



KHUTAMARI JOINT FOREST MANAGEMENT COMMITTEE (JFMC)

GOALPARA FOREST RANGE

GOALPARA FOREST DIVISION

MICRO-PLAN

(2017-18 to 2026-27)

**Prepared by
Khutamari 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
PHE	Public Health Engineering
PRA	Participatory Rural Appraisal
PRF	Proposed Reserved Forest
Rs.	Indian Rupees
SHG	Self Help Group
VCDC	Village Council Development Committee

KHUTAMARI JOINT FOREST MANAGEMENT COMMITTEE
Goalpara Forest Division, Goalpara Forest Range

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) Guwahat 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 both forest development and livelihood development.</p>
<p>Micro-Plan for the Khutamari JFMC</p>	<p>This document gives the Micro-Plan for the Khutamari JFMC, which is located in the Goalpara district of Assam. The JFMC falls under the jurisdiction of the Goalpara Forest Range under Goalpara Forest Division. The profile of the community is given in the next section.</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 Feb 2017. The micro-plan has been compiled by IIE based on the project guidelines. The document has been discussed and finalized for adoption in May 2017.</p>

2. Village Socio-Economic Profile

Location	<p>The Khutamari Joint Forest Management Committee (JFMC) has been formed to cover the existing community dwelling in Khutamari, a village located on the fringe of the Khutamari PRF and Balijana Revenue Circle of Goalpara 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 style="text-align: center;">Table-A: Key Information of the JFMC</p> <table border="1" data-bbox="472 546 1380 1200"> <tr> <td>Name of the JFMC</td> <td>Khutamari</td> </tr> <tr> <td>Habitation</td> <td>Khutamari</td> </tr> <tr> <td>Name of Revenue Village</td> <td>Khutamari</td> </tr> <tr> <td>Name of the Gram Panchayat / VCDC</td> <td>Kumri Gram Panchayat</td> </tr> <tr> <td>Revenue Circle</td> <td>Balijana</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>Goalpara</td> </tr> <tr> <td>Forest Beat</td> <td>Pancharatna</td> </tr> <tr> <td>Year Formed</td> <td>2003-04</td> </tr> <tr> <td>Description of Boundary of JFMC</td> <td>As below North: Borvita South: Satrapur Village West: Khutamari, Brahmaputra East: Dariduri Village N- 26°11'0"- 26°11'30" E- 90°31'0"- 90°31'30"</td> </tr> </table> <p>Source: JFMC Records & Discussions during PRA Exercise in March 2017</p> <p>Additional details are given at Table-1 of Record-I.</p>	Name of the JFMC	Khutamari	Habitation	Khutamari	Name of Revenue Village	Khutamari	Name of the Gram Panchayat / VCDC	Kumri Gram Panchayat	Revenue Circle	Balijana	District	Goalpara	Forest Division	Goalpara	Forest Range	Goalpara	Forest Beat	Pancharatna	Year Formed	2003-04	Description of Boundary of JFMC	As below North: Borvita South: Satrapur Village West: Khutamari, Brahmaputra East: Dariduri Village N- 26°11'0"- 26°11'30" E- 90°31'0"- 90°31'30"
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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 style="text-align: center;">Table-B: Brief Details of Executive Committee & general Body</p> <table border="1" data-bbox="472 1464 1380 1711"> <tr> <td>Name of President</td> <td>Majer Ali</td> </tr> <tr> <td>Name of Member Secretary</td> <td>Ajer Ali</td> </tr> <tr> <td>Name of Treasurer</td> <td>Kader Ali</td> </tr> <tr> <td>No. of Members in Executive Committee</td> <td>Male: 7 Female: 4</td> </tr> <tr> <td>No. of Members in the General Body</td> <td>One person from each household of the village.</td> </tr> </table> <p>Source: JFMC Records</p>	Name of President	Majer Ali	Name of Member Secretary	Ajer Ali	Name of Treasurer	Kader Ali	No. of Members in Executive Committee	Male: 7 Female: 4	No. of Members in the General Body	One person from each household of the village.												
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Households & Population Structure	<p>The village has 86 households, of which about 70 per cent of the total households are of BPL (Below Poverty Line) category. The number of female headed households are 5.</p> <p>The total population is 559 of which 328 are male and the rest are female members. About 73 per cent of total households are belong to General (Muslim) category. And about 25 per cent are of Schedule Tribe (ST) caste of Rabha and Garo community and only about 2 per cent people falls under OBC community.</p>																						

	<p>Table-2, 2.1 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 7. (2) The sex ratio is 704 females per 1000 males in the village.
Education & Skills Development	<p>Over 90 % of the population is reported to be literate. Most of the community members have received school level education (primary school). On the other hand, relatively fewer households have college educated members.</p> <p>Livelihood skills are usually acquired under various settings – formal & informal. In the JFMC area, informal means for skills development is the traditional norm. People have traditional skills in the following areas:</p> <ol style="list-style-type: none"> (a) Handloom (b) Farming (c) Handicraft (d) Livestock Rearing <p>Government has been active in promoting formal skills development programmes in the country as well as in the state. But, no such programme has been carried out in the present habitation.</p>
Soil	<p>The project area is made up of soil of alluvial origin comprising mostly of silt, sand and clay. The soil is very fertile. The sal bearing areas of the forest have sandy loam soil.</p>
Water	<p>The village is located on the bank of the river Bramhaputra.</p>
Climate: Temperature & Rainfall	<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 July. Very insignificant rainfall is received during the month of November, December, January and February in the month.</p> <p>The temperature varies from 22°C to 34.1°C</p>
Forest & Bio-diversity	<p>Sal with its associates are growing naturally in the area. Different species namely Schima Wallichii, Vitex peduncularies, Shorea rebusta, Holarrhena antidysenterica, Gmelina arborea, Syzgium cumini, Garuga pinnata, Emlica officinalis, Erythrina veriegata, Streculia villosa, Atstonia Scholaris, 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>
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>Crop Land:19.6 % Tree Cover: 13.89 % Habitation: 23.3 % Firewood plantation: 24.59 % Medicinal plantation: 3.59 % Cultivable wasteland:13.37 %</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"> • 6% of the households are landless; • 94% of the households are marginal farmers (less than 2 Ha); • None of the households have more than 2 Ha plot of land.
Livestock	<p>The total number of livestock in the village is around 279. The main types of livestock possessed by the households include:</p> <p>Cows: 248 Goats: 203 Pigs : 45 Poultry:159</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>From the above table, the following have been noted with regard to village infrastructure:</p> <p>Physical Infrastructure: The habitation is deprived of basic physical infrastructure like paved roads, electricity, water supply etc.</p> <p>Education & Health Facilities: There are minimal educational and health facilities. Apart from two LP schools, there are no education institutions in the village. Public transportation is poor and private transportation is irregular.</p> <p>Govt. Offices: The government offices (such as Police station, Gram Panchayat office, Revenue office, Forest Beat office etc.) are located at a considerable distance, which gets amplified as the villagers do not have access to regular public transport from the habitation.</p> <p>Financial Inclusion: Facilities for financial institutions like bank and post office are also located at a considerable distance from the habitation. Although the some community members have accounts in faraway places, they rarely use it for financial transactions and for other facilities.</p>
Agricultural Crops	<p>The details of the agricultural crops grown in the village is available at Table-6 of Record-I.</p> <p>The above shows that the following are the main crops grown in the village.</p> <p>Kharif Crops: Sali rice, Chinese rice/ Boro rice, Jackfruit, Mango, Jam, Pumpkin Rabi Crops: Mustard, leafy vegetables Others: Rubber, Tomato</p> <p>All crops are rain fed.</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. The maximum numbers of households are involved in growing crops are 49.</p> <p>The production and yield of these crops is given as follows:</p> <p>(a) Paddy : Production 553.8 Quintals Yield 30.5 Quintals/ha (b) Mustard : Production 9 Quintals Yield 16.05 Quintals/ha (c) Rubber: Production 202 Quintals Yield 12.9 Quintals/ha</p>

Fodder Availability	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: (a) Crop residue (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: Jogighopa and Goalpara at 10 km and 15 km away respectively (b) Weekly / Bi-weekly Market: : Jogighopaat 10 km away (c) Major Market: : Goalpara at 15 km away
Water Resources	The water resources are tabulated at Table-10 of Record-I. The main water resources with the water availability is as follows: (a) Ring Wells (Water Availability: Perennial / Seasonal) (b) Streams (Water Availability: Perennial / Seasonal) (c) Hand Pump (Water Availability: Perennial / Seasonal) (d) River(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: 86 Nos. Source: forest, market (b) Kerosene: Households Depending: 55 Nos. Source: market (c) LPG: Households Depending: 7 Nos. Source: Gas Agency
Socio-economic status	Social set-up: A majority of the population belong to Muslim The village is inhabited by Rabha, Garo and Muslim community. The society is not marked by deep social divisions. The observed position of women is satisfactory. Economic Condition: The economic position is not satisfactory. The main livelihoods are Farming, Daily wage, Driving etc. Most households earn Rs. 15000 to Rs. 30000 per year. There is some migration of the youth and others for livelihoods. Additional details are available at the next section.
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

3. Livelihood Opportunity Analysis

PRA Exercise	Team from IIE Guwahati carried out PRA exercise in Khutamari village as follows: Date: 26 th February June, 2016 Location: Khutamari LP School, Khutamari Numbers Present: 60 In Presence of: JFMC office bearers, Village Headman, community members, Villagers 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. Weaving and Tailoring 2. Livestock Rearing 3. Apparel Making <p>Ranking of EPA</p> <table border="1" data-bbox="459 882 1385 1464"> <thead> <tr> <th data-bbox="459 882 568 981">Ranks</th> <th data-bbox="568 882 799 981">Village EPA as ranked</th> <th data-bbox="799 882 1147 981">Details (Appendix-3 has additional particulars)</th> <th data-bbox="1147 882 1385 981">Probable source of Funding/Deptt.</th> </tr> </thead> <tbody> <tr> <td data-bbox="459 981 568 1093">1.</td> <td data-bbox="568 981 799 1093">Drinking Water</td> <td data-bbox="799 981 1147 1093">Water Supply to each household</td> <td data-bbox="1147 981 1385 1093">APFBC/NRDWP</td> </tr> <tr> <td data-bbox="459 1093 568 1173">2</td> <td data-bbox="568 1093 799 1173">Electricity</td> <td data-bbox="799 1093 1147 1173">Solar light facility to each household</td> <td data-bbox="1147 1093 1385 1173">Linkage with ASEB</td> </tr> <tr> <td data-bbox="459 1173 568 1254">3.</td> <td data-bbox="568 1173 799 1254">Community Hall</td> <td data-bbox="799 1173 1147 1254">40ft X 35ft with platform and store house</td> <td data-bbox="1147 1173 1385 1254">EPA from APFBC</td> </tr> <tr> <td data-bbox="459 1254 568 1464">4.</td> <td data-bbox="568 1254 799 1464">LPG Connection</td> <td data-bbox="799 1254 1147 1464">LPG distribution centre in the forest range office/division office for better distribution of LPG for 70 numbers of households</td> <td data-bbox="1147 1254 1385 1464">EPA from APFBC</td> </tr> </tbody> </table> <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 and commissioning of toolkits/equipment/machineries. 	Ranks	Village EPA as ranked	Details (Appendix-3 has additional particulars)	Probable source of Funding/Deptt.	1.	Drinking Water	Water Supply to each household	APFBC/NRDWP	2	Electricity	Solar light facility to each household	Linkage with ASEB	3.	Community Hall	40ft X 35ft with platform and store house	EPA from APFBC	4.	LPG Connection	LPG distribution centre in the forest range office/division office for better distribution of LPG for 70 numbers of households	EPA from APFBC
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Livelihood opportunities	<p>Livelihood Opportunities were identified as follows:</p> <ol style="list-style-type: none"> (a) Agriculture & Horticulture (b) Livestock (c) NTFP (d) Skills Development (e) Credit Facility <p>Additional discussion about the above has been given below.</p>																				

<p>Agriculture & Horticulture</p>	<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: (a)Very negligible knowledge of organic farming (b)Lack of irrigation facilities (c)Negligible use of modern machineries like tractor, power tiller etc. (d) Not driven by the market demand (e)Lack of transporting facilities for carrying products (f) Less contact with the direct market.</p> <p>The opportunities are: (a)Application of HYV (High Yielding Varieties) seeds (b)Use of irrigation facilities, modern machineries which directly lead to increase production with less cost (c)Smooth transportation facility will help the farmers to carry their products to the nearby markets.</p> <p>The suggested programme are: (a)Training on organic farming (b) Provide credit facility in order to buy modern machineries (c) Encourage vegetable cultivation</p>
<p>Livestock</p>	<p>Table-13 furnishes additional information about opportunities for livestock rearing.</p> <p>The main constraints are: (a) Shortage in supply (b) Unable to buy fodder from market due to poor financial condition (c) Trees fodder and crop residues are available only for 3-6 months. Green fodder is also not available for the whole year (d) No veterinary care clinic (e) Less contact with the direct market for milk</p> <p>The opportunities are: (a) Faster growth (b) Higher income from livestock rearing (c) Disease control (d) Increases the life span (e) Encourage livestock rearing for earning purpose</p> <p>The suggested programme is: (a) Piggery (b) Poultry (c) Dairy</p>
<p>NTFP</p>	<p>The opportunities for NTFP are tabulated at Table-14 under Record-2</p> <p>The main constraints are: (a) Less availability of NTFP (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 etc. (b)Medicinal and Aromatic Plantation</p>
Specialized Skills	<p>For skills development on Handloom, Food Processing, Livestock Rearing etc, the opportunities are tabulated at Table-15 under Record-2</p> <p>The main constraints are: (a) Raw material are not available in the nearby areas (b)Lack of product diversification (c) No direct contact with the institutional buyers (c) Use of modern machinery and equipment</p> <p>The opportunities are: (a) Use of modern machinery and equipment (b) Improvement of quality and designs by comparing their products with those of others' artisans in the national and international fairs/seminars/expos (c)Expansion of market</p> <p>The suggested programme are: (a)Training on Modern Tools and Equipment (b)Providing modern technology to the villagers</p>
Credit Facility	<p>Table-16 under Record-2 discusses this aspect.</p> <p>The main constraints 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. (b) Education programme for SHGs</p>
Strategic Interventions	<p>Summarizing the suggested programmes at above as strategic interventions for the Livelihood Development Plan:</p> <p>1.Agriculture & Horticulture: Application of HYV (High Yielding Varieties) seeds, Training on organic farming, Provide credit facility in order to buy modern machineries, Agri-skill development programme etc</p> <p>2.Livestock: Piggery, Poultry</p> <p>3.NWFP : Plantation of Fruit trees, Medicinal and Aromatic Plantation</p> <p>4. Specialized Skills: 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> <p>5. Credit facility: Setting up modern financial institution in the nearby areas</p>

4. Livelihood Development Plan

<p>Livelihood opportunity Analysis</p>	<p>Framework of livelihood Opportunity Analysis has been done with the help of the following criteria:</p> <p>A) Livelihood assets B) Livelihood context C) Priority ranking on potential livelihood</p> <p>The livelihood situation of Khutamari JFMC has been analyzed 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
<p>Natural capital</p>	<p>The major natural capital of Khutamari JFMC is the Proposed Reserve Forest and the major river flowing through the village is Brahmaputra. 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)</p>
<p>Physical Capital</p>	<p>Majority of the households in the Khutamari JFMC are involved in farming activities and are marginal farmers with farming land of less than 2 ha. (Detailed land holding pattern is described in the table 3/appendix 6)</p> <p>The village has 55 numbers of thatch house, 22 houses are semi-pucca and 9 houses are pucca. 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. (Refer to table 10,11/appendix 6)</p> <p>Two LP schools and one Anganwadi centers are present in the JFMC area. (Refer to table 5/appendix 6)</p> <p>In case of water sources, there are two community ring well in the JFMC.</p>
<p>Social Capital</p>	<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. The village has one community hall inside the JFMC.</p>
<p>Human Capital</p>	<p>More than 30 per cent of total population of the JFMC are illiterate. (refer to additional table ii/appendix 6)</p>
<p>Financial capital</p>	<p>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. All of the people have bank account in commercial banks, but they are not aware of the benefits of financial inclusion.</p>

Livelihood Context	<p>Livelihood activities of the Khutamari JFMC are identified on the basis of following criteria:</p> <ol style="list-style-type: none"> Contribution of particular livelihood activity in the total income of the JFMC Percentage involvement of income group in a particular livelihood activities Priority ranking of the potential livelihood activities (refer to appendix 3)
Contribution of livelihood activity in the total income of the JFMC	<ol style="list-style-type: none"> Farming of paddy, Horticulture Daily wage earning Livestock rearing (Piggery, Poultry, Dairy) Service (both Government and Private jobs)
Involvement of income group in a particular livelihood activity	<p>As observed from the household survey and PRA activity that all the households are involved in the above mentioned activities in some or other parts of the year.</p> <p>Primary livelihood : Farming Secondary livelihood: Daily wage labour, livestock rearing Some service sector employee are also there.</p>
Priority ranking of the potential livelihood activities	<p>Priority ranking of Livelihoods & Skills Development</p> <ol style="list-style-type: none"> Weaving Tailoring Livestock rearing Cane and Bamboo
SHG Activities	<p>There are ten numbers of SHGs working in the village. SHGs of the village can plan the following activities:</p> <ol style="list-style-type: none"> To create awareness. To organise and form group To involve the villagers in Livelihood Activities collectively.
Convergence	<p>The planned initiatives may be converged with the following schemes of the Government of India:</p> <ol style="list-style-type: none"> National Rural Employment Guarantee Scheme - for rural employment Rashtriya Krishi Vikas Yojana (RKVY) - for agricultural and allied development Rashtriya Krishi Sinchay Yojana (RKSJ) - for irrigation, including watershed development National Rural Livelihoods Mission Skills Development schemes Help from departments of education, Sericulture, Veterinary, Irrigation, Industrial and Fishery. 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>

5 Forest Development Plan

Forest Development Plan of Khutamari 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 Khutamari 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 Khutamari 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

After considering other areas planted (or to be planted), the conditions of the forests of the Khutamari JFMC have been summarized below.

Table-1: Conditions of the Forests of Khutamari 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: Amjonga RF Name: Goalpara Beat: Goalpara	30 Ha Bamboo Plantation=20 Ha Mixed Plantation=10 Ha		Good Area: 30 ha	6-9 m
(B) Other Planted Area				

1.2. Forest Soil Type

The forests of Khutamari 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 Khutamari JFMC

Parameter	Status in Assigned Forests	Status in Other Planted Areas
Fertility Level	High	
Presence of:		
(a) Silt	8	
(b) Mud-flat	32	
(c) Newly accreted land	NIL	
(d) Sand dune	60	

For the Khutamari JFMC, the salient points of the forest soil type are summarized below:

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

1.3. Existing Composition of Flora

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

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

Parameter	Local Name(s)	Botanical Name(s)
Major Forest Species	Gomari	<i>Gmelinaarborea</i>
	Arjun	<i>Terminalia arjuna</i>
	Acacia	<i>Acacia sp.</i>
	Sal	<i>Shorearobusta</i>
	Teak	<i>Tectonagrandis</i>
	Koros	<i>Polyalthialongifolia</i>
	Diesel	<i>Copaiferalangsdorffii</i>
Associates	Tera	<i>Angiosperm</i>
	Sonaru	<i>Cassia fistula</i>
Shrubs		
Medicinal Plants	Ghora Neem	<i>Azadirachtaindica</i>
	Amla	<i>Phyllanthusemblica</i>
Produces		
Others, if any		

2. Other Inputs for the Forest Development Plan

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

2.1. Past Protection Measures of the JFMC

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

- (a) Number of households involved: 65
- (b) Number of people involved: 154
- (c) Summary of the measures: Patrolling duty, cult boat operation in Sal forest annually
- (d) Any formal mechanism: NIL

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 Khutamari JFMC

Name of Forest Produce	Average Household Requirement		Source (How met at Present)
	Frequency of Requirement	Approx. Qty(per year)	
Firewood	Throughout the year	80-90 kg/year	Forest
Timber for House	Once in a year	0.15 cu. mt./yr	Forest
Small timber for Implements	Nil		
Pole / Bamboo	2- 3 times per year	102- 258 bamboo per year	Forest
Fodder from Forest	Frequent	100-120/year	Forest
NTFP	Frequent-	5-10 kg per year	Forest
Others	-		

There are 86households in the Khutamari JFMC. From the above table and this number of households, it is inferred that the total annual requirements of the village for forest produce for own use is as follows:

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

Name of Forest Produce	Community Requirement (Kg per annum) (*)	Remarks
Firewood	6880-7740 Kg	Throughout the year
Timber for House	12.90 cu. mt.	Throughout the year
Small Timber for Implements	Nil	
Pole / Bamboo	8772-22188 Bamboo	Throughout the year
Fodder from Forest	8600-10320 kg	Throughout the year
NTFB	430-860 kg	Throughout the year

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

(*) = Approx. Qty. of Average Household Requirement (from Table-4 (A) x 86Households

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

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

Table-6: Total Requirements of Forest Produce by Villagers

Name of Forest Produce	Community Requirement (Kg per annum) From Table-4(B)	Surplus Marketed (Kg) From Table-5(B)	Total Requirements (Kg)
Firewood	6880-7740 Kg		6880-7740 Kg
Timber for House	12.90 cu. mt.		12.90 cu. mt.
Small timber for Implements	NA		NA
Bamboo	8772-22188 Bamboo		8772-22188 Bamboo
Pole	NA		NA
Fodder from Forest	8600-10320 kg		8600-10320 kg
NTFP	430-860 kg		430-860 kg

3. Forest Protection Issue

3.1. Protection Problems

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

Table-7: Protection Problems of the Khutamari 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	Yes	Yes
Accidental Fires	Yes	Yes
Encroachment of Forest Lands	Yes	Yes
Incident of Snake bites/life threats/risks while protecting forest	Yes	Yes
Theft of Medicinal Plants	No	No

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

- (a) Traditional methods of cultivation by Tribal People
- (b) Less LPG connection leads to high dependency on fuel wood collected from forest by JFMC members and other nearby villages.
- (c) Encroachment of forest

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

Table-8: Protection Plan of the Khutamari 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]
Engagement of a watcher	RF		6am-6pm	Medium
Social Fencing	Boundary	Along the Demarcation of the Plantation Area	Grazing Season	High
Fire Protection	Within the Forest	-	Autumn- Winter	High

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

- (a) Engagement of a watcher
- (b) Social Fencing
- (c) Fire Protection
- (d) Patrolling

4.2. Types of Operations Proposed

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

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

Treatment	Required (Yes/ No)	Responsibility of JFMC (Yes / No)	Month / Year when can be done	Extent of Area proposed for Treatment (Ha)
Restoration of Degraded Forests	yes	yes	April –August	
Protection to Cut Stumps of Trees				
Watershed Treatment	Yes	Yes		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	100 ha
Other Activities				

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

- (a) Seed Sowing
- (b) Root & Shoot Cutting & Plantation
- (c) Physical Fencing
- (d) Social Fencing

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 Khutamari JFMC

Treatment	Area in Ha under Plantation Module	Priority for Block Plantation	Species	Spacing (metre x metre)
Assisted Natural Regeneration (with plantation in gap)	50	High	Sal, Arjun, Bohera, Sida	4m x 4m
Block Plantation Firewood plantation	50	High	Teak, Arjun, Bohera, Gamari, Sissoo, Ghora neem	2m x 2m

Treatment	Area in Ha under Plantation Module	Priority for Block Plantation	Species	Spacing (metre x metre)
NTFPs	100	High	Sowing of Amla, Bahera, Hilikhaetc	2m x 2m
TOTAL AREA (in Ha)	200	-	-	-

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 Khutamari JFMC (Year-1 to Year-5)

Name of Plantation	: Firewood Plantation
Plantation Period	: 2016-17 to 2025-26 (10Years)
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 Khutamari 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	: 50 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 Khutamari JFMC (Year-1 to Year 10)

Name of Plantation	: NTFP Plantation
Plantation Period	: 2016-17 to 2025-26 (10 Years)
Plantation Area	: 100 ha
Spacing	: 2m X 2 m-2500 plants per ha
No. of Plants to be Raised	: 2,50,000 (1,25,000 annually)
Number Blocks	: 2 Numbers(50 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	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 Khutamari 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 Khutamari JFMC. This includes the Departmental Nursery involved in JFMC works.

Table-11 (A): JFMC Nurseries of the Khutamari 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 Khutamari 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 Khutamari 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 Sali ANR in the Khutamari 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 Khutamari JFMC

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

5. Expected Benefits

This sub-section furnishes the benefits expected from the forests protected by members of the Khutamari 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 Khutamari 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 Khutamari 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	Plantation and its maintenance	2016-17 onwards	-
Firewood final felling	120/ha in Nov-Dec annually	2021 onwards	-

5.2. Sharing Mechanisms

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

Table-15: Sharing Mechanism for Khutamari JFMC

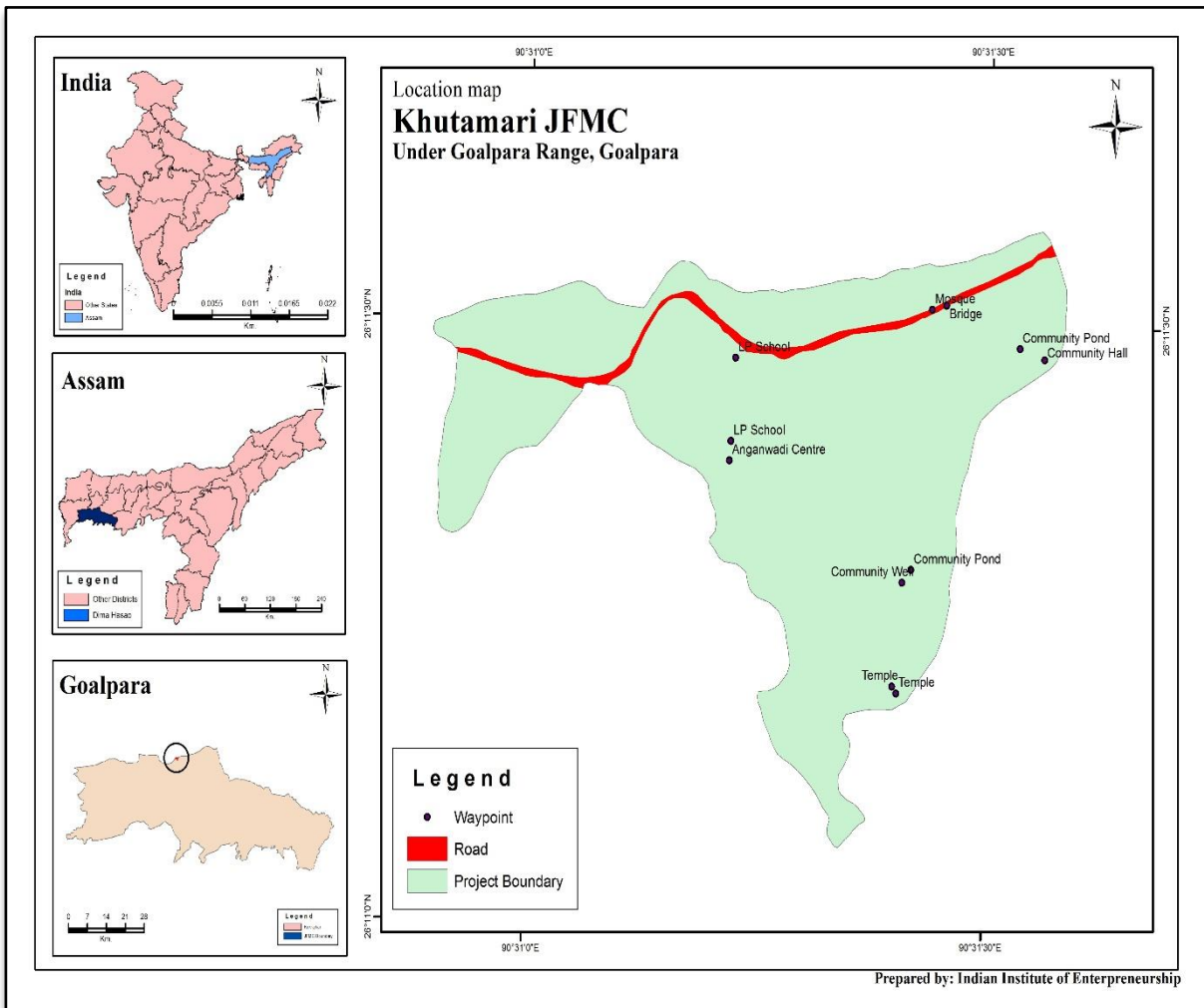
Method	Items
To be shared equally	NTFP, Sal, Firewood (as revenue sharing)
To be freely collected by the members (with some amount of restriction)	Firewood
Other Methods	Processing of NTFPs

List of Appendices

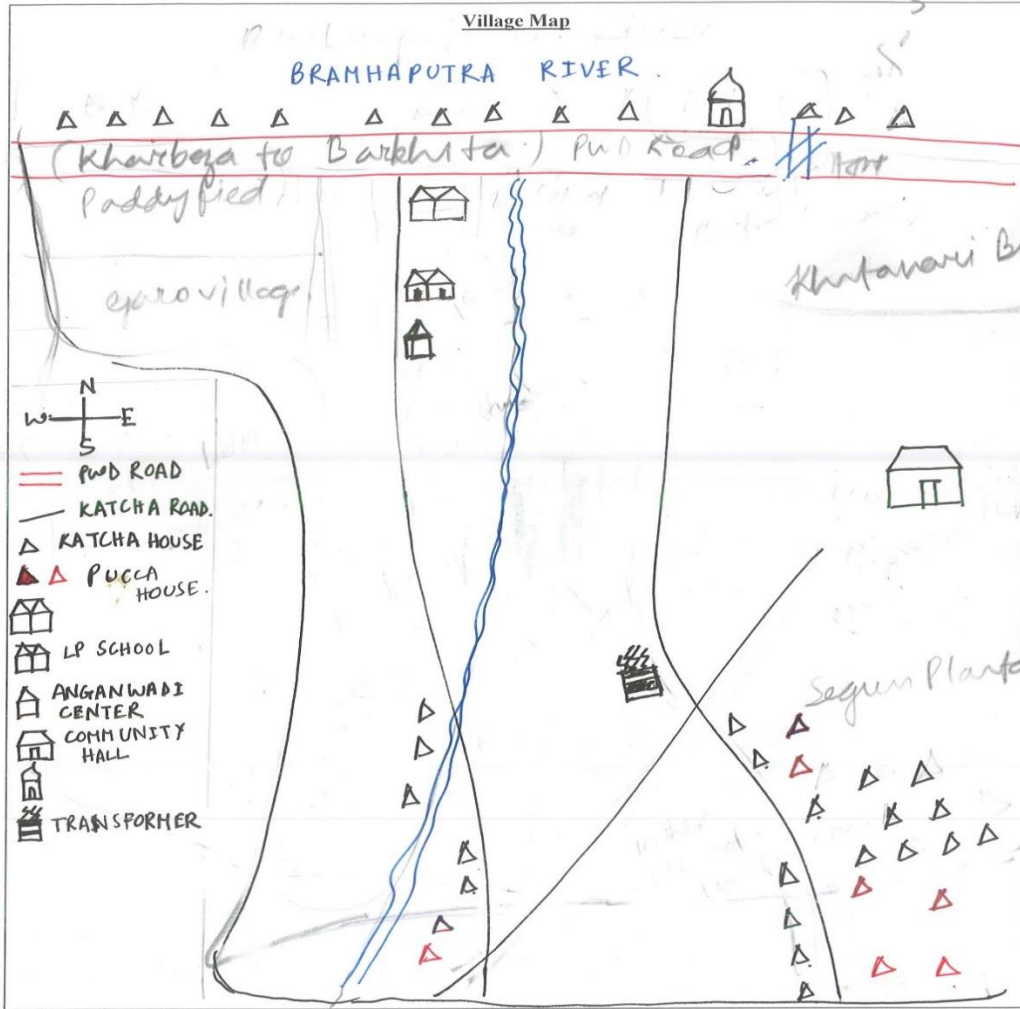
Appendix No	Heading	Page No.
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Appendix 1

1. Location map



2. Village Map



Signatures

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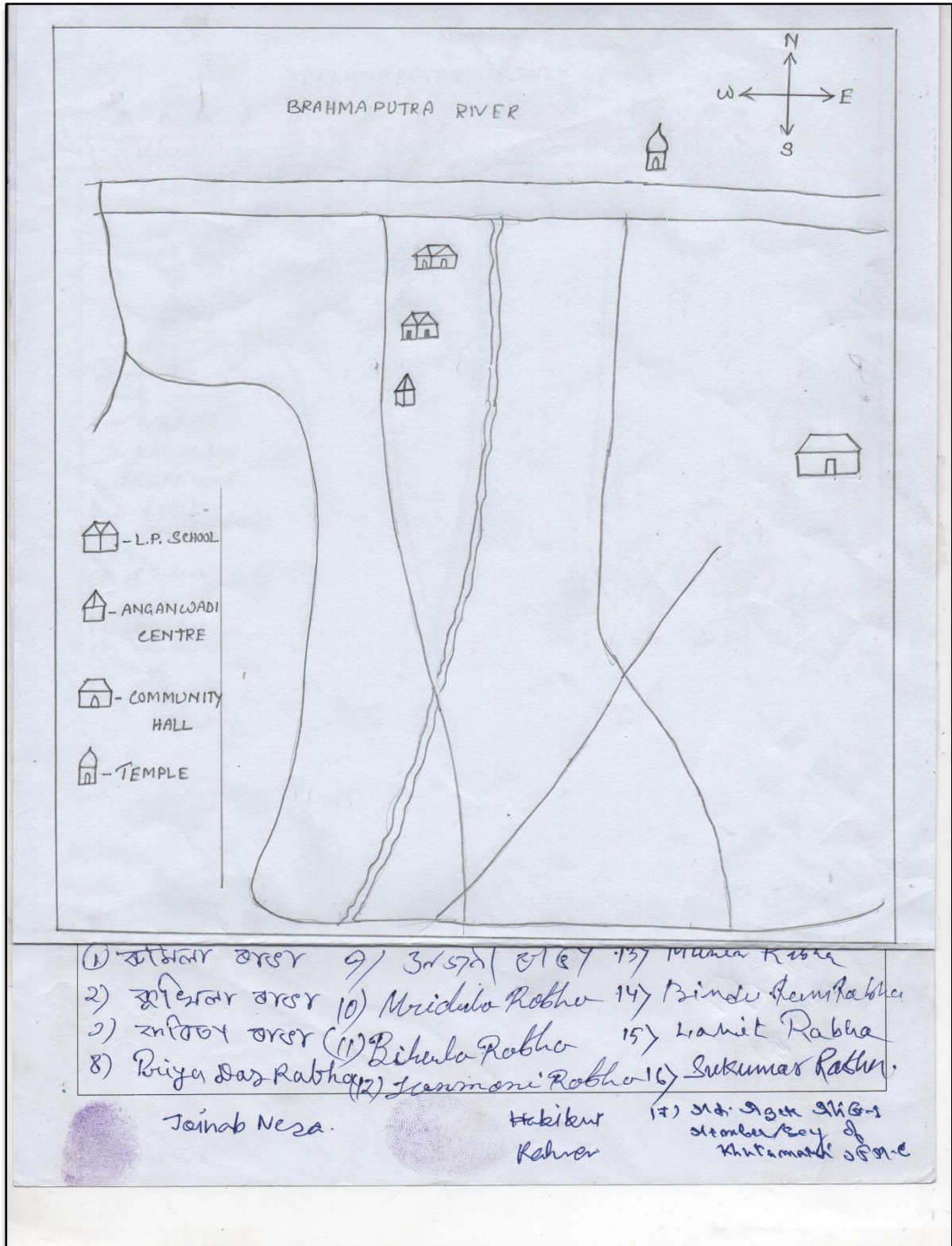
- | | | |
|--------------------|-------------------|-------------------|
| 1) ଅମିତାବ ଦାସ | 9) ଅନନ୍ତା ଦାସ | 13) Musin Rabha |
| 2) ଅମିତାବ ଦାସ | 10) Mridula Rabha | 14) Bindu Rabha |
| 3) ଅମିତାବ ଦାସ | 11) Bihula Rabha | 15) Lanit Rabha |
| 8) Bijay Das Rabha | 12) Jannoni Rabha | 16) Sukumar Rabha |

Jainab Neza.

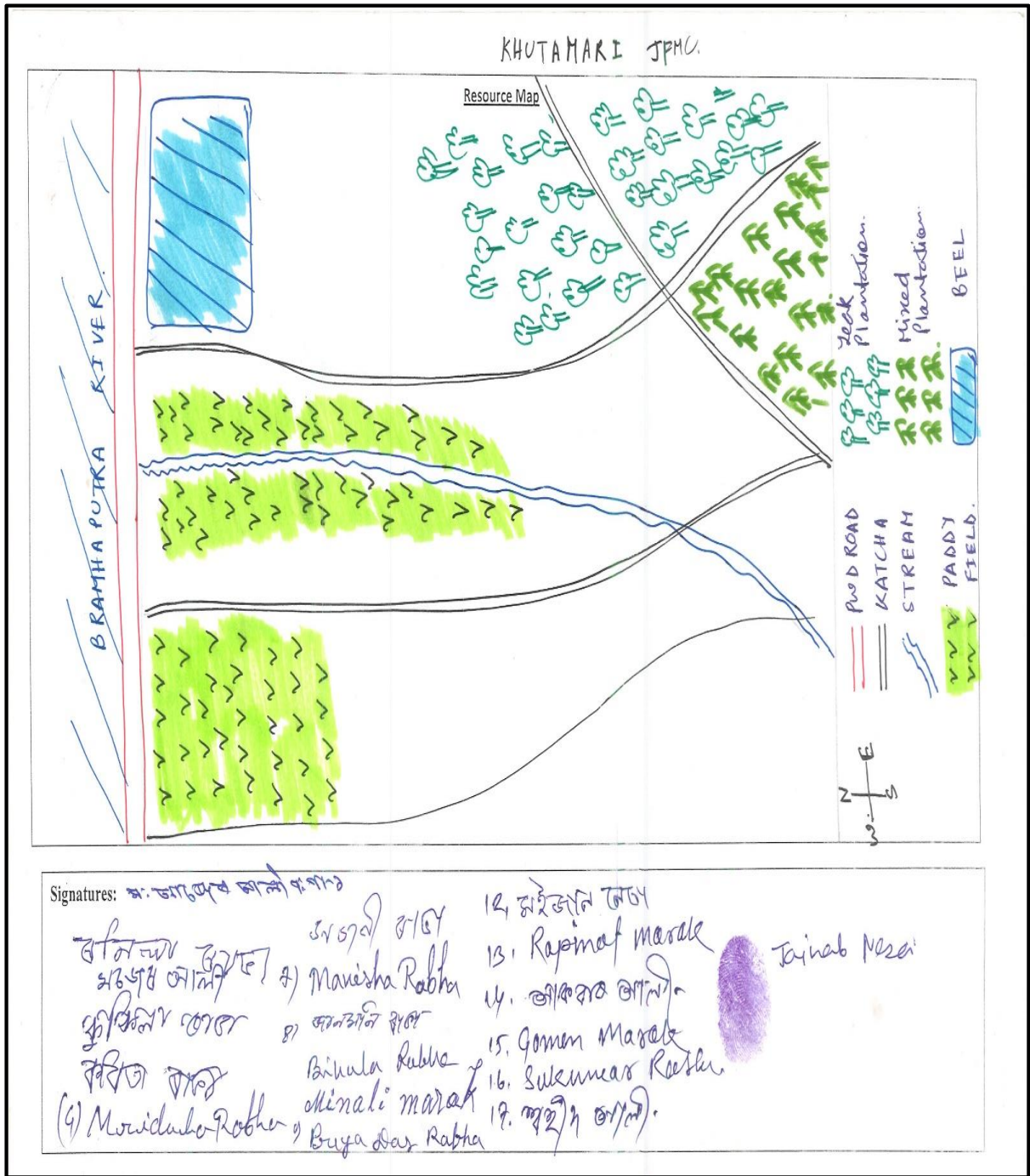
Hakimur
Rahner

17) Mr. Sagar Singh
Member/Boy of
Khatanari Bili

2. Village Social Map

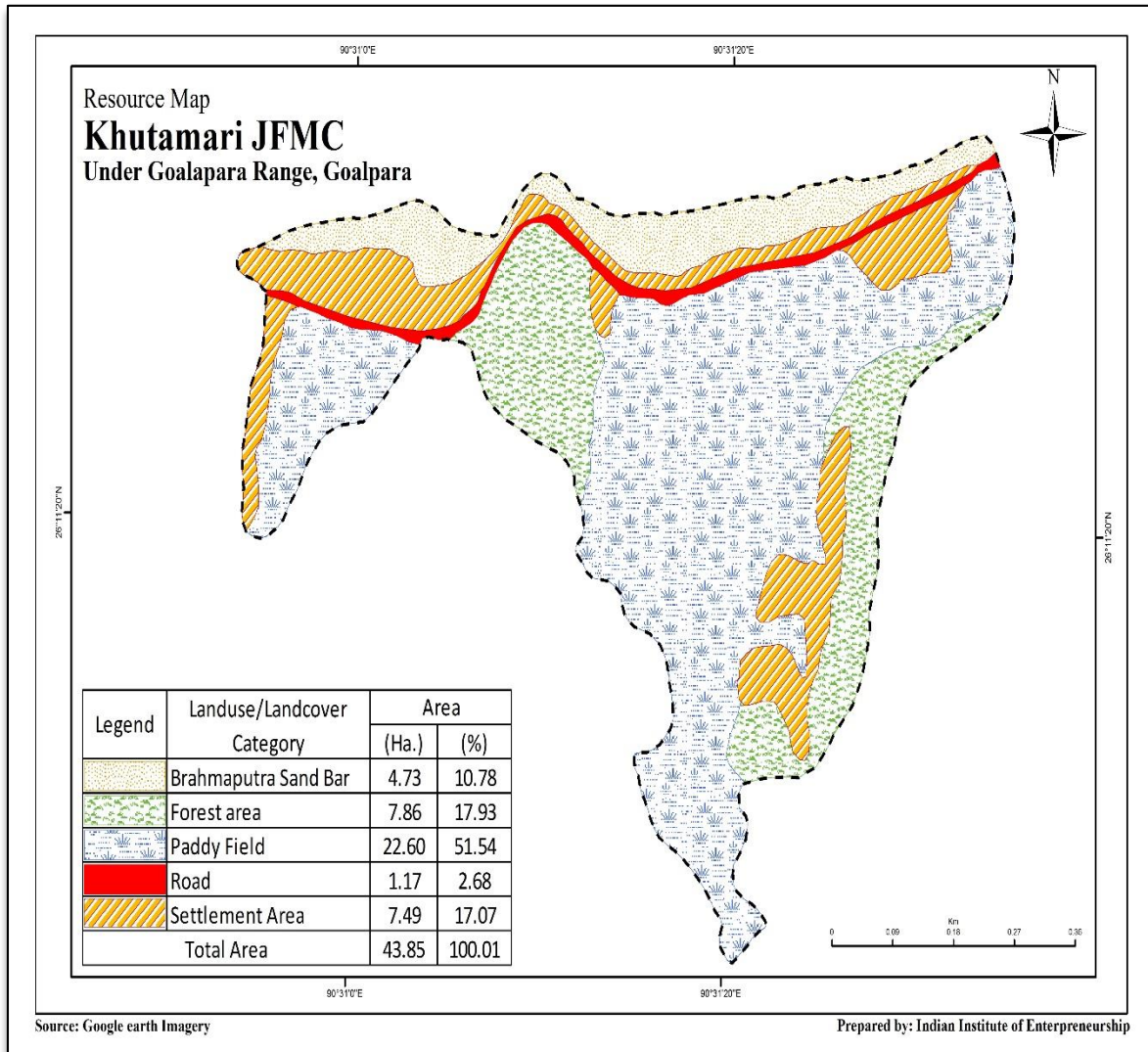


3. Resource Map



Appendix 2

Land Use/Resource map of GIS



Appendix 3

PRA ACTIVITY

Location and Timing of Participatory Rural Appraisal:

Name of the JFMC	Khutamari
Numbers of participants	50-60
Time	26 th February 2017, 9.00 AM
Venue	Khutamari LP School

Table – 3.1 Brief about the villages under Khutamari JFMC

Sl. No.	Name of the Village	No. of households	Population		
			Total	Male	Female
1	Khutamari	86	559	328	231

Different PRA tools have been used under the exercise of PRA technique.

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

3.1 Social and Resource Mapping:

Social mapping is used to visualize the socio-economic aspects of the Khutamari JFMC where the housing patterns of the households, the numbers of schools, social infrastructure, and religious beliefs among households can be visualized. Awareness camp about the project was carried out beforehand. So people came collectively to participate in the PRA process. Simultaneously, transect walk has been done by one of the team member along with some villagers. The villagers are enthusiasms about the mapping process and they actively participated in the process.

Table 3.2: Information about the village

Social Information	Total households	86
	Numbers of Kuccha Houses	56
	Numbers of Semi-Pucca Houses	21
	Numbers of Pucca Houses	09
Landmarks	LP School	2
	River	1
	Streams	2
	Transformer	2
	Community hall	1
	Anganawadi school	1
	Playground cum grazing field	1

Source: PRA

Findings of social map:

- It has been found from the PRA exercise that out of 86 households, only 9 houses are identified to be pucca, 56 houses are kuccha and 21 semi pucca houses by the villagers. Other than the class based division of the households, important places like community hall, schools and playground and location of transformers, streams and bridges are mapped.
- Provisions of education facility is comparatively satisfactory in the villages as there are two primary schools within the JFMC area.
- People from Rabha community and Muslim caste are live together without any social disturbance.

Learnings

- The main road accessible by the village is National Highway (NH 37) and is 5 km away from the village. And the road connecting the village with the national highway is Pucca.
- Electricity connection is there in about 85 per cent households of the Khutamari village. But daily availability of the electricity is very less (less than 5 hours/a day).
- There is a lack of LPG gas connections in households. The Household still dependent on forest and use firewood for their cooking purposes. They also visit the nearest market in Jogighopa (10 km away) for additional purchase of firewood and timber.
- The primary health centre is located in Borvita which is 4 KM away from the JFMC. As public transport is not available, and the villagers have to walk and use bicycles to avail the basic facilities.
- There is an Anganwadi Centre present where basic health care activities include contraceptive counselling and supply, nutrition education and supplementation, as well as pre-school activities are done. But due to lack of aganwadi workers, these facilities are not rendered to the villagers. Only the mid-meal is provided sometime. And two LP school are there in the village premises. However, for higher educations, Students are required to go outside of the village.
- There is one community hall in the JFMC but is in the abundant form.
- There are a grazing field which is used by the villagers use for their cattle rearing. These fields are available for a maximum of six months. Seasonal grazing incorporates “grazing animals on a particular area allows the land that is not being grazed to rest and allow for new forage to grow.
- In the JFMC area several water resource present in the JFMC, however the drinking water facility is not adequate. There is one seasonal stream flows through the village and the village is located on the bank of river Brahmaputra. People are availing the water from the stream and river for agricultural activities, livestock rearing, household activities. On the other hand, for drinking water purpose, people mainly make use of public well as well private well or hand pump.

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 socio-economic 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 information about the households

- a) Occupation/livelihood
- b) Land holding
- c) Types of living house
- d) Ownership of assets

As such it is found that about 87 per cent people are poor, about 11 per cent are belonging to middle class and about 2 per cent are categorized to be rich. Poor people are mainly irregular wage earners and mostly mortgage land for the paddy cultivation. Rich people are mainly rubber cultivators and paddy cultivators with good amount of agricultural land. They also have televisions sets, two wheelers, and radio etc. Middle class people are doing cultivation of rubber, horticulture products as well as of paddy with own agriculture land along with mortgaged lands.

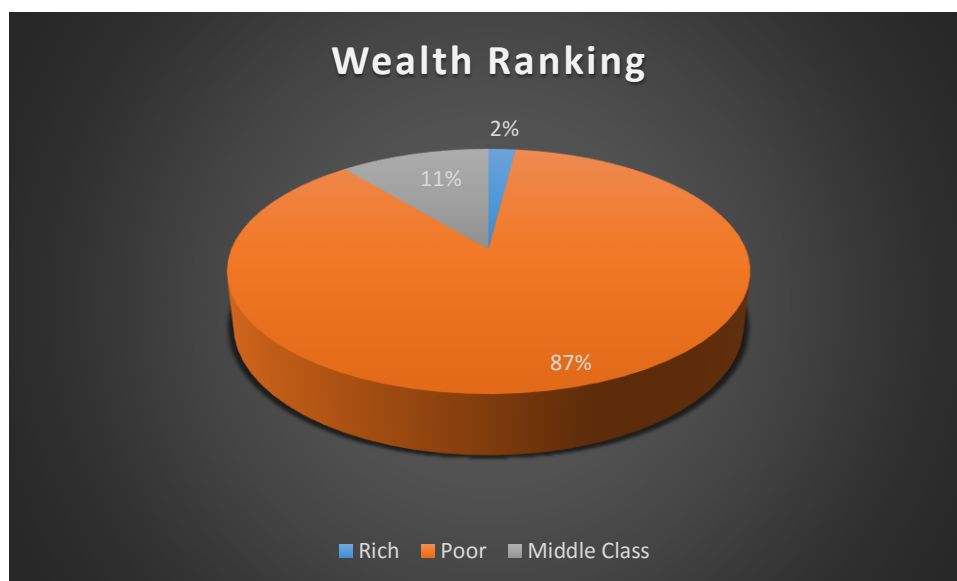


Figure 3.1: Wealth Ranking

Source: PRA

3.3 Time Line 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.

Table 3.3: Timeline review

Year	Event	Type
1956	Establishment of the Village.	Constructive
1960	Establishment of Khutamari Garo L.P. School	Constructive
1980	People migrated from other places to Khutamari village.	Constructive
1981	Establishment of the L.P. School	Constructive
1982	Masjid was constructed inside the JFMC	Constructive
1983	Cholera diseases badly affected the village	Constructive
1988	Flood badly affected the village	Destructive
1990	First matriculate in the village	Achievement
1995	First graduate in the village	Achievement
2015	Formation of the Khutamari JFMC	Social unit

Source: PRA

Learnings:

During the field survey and our research study, it is observed that the historical data of the JFMC says that there are 6 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 1988 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.

In the present JFMC, Seasonal mapping was done in such a process to cover mainly seasonal variation of crops, where we have considered agricultural crops and the timing of three activities viz. sowing, cropping and harvesting details throughout the year. From the seasonal mapping, it has been noticed that the main crops grown in the village are rice, Chinese rice, mustard, potato, chilly etc. The Focus Group Discussion (FGD) revealed that other major livelihood options available in the Khutamari JFMC are Livestock rearing (Piggery, poultry), fishing, shop-keeping, weaving, daily wagemakers, mason, electrician, tailoring and carpentry which are not seasonal in nature but is showed in the seasonal mapping. It has also been expressed that few of them also go to cities outside Northeast as temporary workers and get engaged in factories.

Table 3.4 Seasonal Pattern of Livelihood Activities

Categories	Time of Activity			
		Sowing	Harvesting	Plucking
Farming	Sali Rice	June- July	August- October	November-December
	Chinese Rice	January-March	March- May	June-July
	Potato	April-May	September-October	November-December
	Onion	April-May	September-October	November-December
	Rubber	(April-December)Collection of latex		
	Non-Farming	Weaving	Through Out the year	
Livestock Rearing				
Daily Wage Earning				
Shop-keeper				
Bamboo-craft				
Masonry				
Electrician				
Tailoring				

Source: PRA

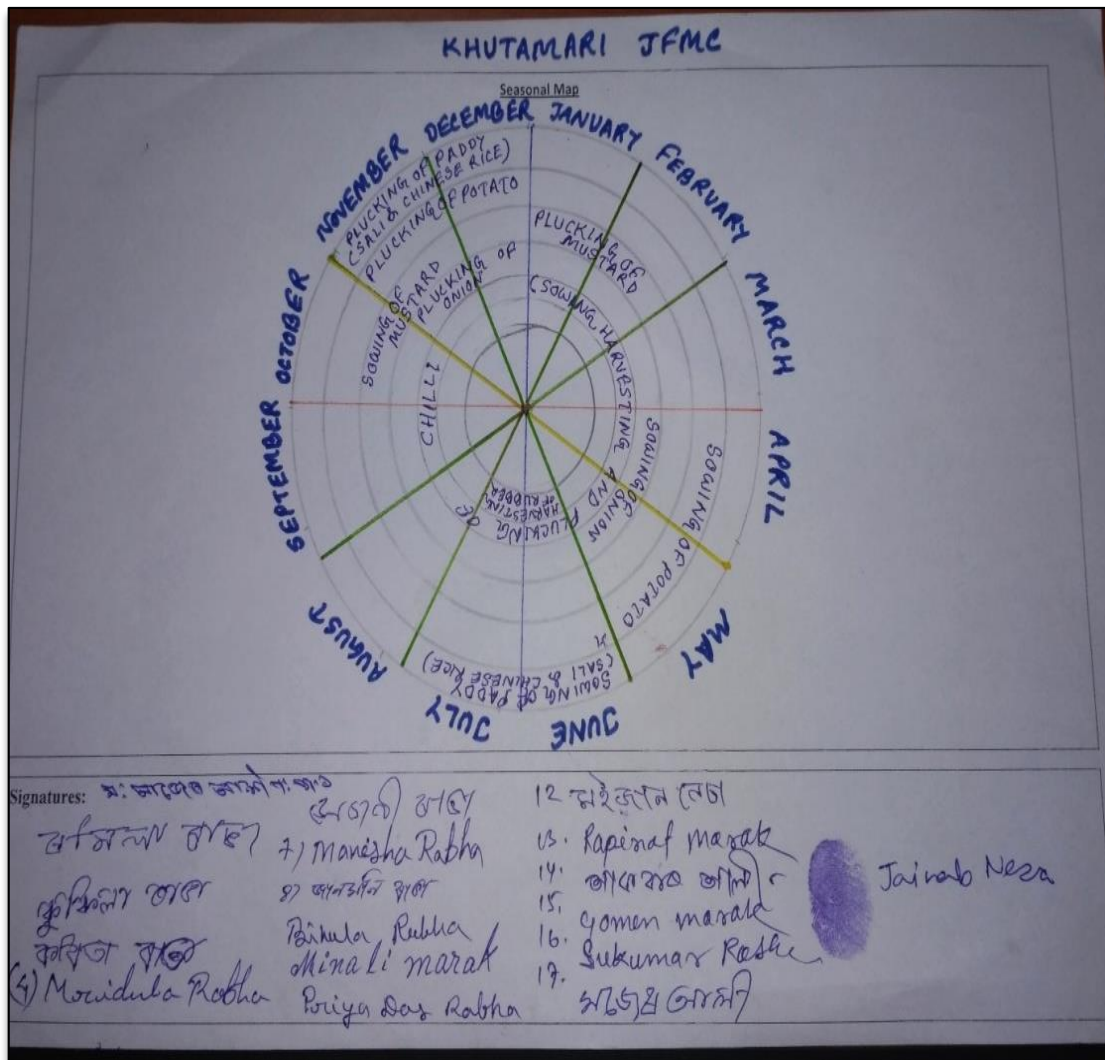
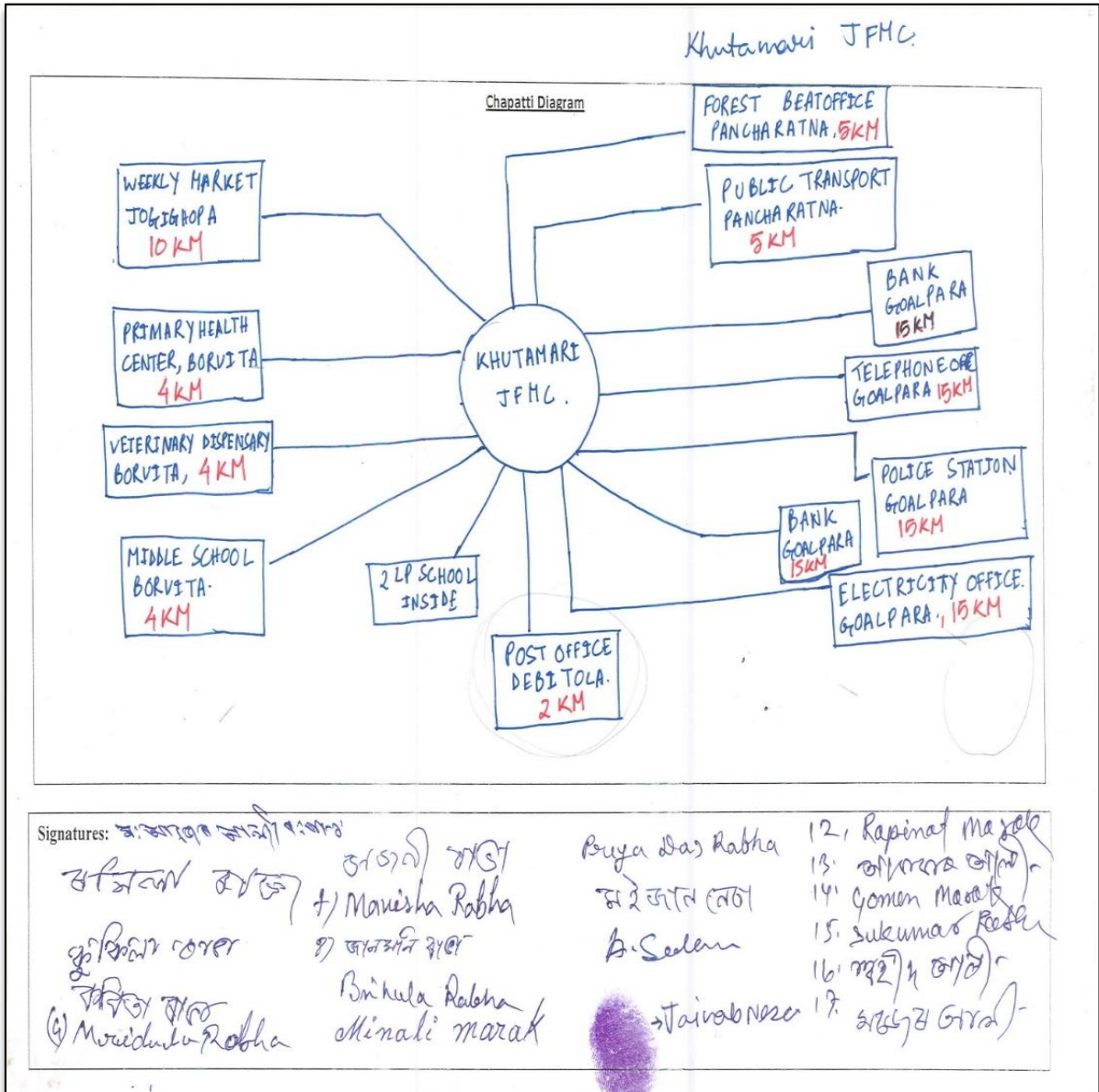


Figure: 3.2: Seasonal and Livelihood map

Learnings:

- The Rabha people have the traditional knowledge of weaving. But they are not aware of the demand of the weaving product and they don't have the marketing linkage. By proper linkages with the market, households can enhance their monthly income, which will in turn benefit them for covering up their standard of living.
- Although livestock rearing is a good source of livelihood for the people in the surveyed areas, but it is also saddled with many problems. Some of these which were discussed during the FGD sessions include lack of assistance and support from Govt. department, outbreak of diseases, absence of veterinary services, lack of technical guidance on animal husbandry, involvement of maintenance cost and untimely availability of fodder and high price.

3.4 Chapatti Diagram



Priority Ranking- EPA

KHUTAMRI, JPHC.
Gopalpara division.

Priority Ranking of Entry Point Activity

Entry Point Activities		Water Supply	Community Hall	Electricity	LPG connection	ME School	Road	Sanitation	Health Center	I	J	K	Marks	Rank
		A	B	C	D	E	F	G	H					
Water Supply	A	X	A	A	A	A	A	A					7	1st
Community Hall	B		X	C	B	B	B	B					5	3rd
Electricity	C			X	C	C	C	C					6	2nd
LPG connection	D				X	D	D	D	H				3	4th
ME School	E					X	E	E	E				3	5th
Road	F						X	G	F				1	8th
Sanitation	G							X	G				2	6th
Health center	H								X				1	7th
	I													
	J													
	K													

Signatures: 1. Manisha Rabha, 2. Manisha Rabha, 3. Manisha Rabha, 4. Manisha Rabha, 5. Manisha Rabha, 6. Manisha Rabha, 7. Manisha Rabha, 8. Manisha Rabha, 9. Manisha Rabha, 10. Manisha Rabha, 11. Manisha Rabha, 12. Rapinet marak, 13. Rapinet marak, 14. Rapinet marak, 15. Rapinet marak, 16. Rapinet marak

Priority Ranking- Potential Livelihoods

KAUTAHARI JFMC.

goalpara division

Priority Ranking of Livelihood Activities

Livelihood Activities		Cane & Bamboo	Weaving	Electrician	Livestock	Refrigerating	Tailoring	computer	driving	Agriculture	Marks	Rank
		A	B	C	D	E	F	G	H			
Cane & Bamboo	A	+	B	A	D	E	A	A	A		4	4th
Weaving	B		X	B	B	B	B	B	B		7	1st
Electrician	C			+	D	E	C	G	H		1	7th
Livestock	D				+	E	D	D	D		5	3rd
Tailoring	E					X	E	E	E		6	2nd
Computer	F						X	G	H		0	8th
Driving	G							X	G		3	5th
Agriculture	H								X		2	6th
	+											

Signatures:

<p>1) Manisha Rabha</p> <p>2) Manisha Rabha</p> <p>3) Manisha Rabha</p> <p>4) Manisha Rabha</p> <p>5) Manisha Rabha</p> <p>6) Manisha Rabha</p>	<p>7) Manisha Rabha</p> <p>8) Manisha Rabha</p> <p>9) Manisha Rabha</p> <p>10) Manisha Rabha</p> <p>11) Manisha Rabha</p> <p>12) Manisha Rabha</p>	<p>13) Manisha Rabha</p> <p>14) Manisha Rabha</p> <p>15) Manisha Rabha</p> <p>16) Manisha Rabha</p> <p>17) Manisha Rabha</p> <p>18) Manisha Rabha</p> <p>19) Manisha Rabha</p>
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Appendix 4

PHOTOGRAPHS



During the PRA exercise



After the completion of PRA

Appendix 5

LIST OF JFMC MEMBERS

List of Executive members in the Khutamari JFMC,
Goyalpara Division

1. Mazar Ali — President
2. Hazer Ali — Member Secretary
3. Samsul Haque
4. Abdul Kader
5. Binod Rabha
6. Hawa Khatun
7. Kukila Bala Rabha
8. Joytun Nessa
9. Omed Ali
10. Najsul Islam
11. Binu Rabha


Member, Secretary
Khutamari Anchalik Bansangrakshan
Committee (J.F.M.C.)

Source: Krishnai Range Office

Appendix 6 (Record I)

Table 1: Basic data of the JFMC:

Table 1: Basic data of the JFMC

Sl no	Name of the JFMC	Date of establishment	No. of members in executive committee	Name of the president	Name of the secretary	Money in VDF	Contribution per family /per person	Social fencing used Yes / No	Remarks on special attainment	Grading %of success by RFO
1	Khutamari	2015	20	Majer Ali	Ajer Ali			Yes		

Source: Field survey report

Table 2: Village wise population data:

Table -2.1: 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	Khutamari	86	559	328	231	704	7

Source: - Field survey report.

Table-2.2 Religion and Category wise distribution of households.

No of the households	Community	Caste	Religion
63	Minority	General	Muslim
23	Rabha and Garo	Schedule Tribe	Hinduism
Total = 86			

Source: Field survey

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

Table 3: Village wise farmers' 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
Khutamari	NIL	NIL	81	5	86

Source: Field survey

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

JFMC	Cows	Buffaloes	Goats	Cocks/Hens	Pigs	Total
Khutamari	248	Nil	203	159	45	655

Source: Field survey

Table 5: Village wise Infrastructure: edited**Table 5: Infrastructure in the Khutamari JFMC**

Infrastructure	Location	Distance from Village (in km)
Main Road	Kharboja	5 km
Electricity	Goalpara	15 km
Cooking Gas	Goalpara	15 km
Public Transport	Pancharatna	5 km
Primary Health Centre	Borvita (outside village)	4 km
Veterinary Dispensary	Borvita (outside village)	4 km
2 Lower Primary School 1 Middle School 1 High School 2 HS School	Within the village	0 Km
College	Goalpara	15 km
Post Office	Borvita	2 km
Bank	Goalpara	15 km
Telephone	Goalpara	15 km
Drinking Water	Piped supply not available	---
Anganwadi Centre	Khutamari	Within the village
Revenue Office	Balijana	12 km
Police Station	Goalpara	15 km
Forest Beat Office	Pancharatna	5 km
District Head Quarter	Goalpara	15 km

Source: field survey

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

	Rain Fed		Irrigation	
	Name of the crop	Area (in ha.)	Name of the crop	Area (in ha)
Kharif	Sali rice, Chinese rice (Boro dhan)	30.5	NA	
Rabi	leafy vegetables, Rubber, Mustard	Household use	NA	
Others	Vegetable, Fruits	20.87	NA	

Source: Field survey

Table 7: Crop production profile*Table 7: Crop production profile*

Type of crop	Total Production (approx) in quintals	No of household growing	Average production (quintal/ ha) approx	Area under crop (ha) approx
Paddy	553.8	71	18.15	30.5
Rubber	9	15	0.56	16.05
Vegetable	202	53	15.65	12.9

*1 ha= 7.68 Bigha

Source: Field survey

Table 8: Fodder Availability*Table 8: Fodder Availability*

Types	1-3 months	3-6 months	>6 months
Crop Residue		✓	
Trees Fodder		✓	
Grasses			✓
Green Fodder			✓
Grazing in Forest			✓

Source: Field survey

Table 9: Location of market from the village edited*Table 9: Location of the markets from the village*

For Purchase	Location	Distance from village if in other village (in km)
Grocery shop	Joghopa	10
	Goalpara	15
Weekly Market	Kabaiteri (Joghopa)	10
Major Market	Goalpara	15
Forest Corporation Sale Depo	NA	

TenduPatta PHAD	NA	
Fish Market	Kabaiteri (Jogighopa)	10
Medicinal Plant collection Center	NA	
Forest Corporation Medicinal plant Collection Center	NA	

Source: Field survey

Table 10: Water Resources Facility: edited

Table 10: Water Resource Facilities

Water Source	Number	Water Availability	Uses
Ring Well	2	Not adequate	Drinking
Streams	3	Not adequate	Irrigation Livestock rearing
River	1		Drinking Irrigation Livestock rearing

Source: Field survey

Table 11: Energy Consumption edited

Table-11: Energy Consumption

Type of Fuel	Number of household depending	Number of months dependent	Sources (local, village, forest, other sources)	Major/ Secondary
Fuel wood	76	12	Forest	Major
Kerosene stove	56	4	Market	Secondary
Gobar/Bio gas	NA			
LPG	7	12	Market	Secondary
Electric Heater	NA			

Source: Field survey

Additional tables:

Table i: Income Distribution

Table i: Income distribution of the households

Income Category (In Rs.) yearly	No. of Households
6000- 8000	20
8000- 100000	30
100000- 120000	25
120000- 140000	5
140000- 160000	4
> 160000	2

Source: Field survey

Table ii: Education Status

Table ii- Education Status of the households

Categories	% of total population
Illiterate	31%
Up to ME	29%
Class VIII to Class X	25%
Class X Pass	6%
12 pass	3%
Graduate	2%
Children	4%

Source: Field survey

RECORD: II

LIVELIHOOD OPPORTUNITY ANALYSIS

Table 12: Agriculture and Horticulture:

Table-12: Agriculture and Horticulture

Constraints	Reason	Opportunities	Programme
Low Production/ Collection	<ul style="list-style-type: none"> Negligible knowledge for organic farming No use of HYV seeds Lack of irrigation facilities Negligible use of modern machineries like tractor, power tiller etc. Not driven by the market demand 	<ul style="list-style-type: none"> Use of irrigation facilities, modern machineries which directly lead to increase production Application of HYV (high yielding variety) seeds 	<ul style="list-style-type: none"> Training on organic farming Provide training on the application of modern seeds, machineries etc. Provide credit facilities to buy modern machineries.
Storage and Processing	<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 	
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. More knowledge about the current market situation as well as the current value of their products. 	<ul style="list-style-type: none"> Buyer seller meet

Table 13: Livestock

Table-13: Livestock

Constraints	Reasons	Opportunities	Programme
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"> • Faster growth of cattle • Higher income from livestock rearing 	
Veterinary care facility	<ul style="list-style-type: none"> • Absence of persons in nearby 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 • encourage livestock rearing for earning purpose 	

Table 14: 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 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 	
Value addition	<ul style="list-style-type: none"> • No processing units • Non availability of required resources • No technical know-how 		

15. Specialized Skills

Table 15: Specialized Skills: Handloom

Constraints	Reasons	Opportunities	Programme
Raw material availability	<ul style="list-style-type: none"> • Non-Availability of Raw Materials within reachable location • No Storage 	<ul style="list-style-type: none"> • Common place for setting a raw material storage • Strengthen the commercialisation 	<ul style="list-style-type: none"> • Setting up raw material bank
Product quality	<ul style="list-style-type: none"> • Lack of research on product quality • Shortage of high quality materials • Depend on traditional machineries. No use of modern machinery and equipment • Lack of TQM techniques. • Lack of innovation in product development 	<ul style="list-style-type: none"> • Increase productivity • Optimal use of manpower • Use of modern machinery and equipment • Improvement of quality and designs by comparing their products with those of others' artisans in the fairs/seminars/expos 	<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 proper market for hand made products • No pricing policy • No direct contact with the institutional buyers 	<ul style="list-style-type: none"> • Better price for the products • Expansion of market 	<ul style="list-style-type: none"> • Establish link between buyers and sellers • Marketing provision for participation in national and international seminars/expos • Intervention in the form of engagement of market consultant • Introduction of product catalogues
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"> • 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 Up gradation & Training on New Product Development and Product Diversification

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 	<ul style="list-style-type: none"> Microfinance, Term Loans, Working Capital Arrangement
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 	

List of Participants

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
Goalpara Forest Division (T)	Khutamari Anchalik Ban Sangrakshon Committee.	Tailoring	1	Rejjak Ali (Rezzak)	Mojek Ali	Vill-Khutamat B.O. Bakrifalass P.S. Goalpara	VII	25	Male	G	902853-267	Rezzak Ali
		- ১০ -	2	Rejjak Ali	Mojek Ali	- ১০ -	VII	21	Male	G	87519939-62	Rejjak Ali
		- ১০ -	3	Nirina Rava (Nirina)	Gabin Rava	Vill-Khutamat P.O-Bakvita P.S. Goalpara	IX	18	Female	S/T	7896768-002	Nirina Rava
		- ১০ -	4	Janmoni Rava	Subash Rava Chandeswar Rava	- ১০ -	IX	20	Female	S/T	881193-2767	Janmoni Rava
		- ১০ -	5	Anandi Rava	Chandeswar Rava	- ১০ -	X	19	Female	S/T	9476820-113	Anandi Rava
		- ১০ -	6	Lila Rava	Bhokendra Rava	- ১০ -	X	19	Female	S/T	789669743-3	Lila Rava
		- ১০ -	7	Mogal Hussain Kader Ali	- ১০ -	- ১০ -	VII	18	Male	G	-	Mogal Hussain Kader Ali
		- ১০ -	8	Anjuma Khatun	Kasem Ali	- ১০ -	IX	18	Female	G	88129266-99	Anjuma Khatun
		- ১০ -	9	Mustak Ali	Rafikul Islam	- ১০ -	IV	18	Male	G	-	Mustak Ali
		- ১০ -	10	Anjere Khatun	Wb-Azhar Ali	- ১০ -	H.S.L.C	24	Female	G	86136907-88	Anjere Khatun


 সভাপতি
 ষ্টামারী অঞ্চলিক
 বন সংরক্ষণ সমিতি

শ্রী. সঞ্জয় কুমার
 Member Secretary
 Khutamari Anchalik Bansangrakshon
 Committee (J.F.M.C.)


 Signature of Divisional Forest Officer,
 Goalpara Division

SKILL DEVELOPMENT PROGRAMME PARTICIPANTS LIST

Geelpana Forest Division (T)	Khatemari Anchalik Bansangrakshan Committee.	Tailoring	Rubia Khatun, Asmat Ali	Vill. Khatemari PO. Barvite P.S. Geelpana	H.S.L. 18	Female	G	—	1937/1927		
		11									
		12	Abarun - Nesa	Mosibar - Rahman	- do -	X	18	- do -	G	887643-8635	21/07/2012
		13	Saidul Islam	Ainal - Hoque	- do -	H.S.L.	23	Male	G	985455-7552	Saidul Islam
		14	Mis Rehana Khatun	Ms. Hasan Ali	- do -	ii	20	Female	G	985950-4639	Rahman
		15	Samena Khatun	Ms. Masud Ali	- do -	g	22	- do -	G	987732-5129	Khatun
		16	Aklima Khatun	St. Sajed Ali	- do -	St. 19	19	- do -	G	985302-875	Aklima Khatun
		17	Shafiq Begum	St. Simran Hussain	- do -	ix	19	- do -	G	987729-4985	Shafiq Begum
		18	Mozid Khatun	Mojibur Rahman	- do -	xii	21	- do -	G	700206-2656	Mozid Khatun
		19	Hafiza Khatun	St. Azhar Ali	- do -	xii	21	- do -	G	—	Hafiza Khatun
20											

ব/তঃ সঃ সঃ
সভাপতি
খুটামারী অঞ্চলিক
বন সংরক্ষণ কমিটি

সঃ সঃ সঃ
Member Secretary
Khatemari Anchalik Bansangrakshan
Committee (J.F.M.C.)

Signature of Divisional Forest Officer.
Geelpana Division