector. Service sector comprises of school teacher, medical sector, defence etc. Non farming sector consist of carpentry, masonry, animal husbandry etc.
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

2. Livelihood Opportunity Analysis

PRA Exercise	Team from IIE Guwahati carried out PRA exercise in Rangpathar JFMC as follows: Date: 1 st March, 2017 Location: Rongpathar LP School, Rongpathar Numbers Present: 50 In Presence of: JFMC office bearers, Headmaster of LP School, 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	<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 elaborates 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. Weaving 3. Cane and bamboo 4. Tailoring 5. Carpentry 6. Masonry <p>Ranking of EPA</p> <table border="1" data-bbox="400 1077 1461 1653"> <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>40ft X 35ft with platform and store house</td> <td>EPA from APFBC</td> </tr> <tr> <td>2</td> <td>Drinking Water</td> <td>At least 4 ring well</td> <td>EPA from APFBC/ NRDWP</td> </tr> <tr> <td>3</td> <td>Culvert</td> <td>4 Nos of culvert in the village adjoining road</td> <td>PWD</td> </tr> <tr> <td>4</td> <td>Sanitation</td> <td>Providing HHL (House Hold Latrine) - Low cost, septic and sanitary type.</td> <td>SwachBharart Mission/ PHE</td> </tr> <tr> <td>5</td> <td>Electricity supply</td> <td>Uninterrupted electricity supply to each household</td> <td>ASEB/APDCL</td> </tr> <tr> <td>6</td> <td>Health Center</td> <td>Health centre within the village.</td> <td>PHC</td> </tr> </tbody> </table>	Rank	Village EPA as ranked	Details (Appendix-3 has additional particulars)	Probable source of funding/Deptt.	1	Community hall	40ft X 35ft with platform and store house	EPA from APFBC	2	Drinking Water	At least 4 ring well	EPA from APFBC/ NRDWP	3	Culvert	4 Nos of culvert in the village adjoining road	PWD	4	Sanitation	Providing HHL (House Hold Latrine) - Low cost, septic and sanitary type.	SwachBharart Mission/ PHE	5	Electricity supply	Uninterrupted electricity supply to each household	ASEB/APDCL	6	Health Center	Health centre within the village.	PHC
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Livelihood opportunities	<p>Livelihood Opportunities were identified as follows:</p> <p>Livestock Agriculture & Horticulture 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> <ul style="list-style-type: none"> (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>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.
Livestock	<p>Table-13 furnishes additional information about opportunities for livestock rearing.</p> <p>The main constraints are:</p> <ul style="list-style-type: none"> (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 <p>The opportunities are:</p> <ul style="list-style-type: none"> (a) Higher income from livestock rearing. <p>The suggested programme is:</p> <ul style="list-style-type: none"> (a)Piggery (b)Poultry
NWFP	<p>The opportunities for NWFP are tabulated at Table-14 under Record-2</p> <p>The main constraints are:</p> <ul style="list-style-type: none"> (a) Less availability of NWFP (b) No technical know-how (c) No processing units <p>The opportunities is:</p> <ul style="list-style-type: none"> (a) Availability of fertile fallow land <p>The suggested programme are:</p> <ul style="list-style-type: none"> (a)Plantation of fruit trees, (b)Medicinal Plant / Medicinal and Aromatic plants etc.

<p>Specialized Skills</p>	<p>For skills development, the opportunities are tabulated at Table-15 under Record-2 like i) livestock rearing, ii) weaving</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. / or other sponsorship agencies.</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.
<p>Credit Facility</p>	<p>Table-16 under Record-2 discusses this aspect.</p> <p>The main constraints with the reasons are: (a) Financial exclusion (b) Higher rate charged by the private money lender.</p> <p>The opportunities are: (a) setting up modern financial institution (b) Adequate awareness.</p> <p>The suggested programme is: (a) Setting up modern financial institution in the nearby areas.</p>
<p>Strategic Interventions</p>	<p>Summarizing the suggested programmes at above as strategic interventions for the Livelihood Development Plan:</p> <ol style="list-style-type: none"> 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 RangpatharJFMC 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 Rangpathar JFMC is Amjonga P.R.F. 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 Rangpathar JFMC are involved in daily wage earning. Farming activities are very less as land holding is minimal in the JFMC. 31.91% of the household are marginal farmers. 64.89% 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 LP School and three Anganwadi School 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 RangpatharJFMC 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

3. 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 Piggery2. Vanilla cultivation3.Horticulture <p>Non-Farm sector:</p> <ol style="list-style-type: none">1.Handloom/ Weaving2.Driving3. Electrician4. Sericulture5. 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 group3. 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	<p>As attached in next page.</p>
Convergence	<p>The planned initiatives may be converged with the following schemes of the Government of India:</p> <ol style="list-style-type: none">(a) National Rural Employment Guarantee Scheme - for rural employment(b) RashtriyaKrishiVikasYojana (RKVY) - for agricultural and allied development(c) RashtriyaKrishiSinchayYojana (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>

4. Forest Development Plan of Rangpathar 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 Rangpathar 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 RangpatharJFMC:

- (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 RangpatharJFMC have been summarized below.

Table-1: Conditions of the Forests of Rangpathar 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: Rangpathar Beat: Rangpathar Compartment: Nil	75 Ha	0 km		
(B) Other Planted Area				
TOTAL	75 Ha			

1.2. Forest Soil Type

The forests of Rangpathar 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 Rangpathar JFMC

Parameter	Status in Assigned Forests	Status in Other Planted Areas
Fertility Level	High	High
Soil Erosion Status	No Soil Erosion	No soil Erosion
Presence of:		
(a) Silt	Yes	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 Rangpathar JFMC; the salient points of the forest soil type are summarized below:

- (a) Loam soil
- (b) Fertile

1.3. Existing Composition of Flora

In the forests of the Rangpathar JFMC, the existing composition of the flora has been given as follows. It may be noted that the local forests are classified as Himalayan Moist mixed Deciduous Forest.

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

Parameter	Local Name(s)	Biological Name(s)
Major Forest Species	Segun	<i>Tectonagrandis</i>
	Gomari	<i>Gamelinaarborea</i>
	Arjun	<i>Terminalia arjuna</i>
	Bhelkor	<i>Trewianudiflora</i>
	Ghoraneem	<i>Meliaazedarach</i>
Shrubs	Dhekia	<i>Ferns</i>
	Jharmonibann	<i>Atropabellodonna</i>
Medicinal Plants	Arjun,	<i>Terminalia arjuna</i>
	Hilikha	<i>Terminalia chebula</i>
	Neem	<i>Azadirachta indica</i>
	Amla	<i>Phyllanthusemblica</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 Rangpathar JFMC.

2.1. Past Protection Measures of the JFMC

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

- (a) Number of households involved:-
- (b) Number of people involved:-
- (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 Rangpathar 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	1-2qntl/yr		Forest
Small timber for Implements	Nil			
Pole / Bamboo	Frequently	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 94 households in the Rangpathar JFMC. From the above table and this number of households, it is inferred that the total annual requirements of the Rangpathar village for forest produce for own use is as follows:

Table-4 (B): Total Domestic Requirement of Forest Produce - All Households of the Rangpathar 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 Rangpathar JFMC is given in the following table.

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

Name of Forest Produce	Surplus Marketed (Kg)	How marketed	Average Income per HH from sale of Forest Produce
Firewood	1300kg	Rangpathar	1600-2000/month
Timber for House	-	-	
Small timber for Implements	-	-	
Bamboo	32-40 pc/per month	Rangpathar 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 Rangpathar 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 Rangpathar 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
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 Rangpathar JFMC have been summarized below.

Table-7: Protection Problems of the Rangpathar 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 Rangpathar JFMC, the reasons for degradation of forest are as follows:

- (a) Cutting of trees
- (b) Grazing of cattle,of forest land.

[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 Rangpathar 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 Rangpathar JFMC from the issues discussed earlier at Sub-section 3.1.

Table-8: Protection Plan of the Rangpathar 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 Rangpathar 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 Rangpathar JFMC are given hereunder.

Table-9: Types of Operations Proposed in the Rangpathar 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				
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

Treatment	Required (Yes/ No)	Responsibility of JFMC (Yes / No)	Month / Year when can be done	Extent of Area proposed for Treatment (Ha)
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 Rangpathar 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 Rangpathar JFMC

Treatment	Area in Ha under Plantation Module	Priority for Block Plantation	Species	Spacing (metre x metre)
Assisted Natural Regeneration (with plantation in gap)	30-35	High	Sal, Bohera, Arjun,	4m x 4m
Block Plantation (Firewood)	25	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)	60	-	-	-

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 Rangpathar 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 Rangpathar 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 Rangpathar 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 Rangpathar JFMC. This includes the Departmental Nursery involved in JFMC works.

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

Location of Nursery	Sp. Planted	Year of Development	Number of Seedlings	Remarks
		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 Rangpathar 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 Rangpathar 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 Rangpathar 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 Rangpathar JFMC are given below.

Table-13): Miscellaneous Operations in the Rangpathar 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 Rangpathar 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 Rangpathar 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 Rangpathar 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 RangpatharJFMC.

Table-15: Sharing Mechanism for Rangpathar 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

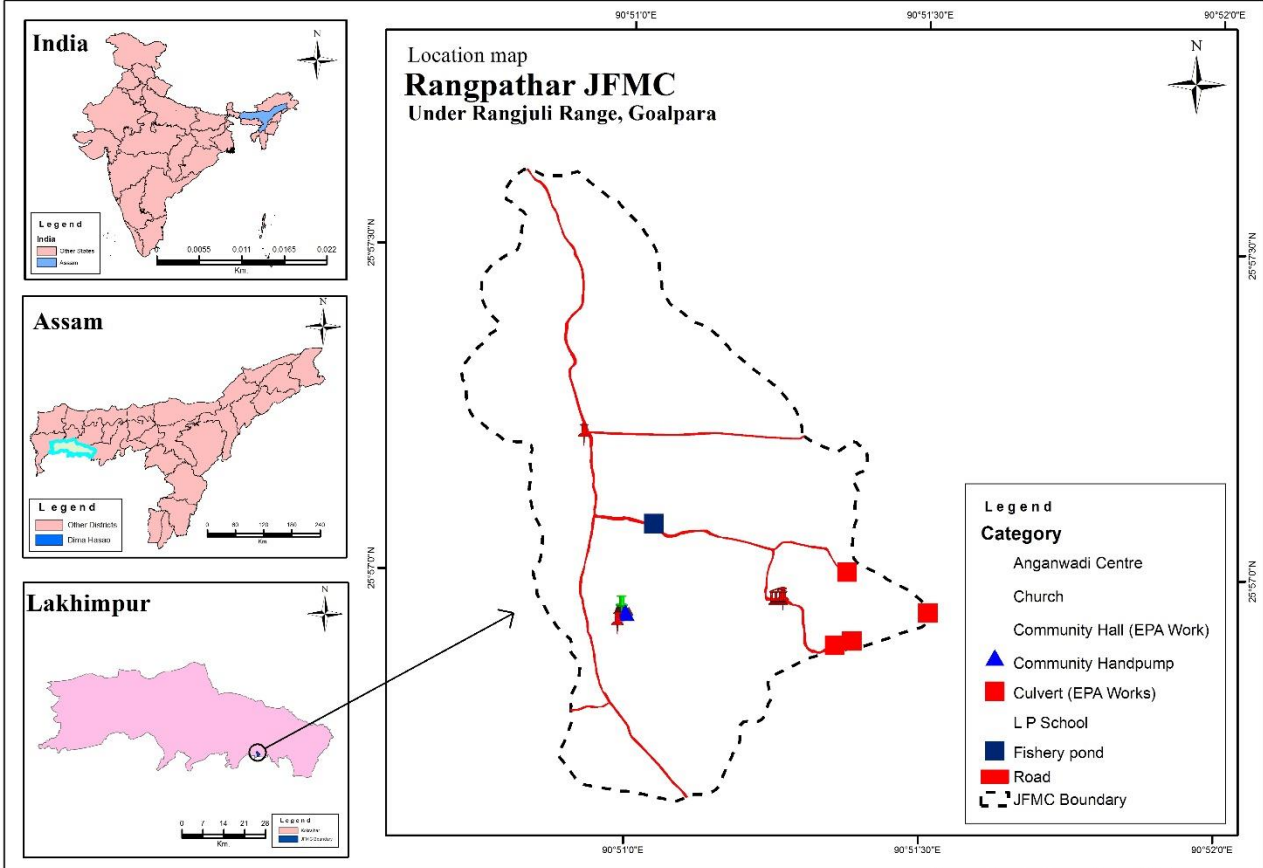
Source: Proforma-3, Table-3.15 / Discussions with Forest Department personnel & Community members.

List of Appendices

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Appendix 1

Location map



Prepared by: Indian Institute of Entrepreneurship

Village Map

Rangpathar JFMC

Village Map

Legend:

- △ - KATCHA HOUSE
- △ - TRANSFORMER
- △ - AMONALABAD
- △ - ANONABADI
- △ - NH SY AREA
- △ - PADDY
- △ - CEMETERY
- △ - FOREST
- △ - PLANTATION
- △ - MARKET
- △ - L.P. SCHOOL
- △ - CHURCH
- △ - PLAYGROUND
- △ - MORA RIVER
- △ - BEEL
- △ - MEGHALAYA

Signatures:

Nepolin Marak	Palitra Rabha	Spilla Kon	Sayan Baro
SKalleo Areng	Dames Makal	Greilda Sangma	(Am)
Luskel Sango	Singhina Monin	Namika Sangma	
Khapan Rabha	Coetan Sangma	Sri Biswojit Rabha	

Rangpatkar JPMC



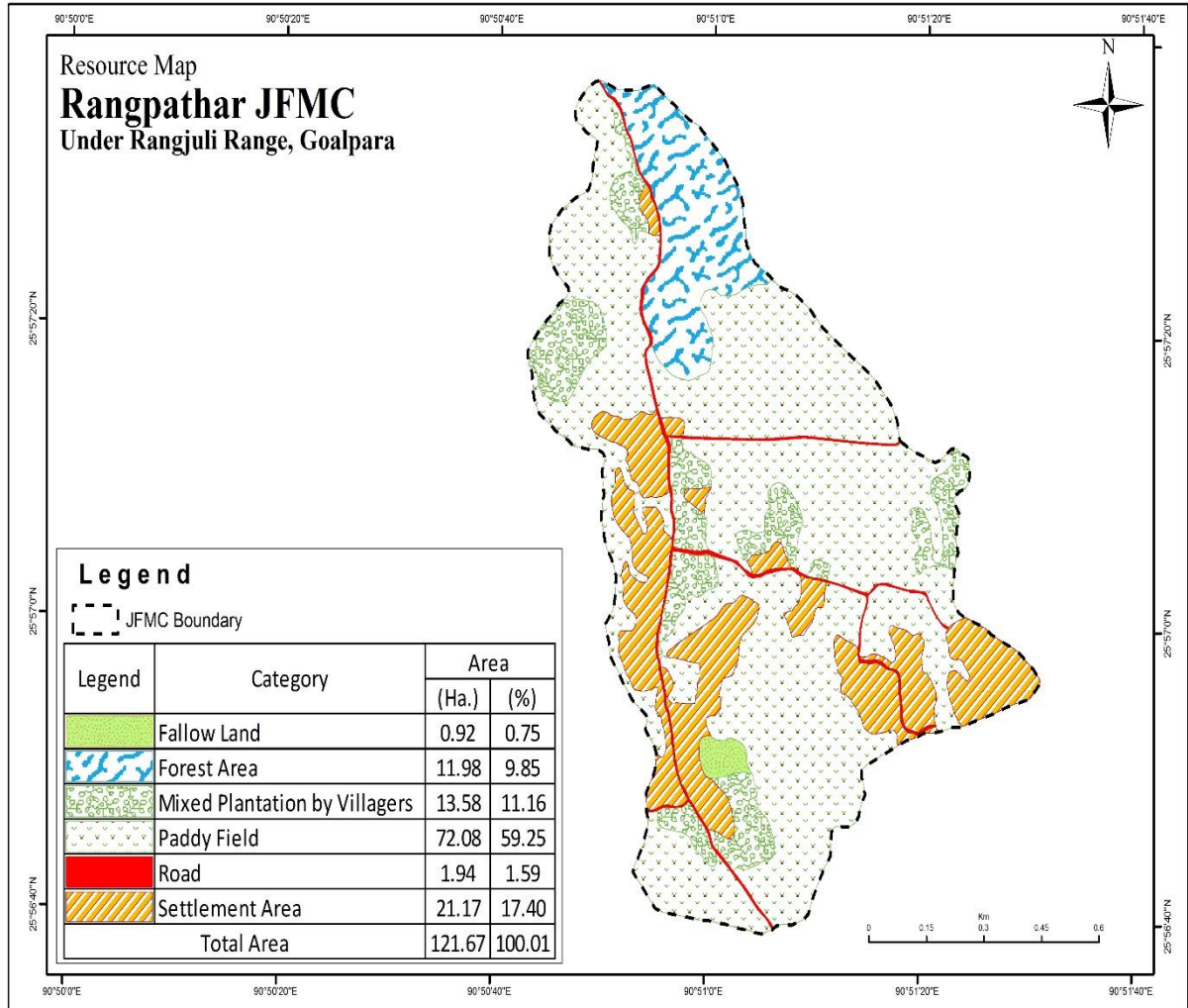
Signatures:

Stalbo Areng	Palitra Rabha	Spella Roming
Nepolin Karaka	Kamesh Mareh	Sapan Boro
Rusbel Sengma	Senghina Nomin	Gresilda Sangma
Chagan Kuliak	Caxton Sangma	Mamthe Sangma
	Witopon Sangma	Sai Biswasit Rabha

Resource Map



Land Use map of GIS



Source: Google earth Imagery

Prepared by: Indian Institute of Entrepreneurship

Appendix 3

PRA ACTIVITY

Numbers of participants:	40
Time:	11:30 am, 28 th Feb 2017
Venue:	Rangpathar L.P. School

Table – 3.1 Brief about the villages under Rangpathar Garopara JFMC

Sl. No.	Name of the Village	No. of households	Population		
			Total	Male	Female
1	Rangpathar	94	542	291	251

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 Rangpathar 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	Rangpathar
Social information	Total Population	542
	Male	291
	Female	251
	Total households	94
	Numbers of semi	15
	Numbers of pucca	5
	Numbers of IAY	0
Landmarks	Bridges	2(1 RCC, 1 wooden)
	Stream	0
	River	1(Sibonga River)
	PHE	0
	PHC	0
	Power Transformer	1
	Community hall	0
	LP School	1
	ME School	0
	High school	0
	Anganabadi school	3
	Church	2

Findings of social map:

- The participants of social mapping have identified all 94 households out of which 15 are pucca houses and others are katcha and 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 one LP school and three Anganwadi school inside the village.
- Out of 94 HH, people belong to ST community.

3.2 Wealth Ranking:

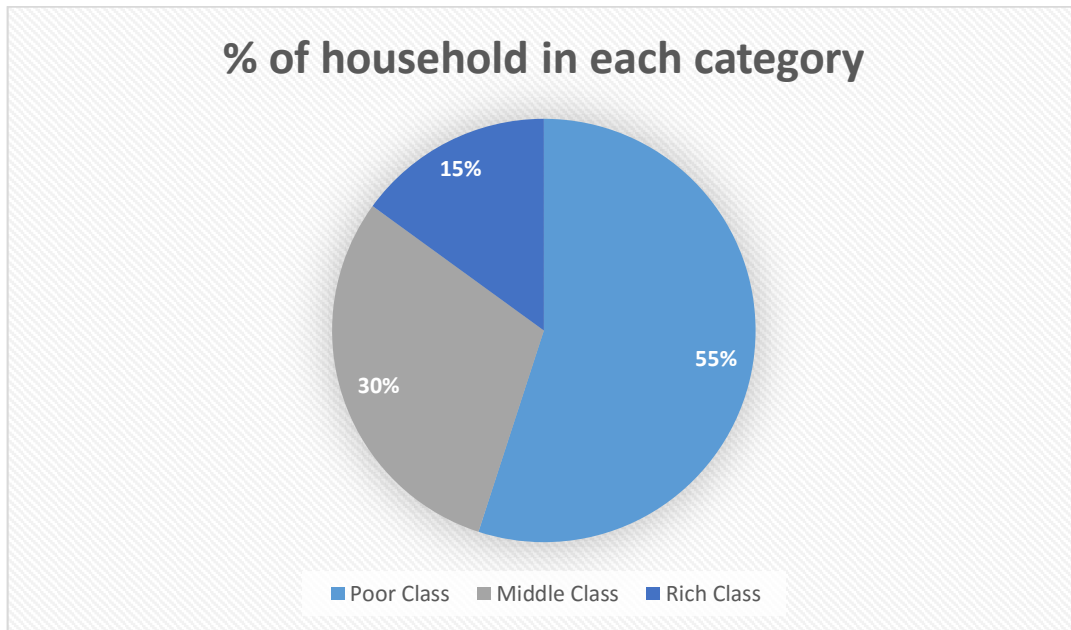
Wealth ranking, or well-being ranking, involves community members identifying and analysing the different wealth groups in a community. It enables evaluators to learn about the socioeconomic stratification of project beneficiaries and local people's definitions and indicators of wealth/well-being.

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

- a) Land holding
- b) Occupation

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 (adhilua) 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
1896	Establishment of this village	Constructive
1910	Construction of Community pond	Constructive
1977	Construction of Baptist Church	Constructive
1989	First graduate in the village	Achievement
2006	Electricity in the village	Social
2014	Flood badly affected the village	Destructive
1963	Establishment of the L.P. School	Constructive

Learnings:

During the field survey and our research study, it is observed that the historical data of the JFMC says that there are 4 nos of constructive events in the JFMC in addition with an establishment of a social unit and there is only one destructive occurrence of flood during the year 2014 which caused a severe damage to the village area.

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, labour 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. sowing, 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 Rangpathar JFMC

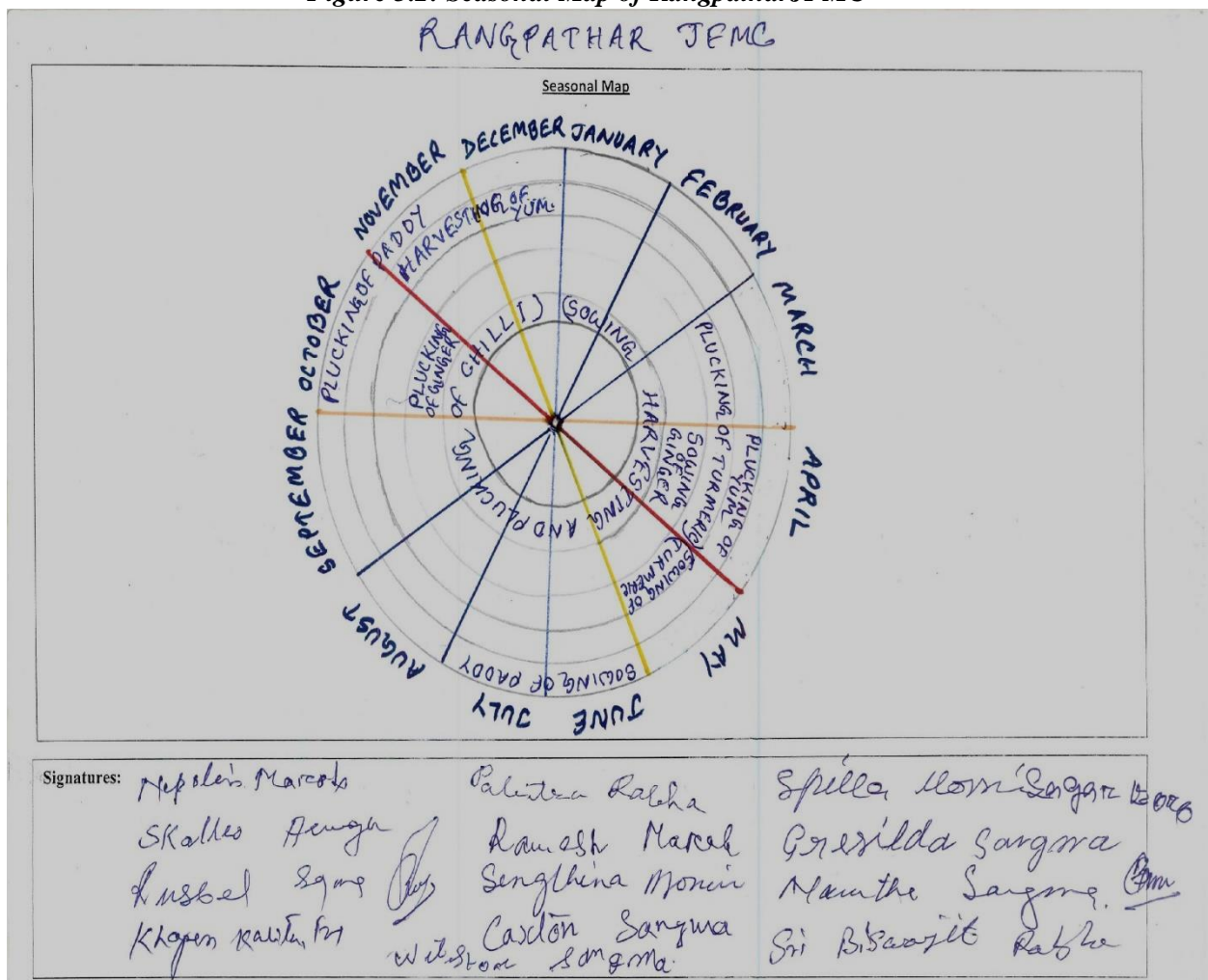


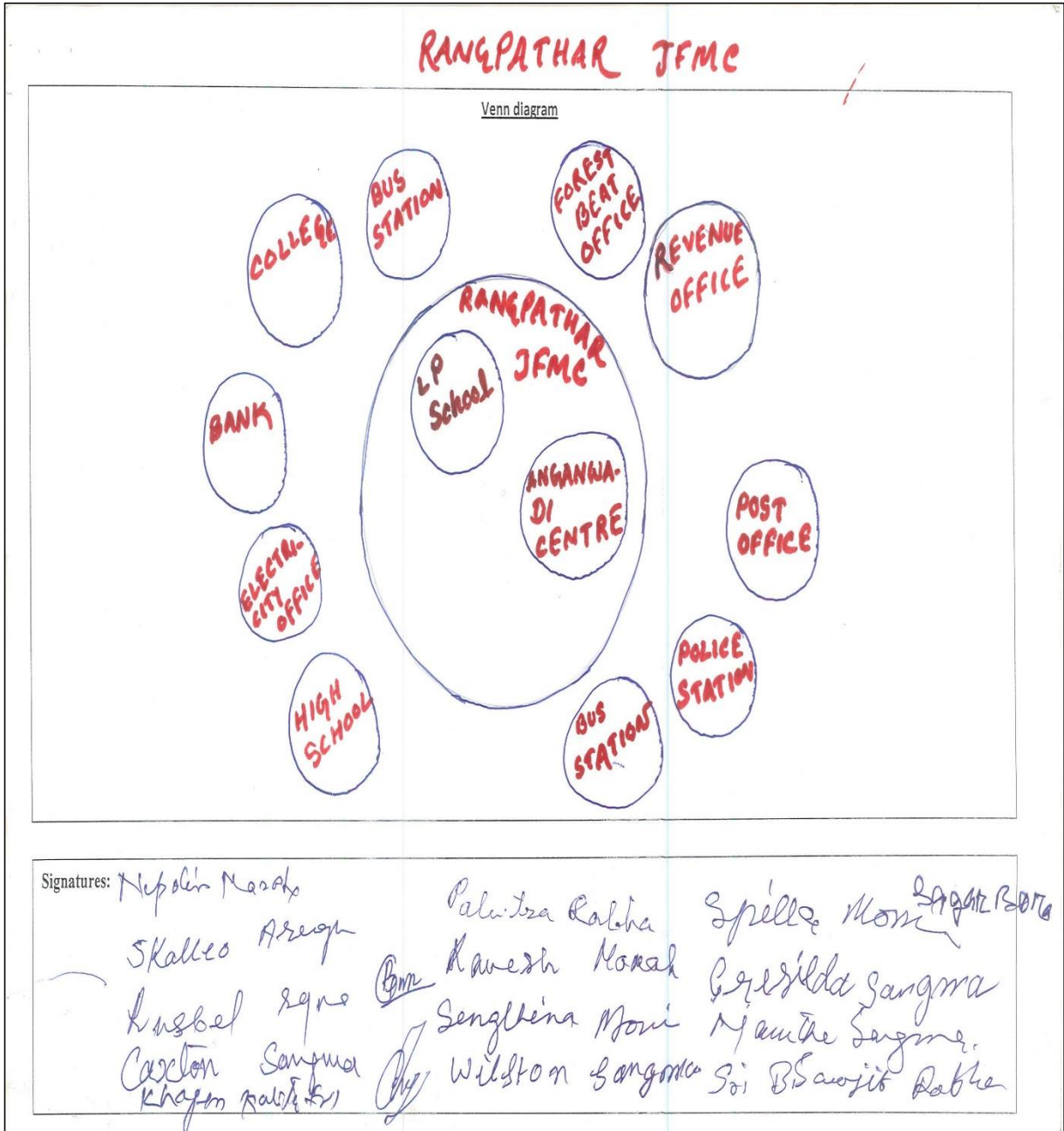
Table 3.4 Seasonal cropping pattern

Agricultural crop	Sowing/Planting	Harvesting	Plucking/Cutting/Collecting
Sali Rice	June-July	Aug-Oct	Nov-Dec
Yum	Sep-Oct	Nov-Dec	April
Turmeric	May-June	July-August	March-April
Ginger	April	May	October
Chilly	Throughout the year		
Non Farming sector			
Animal Husbandry	Throughout the year		
Tailoring			
Masonry			
Electrician			
Buisnessman			
Weaving			
Daily wage earner			

Learnings:

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

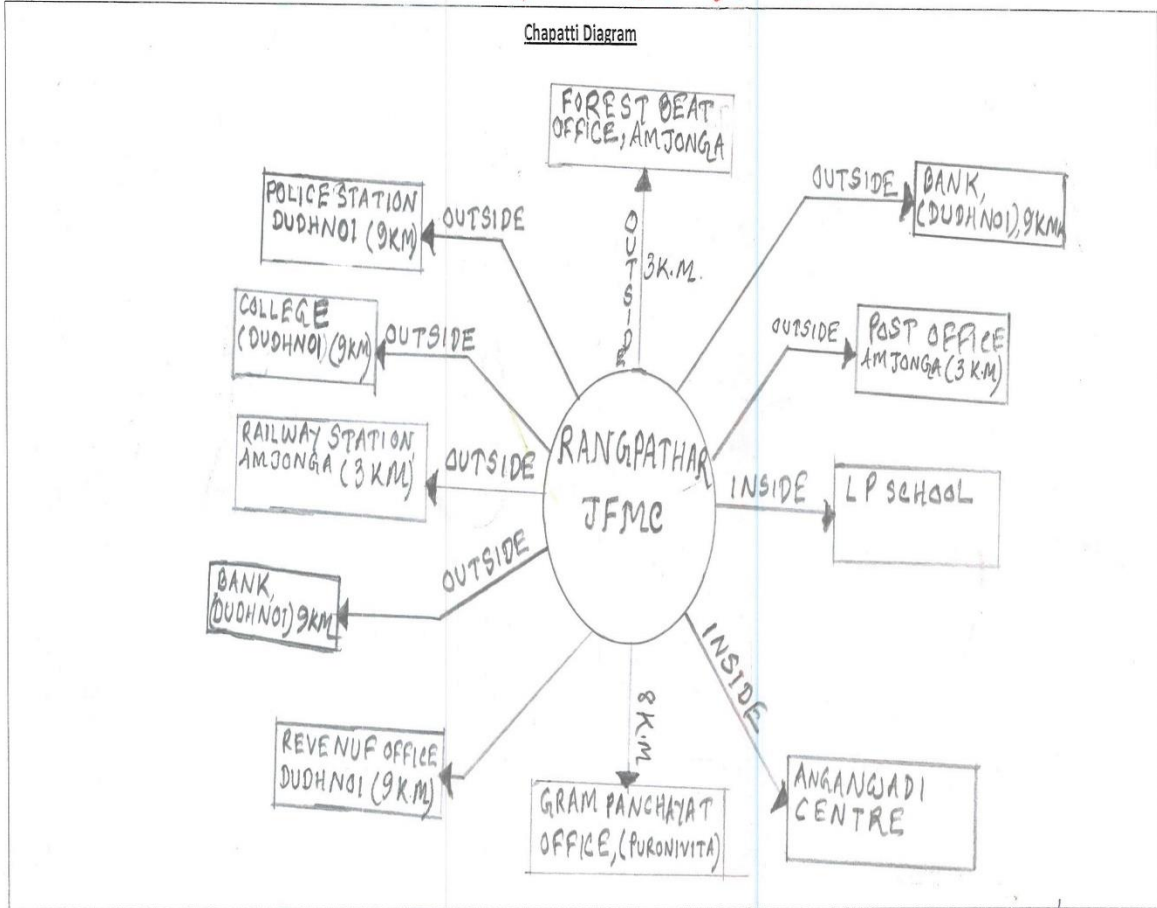
3.5 Venn Diagram



3.6 Chapatti Diagram

RANGPATHAR JFMC

Chapatti Diagram



Signatures:

Nepoleb Marak

S Kalleo Arong

Kusbel Seng

Caxton Sangma
Khaem Kalleo Fri

Bmm

Palitra Lalha

Lamresh Marak

Senghina Moni

Wilston Sangma

Spella Moni

Ceresilla Sangma

Manthe Sengma

Soi Biswajit Rabha

Sagar Baro

Priority Ranking- Livelihood and Entry Point Activity(EPA)

Rangpathar JPMC

Priority Ranking of Livelihood Activities

Livelihood Activities	Livestock Rearing	weaving	Cane & Bamboo	Tailoring	Carpentry	Masonry				Marks	Rank
	A	B	C	D	E	F	G	H	I		
Livestock Rearing	A	X	A	A	A	A				5	1
weaving	B		X	B	B	B				4	2
Cane & Bamboo	C			X	C	C				3	3
Tailoring	D				X	D				2	4
Carpentry	E					X				1	5
Masonry	F						X			0	6
	G										
	H										
	I										

Signatures:

Nepali Marak
Shales Arangh

Mustak Sams.
Coston Sanyama

Balitra Babha

Kamesh Notal

Senghina Momin

Khagen Kachhi

Sulla Mon

Prasidda Sanyama

Nantu Sanyama

Sagar Baro

Sri Boudit Babu

Priority ranking of livelihood by the villagers

Priority Ranking of Entry Point Activity

Rangpathar JPMC

Entry Point Activities		culture	community Hall	drinking water	Road	Sanitation	electricity	LPG connection	Health center	transportation	Marks	Rank
		A	B	C	D	E	F	G	H	I		
Culture (4 nos)	A	X	A	C	D	A	A	A	A	A	6	3rd
Community Hall	B		X	C	D	B	B	B	B	B	5	4th
drinking water	C			X	D	C	C	C	C	C	7	2nd
Road	D				X	D	D	D	D	D	8	1st
Sanitation	E					X	E	E	E	E	4	5th
electricity	F						X	G	F	F	2	7th
LPG connection	G							X	H	I	1	8th
Health center	H								X	I	1	9th
Transportation	I									X	3	6th
	J											
	K											

Signatures: Napolin Murok
 Wilston Skalles Aserga
 Kusbel Sany
 Carlon Sany
 Palitza Rabha
 dawsa Murok
 Senathina Momin
 Kheyin Kura
 Spiller Momin
 Gyesilda Sany
 Namthe Sany
 Sri Biswajit Rabha

Priority Ranking of Entry point Activity by the villagers

PHOTOGRAPHS



During the PRA mapping



PRA Mapping



Villagers after the PRA activity with Member Secretary


Annexure 5

LIST OF JFMC MEMBERS

List of Executive members.

1. Napolin Marak — President
2. Khagen Kalita — Member Secretary
3. Dianson Sangma — Treasurer
4. Witston Sangma
5. Polling Sangma
6. Carston Sangma
7. Bringkil Marak
8. Endalsan Marak
9. Smt. Gredine Sangma
10. Smt. Silit Sangma
11. Smt. Liamoni Marak


President,
Forest Protection Committee
Garo Rongpathar,
Glp. Assam.


(Khagen Kalita-1)
Member Secretary
Rangapathar Garopara Forest
Protection & Regn. Committee J.F.M.C.

Annexure 6 (Record I)
Table 1: Basic data of the village:

Table 1: Basic data of the JFMC

Sl.No	Name of	Date of Establishment	No. of members in executive comtt.	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	Rangpathar	2015	11	NepolinMarak	KhagenKali ta			yes		

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/1000 Male	Avg. HH size
			Total	Male	Female		
1	Rangpathar	94	542	291	251	862	5.76

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 (2-10 hectare)	Marginal farmer (< 2 hectare)	Landless	Total
Rangpathar	9	13	61	11	94

Table 4: Cattle Population:

Table 4: Cattle Population of the JFMC

Village wise numbers of cattle or type of animal										
JFMC	Cows	Buffaloes	Goats	Sheep	Bulls/Oxen	Camels	Pigs	Hens/Cocks	Duck	Total
Rangpathar	276	Nil	66	Nil	Nil	Nil	132	345	52	871

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	Amjonga	3 km	Katcha Road
2	Electricity	Dudhnoi	9 km	Good
3	Gas connection	Dudhnoi	9 km	Good
4	Transport	Amjonga	3 km	Good
5	Primary health centre	Nil	Nil	
6	School	Inside the village	-	Poor
7	Post Office	Amjonga	3 km	Poor
8	Bank	Dudhnoi	9 km	Good
9	Anganwadi Centre	Inside the village	-	Poor
10	Gram Panchayat Office	Puronivita	8 km	Good
11	Police Station	Dudhnoi	9 km	Good
13	Forest Office(Beat)	Amjonga	3 km	Good
14	Bus Facility	Dudhnoi	9 km	Good
15	Railway Station	Amjonga	3 km	Good
17	JFMC assets community hall	Nil		
18	District Head Quarter	Goalpara	---	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	45	NA	
Rabi	Leafy vegetables	Household use	NA	

Table 7: Crop production profile of RANGPATHAR JFMC:*Table 7 Crop production profile of Rangpathar JFMC*

Name of crop	Total production(approx.)in quintals	Number of households growing	Average production(quintal per/ha)
Paddy	1720	36	30
Vegetables(Ginger)	30	65	3.75

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	Amjonga	3 km
Weekly Market	Amjonga	3 km
Major Market	Dudhnoi	9 km

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	1 (Sibonga) not in use		
Katcha ring well	35	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	82	12	Forest, own campus	Major
Kerosene stove	10(for the purpose of lightening)		Market	Secondary
Gobar/Bio gas	NA			
LPG	12	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	2
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 Goalpara 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 		
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: 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	

SKILL DEVELOPMENT PROGRAMME PARTICIPANTS LIST

Rangpathar

①

Division	JFMC/EDC	Skill (trade)	Sl. No.	Participant	Guardian/Father Name	Address	Qualification	Age	Gender	Category	Contact No	Signature
GOALPARA (E) DIVISION, Garapara Forest		Prog Makak	1	Sri Napolin Marak	K P Dhanasingh Maran	vill Rangpathar 90-Arjuna	Class II	61 yrs	M.	ST.	813490 6749	Napolin Marak
		Form	2	Sri Wilston Sangma	Ki Sangma Marak	90-Arjuna, Nisi-Gulpan	Class II	54 yrs	M.	ST.	953287 828	Wilston Sangma
		do	3	Sri Bahadur Marak	Sri Ramesh Sangma	(Kantadu)	Class II	45 yrs	M	ST.	99546 00774	Bahadur Marak
			4	MR. Nimitha Marak	Lincoln Maran	do	Class II	40 yrs	F	ST.		Nimitha Marak
			5	Mrs Meghina Maran	Pradip Dainary	do	Class II	40 yrs	F	ST	9911244 2478	Meghina Maran
			6	Mrs Renila Sangma	Ki Witsing Maran	do	Class II	38 yrs	F.	ST.		Renila Sangma
			7	Mrs Jamila Marak	Sri George Arang	do	Nil	55 yrs	F	ST.		Jamila Marak
			8	Mrs Nazila Maran	K P Super Sangma	do	Class II	55 yrs	F	ST.		Nazila Maran
			9	Mrs Trisha Marak	K P Kishan Marak	do	Nil	38 yrs	F	ST.	9085 419108	Trisha Marak
			10	Kelitha Sangma	deonat Sangma	do	Nil	52 yrs	F	ST.	801141 3589	Kelitha Sangma

Napolin Marak

President

Rangpathar Garapara Forest

Protection & Regn Committee J.F.M.C

K P Dhanasingh

Member Secretary

Rangpathar Garapara Forest

Protection & Regn Committee J.F.M.C

Signature of Divisional Forest Officer.

Garapara Division

SKILL DEVELOPMENT PROGRAMME PARTICIPANTS LIST

Forest Division	JFMC/EDC	Skill (trade)	Sl. No.	Participant	Guardian/Father Name	Address	Qualification	Age	Gender	Category	Contact No	Signature
Garopura (T) Division, Rangpatar Garopura J.F.M.C.	Jfg		11	Resmilla Momin	Hapison Sangma	do.	class VII	43 years	F	st.	9577 192806	Resmilla Momin
	Prdm		12	Rijina Sangma	Poringkil Marak	do	class (IX)	25 years	F	st.	Nil.	Rijina Sangma
			13	Nutlan Sangma	Lt Ambar Marak	do.	class (VII)	26 years	F	st.	Nil.	Nutlan Sangma
			14	Marthalis Marak	Lt Pinet Marak	do.	Nil		F	st.	Nil.	Marthalis Marak
			15	Monitha Sangma	Pinot Sangma	do.	class (VIII)	27 years	F	st.	Nil	Monitha Sangma
			16	Rabalim Sangma	Dianzon Sangma	do	class VI	45	F	S.T.	98597 68886	Rabalim Sangma.
			17	Probath Momin	Lt. Jebon Marak	do	class V	62	M	ST	813596 7631.	Probath Momin
			18	Sengbath Sangma	Probath Momin	do	class X	30	M	ST	957785 9213	Sengbath Sangma.
			19	Dilmethua Momin	Rajiv Sangma	do -	class X	29	F	ST	763607 3038	Dilmethua Momin
			20	Sabali Marak	Babul Sangma	do	class IX	21	F	ST		Sabali Marak

Nepolin Marak
 President
 Rangapathar Garopura Forest
 Protection & Regn. Committee J.F.M.C.

[Signature]
 Member Secretary
 Rangapathar Garopura Forest
 Protection & Regn. Committee J.F.M.C.

[Signature]
 Signature of Divisional Forest Officer.
 Garopura Division

SKILL DEVELOPMENT PROGRAMME PARTICIPANTS LIST

Forest Division	JFMC/EDC	Skill (trade)	Sl. No.	Participant	Guardian/Father Name	Address	Qualification	Age	Gender	Category	Contact No	Signature
Ganapara (T) Division Rangapathar J.F.M.C.		Pig	21	Sri Rusbel Sangre	Selbinada Sangre	Rangapathar K. Anapooja	class I	27	M	S.T.	957955 1944	Rusbel Sangre
		Fadon	22	Skallend Arang	Ronomoni Sangre	-DO-	class IV	35	M	S.T.	98560 2236	Skallend Arang
			23	Kumerachi Sangre	Silsang Momin	-DO-	class III	40	F	S.T.		Kumerachi Sangre
			24	Juliar Arang	Some Sangre	-DO-	class I	33	M	S.T.		Juliar Arang
			25	Saramila Momin	Kendli Matak	-DO-	class III	32	F	S.T.		Saramila Momin
			26	Emadal Matak	Rusbel Sangre	-DO-	class I	27	M	S.T.	88110 65783	Emadal Matak
			27	Chonail Matak	Pilling Sangre	-DO-	class VIII	45	F	S.T.		Chonail Matak
			28	Chonang Momin	Lt. Semera Sangre	-DO-	class I	41	M	S.T.	87528 90987	Chonang Momin
			29	Chonteng Sangre	Catson Momin	-DO-	class I	43	M	S.T.		Chonteng Sangre
			30	Lipidina Sangre	Catson Sangre	-DO-	class III	52	F	S.T.	98547 72491	Lipidina Sangre

Nepolin Matak

President
Rangapathar Ganapara Forest
Protection & Regn. Committee J.F.M.C.

Kishor

Member Secretary
Rangapathar Ganapara Forest
Protection & Regn. Committee J.F.M.C.



Signature of Provisional Forest Officer.
Ganapara Division