

**NAMA MODATI JOINT FOREST MANAGEMENT COMMITTEE  
(JFMC)**

**RUPSHI FOREST RANGE**

**PARBATJHORA FOREST DIVISION**

**MICRO-PLAN**

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

**Prepared by  
Nama Modati Joint Forest Management Committee**

**Assisted by  
Assam Forest Department  
&**

**COMPELO  
(IIE, RGVN and CML)**

**July 2016**

*Approved*

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**Divisional Forest Officer  
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### List of Acronyms

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

**NAMA MODATIJOINT FOREST MANAGEMENT COMMITTEE**  
**Porbotjhora Forest Division, Rupshi Forest Range**

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

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## 1. Introduction

### About the Project

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'.

The above project is being mainly funded by the *Agence France de Développement* (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.

### Micro-Planning & Livelihood Development

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.

A consortium comprising of Indian Institute of Entrepreneurship (IIE) Guwahati, *Rashtriya Gramin Vikas Nidhi* (RGVN) and Centre for Microfinance and Livelihood (CML) has been formed to implement (*inter-alia*) 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.

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.

### Micro-Plan for the Nama Modati JFMC

This document gives the Micro-Plan for the NamaModatiJFMC, which is located in the Kokrajhar district of Assam. The JFMC falls under the jurisdiction of the Parbatjhora Forest Division of the Rupshi Forest Range. The profile of the community is given in the next section.

The present micro-plan has been prepared by members of the community, including both male and female members. This document has emerged as an outcome of a Participatory Rural Appraisal (PRA) process undertaken by the community and personnel of Indian Institute of Entrepreneurship (IIE) Guwahati in June 2016. The micro-plan has been compiled by IIE based on the project guidelines. The document has been discussed and finalized for adoption in July 2016.

## 2. Village Socio-Economic Profile

**Location** The Nama Modati Joint Forest Management Committee (JFMC) has been formed to cover the existing community dwelling in Nama Modati a village located on the fringe of the Rupshi range. The area covered by the above JFMC falls within the Modati VCDC, Bogribari Revenue Circle of Kokrajhar District of Assam.

**Appendix-1** gives the Village Map.

**Key Information** The key information of the JFMC is furnished below.

**Table-A: Key Information of the JFMC**

<b>Name of the JFMC</b>	Nama Modati
<b>Habitation</b>	Nama Modati
<b>Name of Revenue Village</b>	ModatiPaharbosti PT-IV
<b>Name of the Gram Panchayat / VCDC</b>	Modati
<b>Revenue Circle</b>	Bogribari
<b>District</b>	Kokrajhar
<b>Forest Division</b>	Parbatjhora
<b>Forest Range</b>	Rupshi
<b>Forest Beat</b>	Shantipur
<b>Year Formed</b>	2015
<b>Description of Boundary of JFMC</b>	North: Khopati South: Madatipharbasti part III, NH 31, Gauripur West: Basbari, Rupshi airport East: SuparighatBasbari road

**Source:** JFMC Records & Discussions during PRA Exercise in June, 2016

Additional details are given at **Table-1** of Record-I. (Given at Annexure)

**Brief Details of the Executive Committee & General Body** The brief details of Executive Committee & General Body of the JFMC are contained in the table, which is given below.

**Table-B: Brief Details of Executive Committee & general Body**

<b>Name of President</b>	Tajendra Rabha
<b>Name of Member Secretary</b>	Dipak Kumar Roy
<b>Name of Treasurer</b>	Kailash Ch. Rabha
<b>No. of Members in Executive Committee</b>	Male: 10 Female: 05
<b>No. of Members in the General Body</b>	52+52 (one male and one female member of each household)

**Source:** JFMC Records

**Households & Population Structure** The village has 52 households, of which about 55 per cent of the total households are of BPL (Below Poverty Line) category. The number of female headed households are 4.

The total population is 320 of which 188 are male and the rest are female members. All the households are belong to Schedule Tribe (ST) caste of Rabha community.

**Table-2** of Record-I may be referred for further details in the above regard.

From this, it is inferred that:

- (1) The average number of persons in a household is 6.
- (2) The sex ratio is 702 females per 1000 males in the village.

**Education & Skills Development**

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.

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:

- (a) Handloom
- (b) Horticulture
- (c)Cane and bamboo handicraft
- (d) Farming

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.

**Soil**

The soil type of the project area includes:

- Alluvial soil in low lying (clayey soils)

This types of soil can support different kinds of crops, as the soil is reported to non-fertile on the whole. But, the soil of the present village is described to be less fertile due to rubber cultivation.

**Water**

The area is drained by one stream namely: Akai

**Climate: Temperature & Rainfall**

The maximum **temperature** during the summer is 38° C. The minimum temperature during the winter is 8°-9° C.

The annual **rainfall** is about 3100 mm. About two-thirds of the rainfall usually occurs during the rainy season (April-August). The village has high levels of **humidity** (over 85%) in monsoons and post monsoons periods and low levels in the winter (Below 65%).

**Forest & Bio-diversity**

The local forests have been broadly classified as Wet Hill Sal Type under Northern Tropical Moist Deciduous Forest. The main tree species are Bohera, Sishoo, Ajar, Sonaru, Teak, Sal, Arjun etc. The forests can yield a range of NTFP like leafy vegetables, ferns, medicinal plants, bamboo, thatch, edible mushrooms etc.

Additional details in this regard are given at the ‘Forest Development Plan’.

**Land Use Pattern**

**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:

- Crop Land: 28.5 %
- Habitation: 6.25 %
- Cultivable waste land: 6.07 %

<b>Land Holdings</b>	<p>Firewood plantation: 35.74 %          Degraded forest: 16.73 %          Tree clad area: 6.25%</p> <p>The type of households as per land-holding is given at <b>Table-3</b> of Record-I. From the same, it is seen that:</p> <ul style="list-style-type: none"> <li>• 19 % of the households are landless;</li> <li>• 81 % of the households are marginal farmers (less than 2 Ha/15 Bigha);</li> <li>• None of the households have more than 2 Ha/15 Bigha plot of land.</li> </ul>
<b>Livestock</b>	<p>The total number of livestock in the village is around 170. The main types of livestock possessed by the households include:</p> <p>Cows: 72          Goats: 28          Pigs : 70</p> <p><b>Table-4</b> of Record-I may be referred to for the details in the above connection.</p>
<b>Village Infrastructure &amp; Communication Facilities</b>	<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 <b>Table-5</b> 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><b>Physical Infrastructure:</b> The habitation is deprived of basic physical infrastructure like paved roads, electricity, regular water supply, community hall</p> <p><b>Education &amp; Health Facilities:</b> There are minimal educational and health facilities. Public transport is not available, and the community members have to use bicycles to move around.</p> <p><b>Govt. Offices:</b> 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><b>Financial Inclusion:</b> Facilities for financial institutions like bank and post office are also located at a considerable distance from the habitation. Although the community members have accounts in faraway places, they rarely use it for financial transactions and for other facilities.</p>
<b>Agricultural Crops</b>	<p>The details of the agricultural crops grown in the village is available at <b>Table-6</b> of Record-I.</p> <p>The above shows that the following are the main crops grown in the village.          Kharif Crops: Summer Paddy (Ahu, Sali), Chinese rice (Buck Boro), Yum (kachu), Tapioca (ShimaluAloo), Jackfruit, Mango, Jam, Pumpkin          Rabi Crops: Mustard          Others: Rubber, Tomato, Carrot, White melon, Radish, Pineapple</p> <p>All crops are rain fed.</p>
<b>Crop Production Profile</b>	<p><b>Table-7</b> of Record-I may be referred to for the production and yield details of the crops grown in the village.</p>

The maximum numbers of households are involved in growing crops are 49.

The production and yield of these crops is given as follows:

- (a) Paddy : Production 627 Quintals Yield 19.93 Quintals/ha
- (b) Vegetables : Production 176 Quintals Yield 22.39 Quintals/ha

**Fodder Availability** The matter of fodder availability in the village is dealt with at **Table-8** of Record-I. The table 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: within the village
- (b) Weekly / Bi-weekly Market: : Gauripur at 7 km away
- (c) Major Market: : Gauripur at 7 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) Stream (Water Availability: ~~Perennial~~ / Seasonal)
- (c) Hand Pump (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: 52 Nos. Source: forest
- (b) Kerosene: Households Depending: 10 Nos. Source: open market
- (c) LPG: Households Depending: 6 Nos. Source: Gas Agency, Gauripur

**Socio-economic status** **Social set-up:** The village is inhabited by Rabha / ST 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:** The economic position is not satisfactory. The main livelihoods are Farming, Horticulture, Liquor making, Daily wage etc. Most households earn Rs. 15000 to Rs. 35000 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:

- Village Map
- Village Social Map (with the names and particulars of members in PRA)
- Village Resource Map

### 3. Livelihood Opportunity Analysis

Team from IIE Guwahati carried out PRA exercise in Nama Modati village as follows:

#### PRA Exercise

**Date:** 7<sup>th</sup> June, 2016 **Location:** Nama Modati temple yard  
**Numbers Present: 70**

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

#### Objective of PRA

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

#### Tools Used & Outcomes of the PRA

Different tools were used and outcomes obtained. These include:

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

**Appendix-3** furnishes detailed information of the above.

#### Ranking

Ranking exercise has been done for the following:

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

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

#### Ranking of EPA

Ranks	Village EPA as ranked	Details (Appendix-3 has additional particulars)	Probable source of Funding/Deptt.
1.	Road Connectivity	Road construction connecting village with APFBC plantation of 2 km distance	EPA from APFBC
2.	Community Hall	40ft X 35ft with platform and store house	EPA from APFBC
3.	Drinking Water	Linking PHE for regular and pure water supply	PHE Dept.
4.	LPG connection	LPG gas connection to the remaining households with no LPG gas	-
5.	Health centre	Primary health centre with regular availability of doctor and nurse /Asha worker	Health Dept.

✓ An arrangement of working capital worth Rs. 2 Lacs should be arranged from the EPA fund for promoting livelihood activities.

- ✓ A community work shed cum JFMC office to be set up within the JFMC boundaries.
- ✓ A low cost livestock rearing shed have to be arranged from the EPA fund for promoting a common community livelihood activity.

**Livelihood opportunities**

Livelihood Opportunities were identified as follows:

- (a)Agriculture & Horticulture
- (b)Livestock
- (c)NTFP
- (d)Skills Development
- (e)Credit Facility

Additional discussion about the above has been given below.

**Agriculture & Horticulture**

**Table-12** under Record-2 may be seen in this connection for opportunities in the areas of agriculture and horticulture.

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.
- (e) Not driven by the market demand
- (f) Lack of transporting facilities for carrying products
- (g)Less contact with the direct market; much dependency upon middle man

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.

The suggested programme are:

- (a)Training on organic farming
- (b) Provide credit facility in order to buy modern machineries
- (c) Encourage vegetable cultivation

**Livestock**

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

The main constraints are:

- (a) Shortage in supply
- (b) Unable to buy fodder from market due to poor financial condition
- (b)Trees fodder and crop residues are available only for 3-6 months. Green fodder is also not available for the whole year
- (c)No veterinary care clinic
- (d) Less contact with the direct market for milk

The opportunities are:

- (a) Faster growth of livestock
- (b) Higher income from livestock rearing
- (c) Disease control
- (d) Increases the life span
- (e) Encourage livestock rearing for earning purpose

The suggested programme is:

- (a) Piggery
- (b) Poultry
- (c) Fishery
- (d) Dairy

**NTFP**

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

The main constraints are:

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

The opportunities is:

- (a) Availability of fertile fallow land

The suggested programme are:

- (a) Plantation of Fruit Trees etc.
- (b) Medicinal and Aromatic Plantation

**Specialized Skills**

For skills development Handloom, Food Processing, Livestock Rearing, Handicraft etc., the opportunities are tabulated at **Table-15** under Record-2

1. Livestock Rearing
2. Handloom

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
- (d) lack of institutional training

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

The suggested programme are:

- (a) Training on Modern Tools and Equipment
- (b) Providing modern technology to the villagers

**Credit Facility**

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

The main constraints are

- (a) Financial exclusion/ Lack of financial institutions
- (b) Higher interest rate charged by the private money lender.

The opportunities are:

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

The suggested programme is:

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

**Strategic Interventions**

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

**1. Agriculture & Horticulture:**

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

**2. Livestock:** Piggery, Poultry, Fishery, Dairy

**3. NWFP :** Plantation of Fruit Trees, Medicinal and Aromatic Plant etc

**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.

**5. Credit facility:** Setting up modern financial institution in the nearby areas etc with the help of government support, subsidy,

**4. Livelihood Development Plan**

**Livelihood opportunity Analysis**

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

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

**Natural capital** The major natural capital of Nama Modati JFMC is the Reserve Forest and the major stream flowing through the village is Akai. 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 Nama Modati 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/annexure 6)  
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/annexure 6)  
There is only LP school present within the JFMC area. And one Middle school is very nearby just on the boundary of the JFMC. But higher secondary school and college are located at far distances. (Refer to table 5/annexure 6)  
There is one stream present where people availed water 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.

**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.

**Human Capital** The village has one youth club and no community hall inside the JFMC  
Over 90 per cent of total population of the JFMC are literate.  
(refer to additional table ii)

**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.

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

**Livelihood Context** Livelihood activities of the JFMC are identifies 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

(refer to annexure 3)

**Contribution of livelihood activity in the total income of the JFMC**

- (a) Farming of Paddy, Horticulture products
- (b) Local liquor selling
- (c) Daily wage earning
- (d) Livestock rearing (Piggery, Poultry, Dairy)
- (e) Service (both Government and Private jobs)

**Involvement of income group in a particular livelihood activity** 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.  
Primary livelihood : Farming, Local liquor selling  
Secondary livelihood: Daily wage labour, livestock rearing  
Some service sector employee are also there.

**Priority ranking of the potential livelihood activities** Priority ranking of Livelihoods & Skills Development

1. Livestock rearing
2. Handloom
3. Horticulture
4. Cane and bamboo
5. Fishing
6. Electrician

**SHG Activities** There are twelve numbers of SHGs working in the village. SHGs of the village can plan the following activities:

1. To create awareness.
2. To organise and form group
3. To involve the villagers in Livelihood Activities collectively.

**Source:** Table-33 of Record-4

**Summary of Action Plan** As attached in next page.

**Convergence** The planned initiatives may be converged with the following schemes of the Government of India:

- (a) National Rural Employment Guarantee Scheme - for rural employment
- (b) Rashtriya Krishi Vikas Yojana (RKVY) - for agricultural and allied development
- (c) Rashtriya Krishi Sinchay Yojana (RKSJ) - for irrigation, including watershed development
- (d) National Rural Livelihoods Mission
- (e) Skills Development schemes
- (f) Help from departments of education, Sericulture, Veterinary, Irrigation, Industrial and Fishery.
- (g) Other schemes for rural development and livelihoods as found appropriate.

The above convergence will yield synergies for the present plan, as well as help in sustaining the planned works in the post-project period.

## 5. Forest Development Plan of Nama Modati 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 Nama Modati 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 Nama Modati JFMC:

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

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

#### 1.1. Forests & Their Conditions

The details of the status of forest areas assigned to the JFMC have been furnished in the Forest Development Plan. After considering other areas planted (or to be planted), the conditions of the forests of the NamaModati JFMC have been summarized below.

**Table-1: Conditions of the Forests of Nama Modati 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]
<b>(A) Assigned Forest</b>				
Rupshi Range, Parbatjhora forest division	150 Ha	7 km	Good Area: 70 Ha Degraded Area: 50 Ha	2-3 m
<b>(B) Other Planted Area</b>			NA	
<b>TOTAL</b>	150		Good Area: 70Ha Degraded Area: 50 Ha	

#### 1.2. Forest Soil Type

**Table-2: Forest Soil Type in Nama Modati\_ JFMC**

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

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

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

### 1.3. Existing Composition of Flora

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

**Table-3: Existing Composition of Flora in the Nama Modati JFMC**

Parameter	Local Name(s)	Botanical Name(s)
Major Forest Species	Gomari	<i>Gmelina arborea</i>
	Arjun	<i>Terminalia arjuna</i>
	Acacia	<i>Racosperma</i>
	Sal	<i>Shorea robusta</i>
	Teak	<i>Tectona grandis</i>
	Diesel	<i>Copaiferalangs dorffii</i>
Associates	Bahera	<i>Terminalia bellirica</i>
	Sonaru	<i>Cassia fistula</i>
Medicinal Plants	GhoraNeem	<i>Azadirachta indica</i>
	Amla	<i>Phyllanthus emblica</i>

## 2. Other Inputs for the Forest Development Plan

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

### 2.1. Past Protection Measures of the JFMC

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

- (a) Number of households involved: 52
- (b) Number of people involved: 52 (one member of each household)
- (c) Summary of the measures:Patrolling duty, cultural operation in Sal forest annually
- (d) Any formal mechanism: NA

### 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 Nama Modati JFMC**

Name of Forest Produce	Average Household Requirement		Source
	Frequency of Requirement	Approx. Qty	
Firewood	Once in a week	60-75 kg	Forest
Timber for House	Once in a year	1 quintals	Forest, market

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

Name of Forest Produce	Community Requirement (Kg per annum) (*)	Remarks
Firewood	198688	Throughout the year
Timber or House	4000	Dec- Jan
Small Timber for Implements	NA	
Pole / Bamboo	NA	
Fodder from Forest	NA	
NTFP	NA	
Other	NA	

(\*) = Approx. Qty. of Average Household Requirement (from Table-4 (A) x no of household using

### 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 but the marketing of forest produce is very less in the village. The collection and marketing of forest produce by villagers of JFMC is given in the following table.

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

Name of Forest Produce	Collection for Marketing			Location of Collection
	Season / Months	No of Households Collecting	Average Qty. Collected (Kg)	
Firewood	Dec-Jan	45	200 kg/ per month	Forest
Timber for House	NA	NA	NA	NA
Small timber for Implements	NA	NA	NA	NA
Bamboo	NA	NA	NA	NA
Pole	NA	NA	NA	NA
Fodder from Forest	NA	NA	NA	NA
NTFP	NA	NA	NA	NA
Other _____	NA	NA	NA	NA

**Table-5 (B): Collection & Marketing of Forest Produce - Additional Information Nama Modati JFMC**

Name of Forest Produce	Surplus Marketed (Kg)	How marketed	Average Income per HH from sale of Forest Produce
Firewood	50	Middle men come to collect from the village	1000/per month
Timber for House	NA	NA	NA
Small timber for Implements	NA	NA	NA
Bamboo	NA	NA	NA
Pole	NA	NA	NA
Fodder from Forest	NA	NA	NA
NTFP	NA	NA	NA
Other _____	NA	NA	NA

**3. Forest Protection Issues**

**3.1. Protection Problems**

**Table-7: Protection Problems of the Nama Modati JFMC**

Type of Problem	Relevant (Yes / No)	Significant (Yes / No)
Grazing - Local Animals	Yes	Yes
Grazing - Animals from Other Area	Yes	Yes
Illicit Felling of Timber	Yes	Yes
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	Yes	Yes

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 Nama Modati 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

#### 4. Components of the Forest Development Plan

The following sub-sections discuss the main components of the Forest Development Plan of Nama Modati 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 Nama Modati JFMC from the issues discussed earlier at Sub-section 3.1

**Table-8: Protection Plan of the Nama Modati JFMC**

<b>Protection Work</b> [to be filled from Table 3.7 of Proforma-3 as applicable]	<b>Location in Forest Area</b>	<b>Quantification of the Measures</b> [Length, Area, Size etc.]	<b>Timing</b>	<b>Priority</b> [High / Medium / Low]
Social Fencing	Boundary	Along the Demarcation of the Plantation Area	Throughout the year	High
Fire Protection	Within the Forest	-	Throughout the year	High

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

- (a) Social 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 Nama Modati JFMC are given hereunder

**Table-9: Types of Operations Proposed in the Nama Modati JFMC**

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

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

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

Treatment	Area in Ha under Plantation Module	Priority for Block Plantation	Species	Spacing (metre x metre)
Firewood plantation	50	High	Teak, Gamari, Sissoo, Ghoraneem, Bohera, Belkhoretc	2m x 2m
NTFPs	100	Nil	Amla, Bohera, Hilikha etc	2m x 2m
TOTAL AREA (in Ha)	150	-	-	-

#### 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 North Hatibandha 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 <sup>st</sup> , 5 <sup>th</sup> , 9 <sup>th</sup> , 13 <sup>th</sup> , etc rows and planting/seed sowing in these felled rows.
2022-23	Felling of trees in the 2 <sup>nd</sup> , 6 <sup>th</sup> , 10 <sup>th</sup> , 14 <sup>th</sup> , etc rows and planting/seed sowing in these felled rows.
2023-24	Felling of trees in the 3 <sup>rd</sup> , 7 <sup>th</sup> , 11 <sup>th</sup> , 15 <sup>th</sup> , etc rows and planting/seed sowing in these felled rows
2024-25	Felling of trees in the 4 <sup>th</sup> , 8 <sup>th</sup> , 12 <sup>th</sup> , 16 <sup>th</sup> , 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): NTFP Plantation-Annual Targets of Forest Improvement in North Hatibandha 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 <sup>st</sup> 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 <sup>nd</sup> Year	Block Plantation 2m x 2m, 2500 plants/ha-during the season of <b>April-June</b> ; GPS marking of the area; cultural operation and weeding
3 <sup>rd</sup> Year	Cultural operation, weeding, vacancy filling
4 <sup>th</sup> Year	Same as above
5 <sup>th</sup> Year	Same as above
6 <sup>th</sup> Year	Same as above
7 <sup>th</sup> 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 North Hatibandha 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 North Hatibandha JFMC. This includes the Departmental Nursery involved in JFMC works.

**Table-11 (A): JFMC Nurseries of the North Hatibandha 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 <sup>th</sup> of area) every year

#### 4.6 Maintenance Plan - 10 Years

The maintenance plan for plantations raised in the North Hatibandha 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 North Hatibandha JFMC**

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

##### (B) NTFP / Medicinal Plantation

**Table-12 (B): Maintenance Plan of NTFP / Medicinal Plantation in the North Hatibandha JFMC**

Year(s)	Treatment
1 <sup>st</sup> to 7 <sup>th</sup> 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 Nama Modati 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 Nama Modati 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 Nama Modati 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	-

### 5.2. Sharing Mechanisms

The sharing mechanism for the benefits is indicated below for members of the Nama Modati JFMC

**Table-15: Sharing Mechanism for Nama Modati JFMC**

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

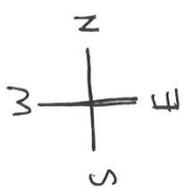
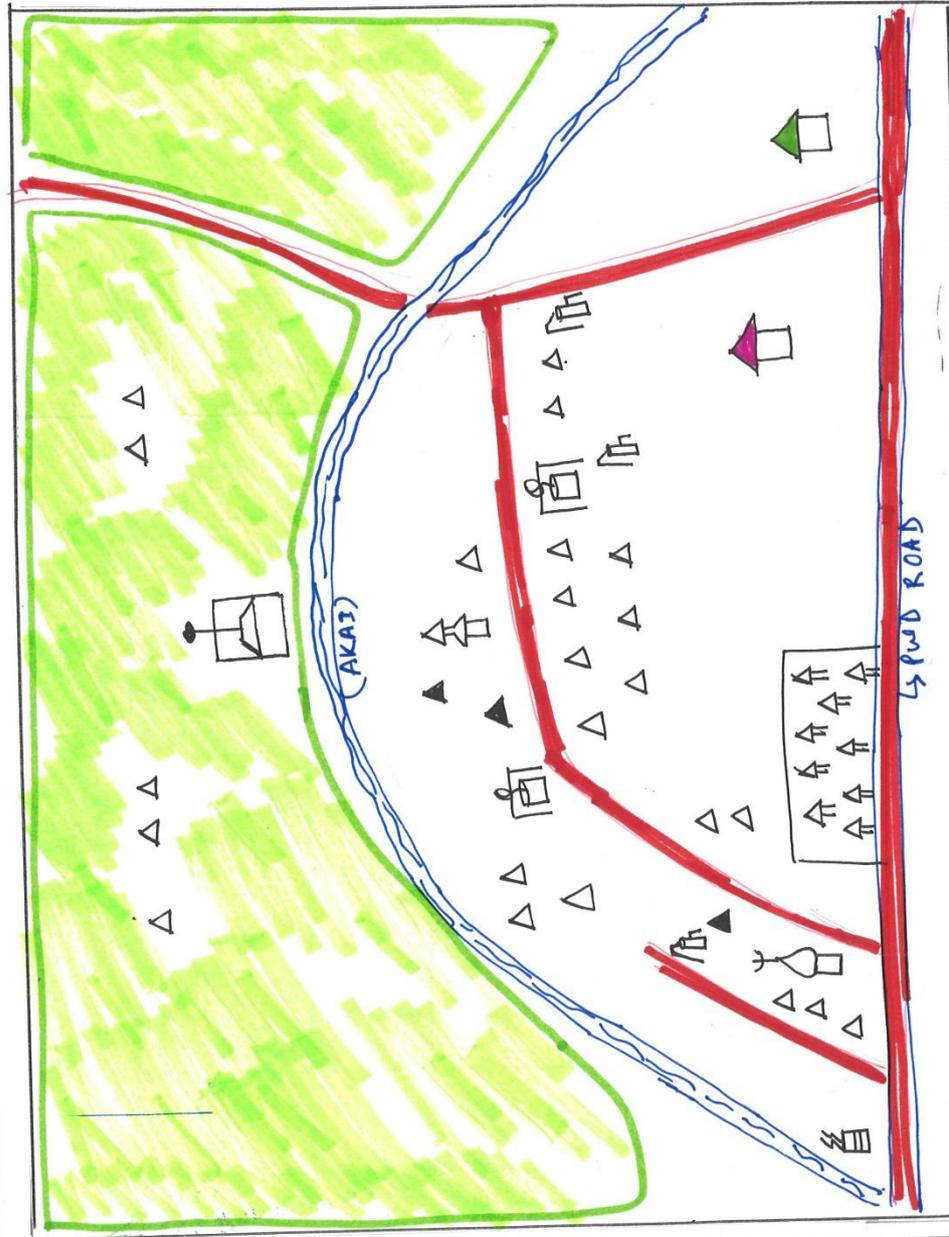
## List of Appendices

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



2. Social Map

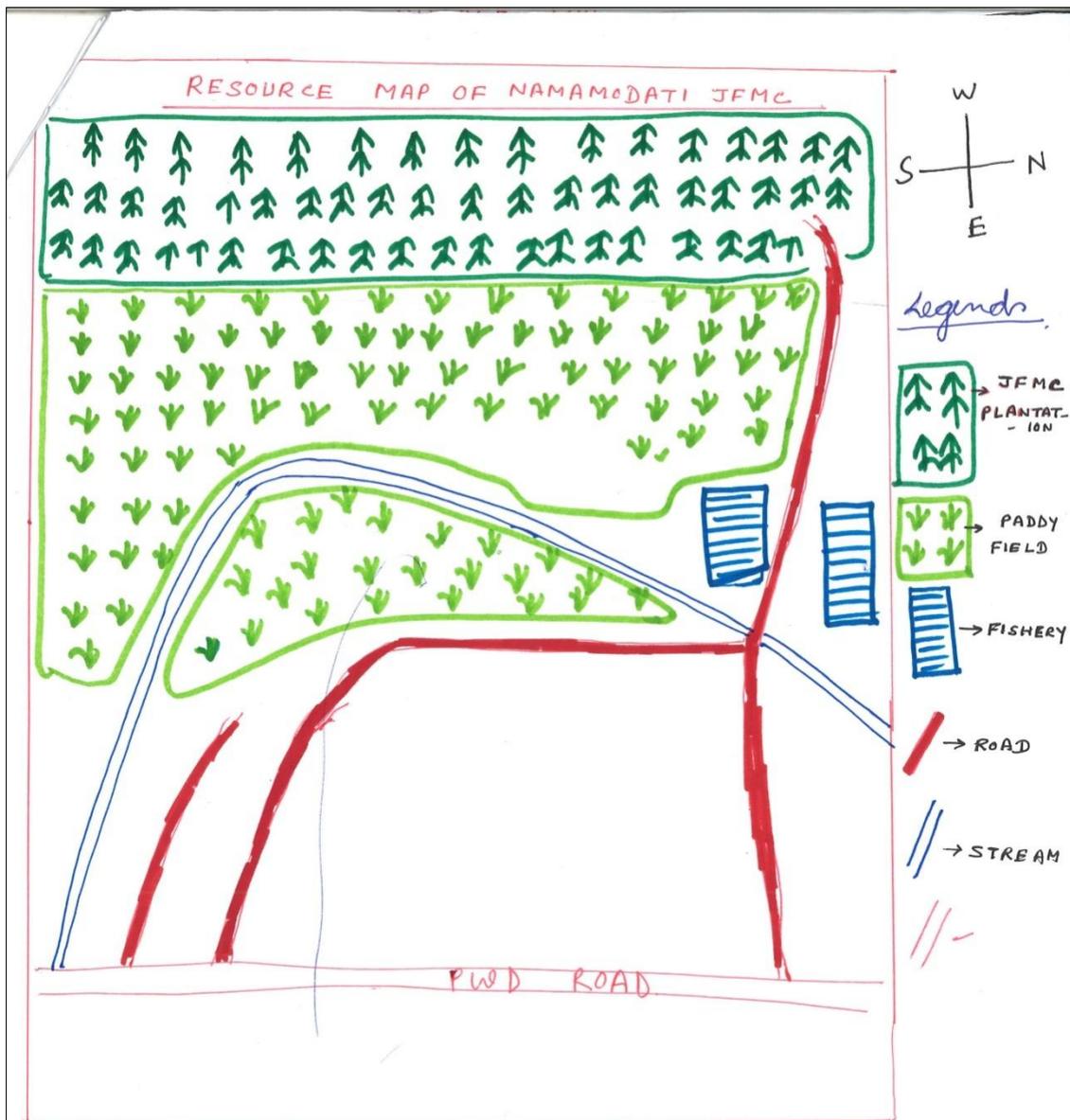
VILLAGE MAP OF NAMAMODATI JFM2



- △ KATCHA HOUSES
- ▲ SEMI PUCCA HOUSES
- ▣ YOUTH CLUB
- ▣ LP SCHOOL
- ▣ CREMATION GROUND
- ▣ RING WELL
- ▣ HAND PUMP
- ▣ TEMPLE
- ▣ TRANSFORMER
- ▣ SLUICE GATE
- ▬ ROAD
- ▬ STREAM
- ▣ MARKET

Sauryaj & unwar Rubha  
 Peshimote - Rubha.  
 Tulika Rubha jibika Rubha  
 ନିଆଁ ଥାଏ ବିମାଜୀ ବାଉଁ - ଫିଲମ ନିଆଁ ତାଣ୍ଡ  
 ସମସ୍ତେ ଚାପି ଶାନ୍ତିରାଜ ତାଣ୍ଡ  
 ଆଉଁ କର ରାଧା (J.F.M.C Me bar  
 ଶାନ୍ତି ବାଉଁ - ଶିଳ୍ପିଣୀ ଥାଉଁ

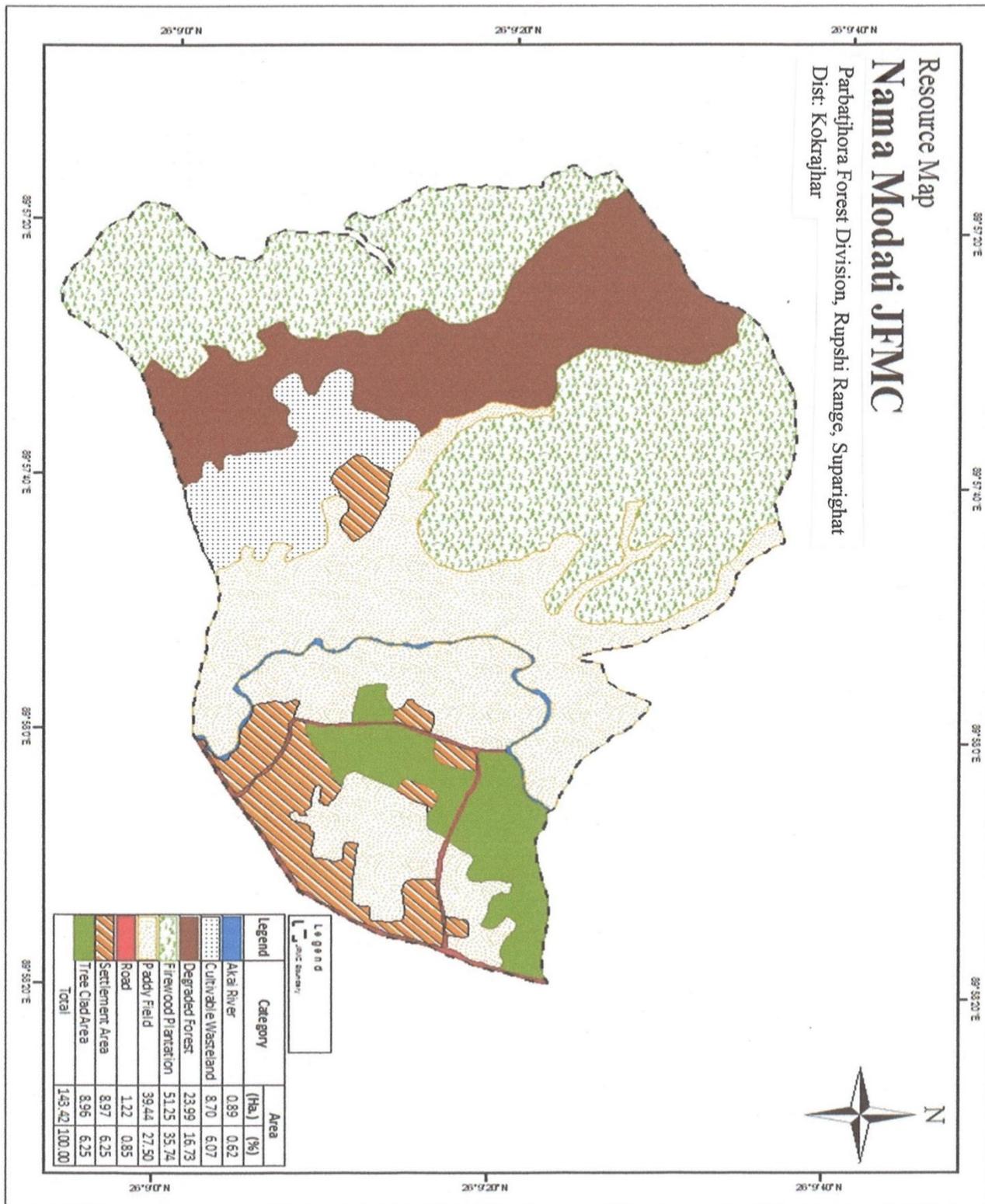
### 3. Resource Map



Sanjay Kumar Rabha  
 Dhamila Rabha Rishmati Rabha  
 Alok K. Rabha (J.F.M.C. Member)  
 Julika Rabha  
 Jibika Rabha  
 Chin Tai Rabha

সংগীত ০১৮  
 অলক কস রাভা (J.F.M.C. মেম্বাৰ)  
 জুলিকা রাভা  
 জিবিকা রাভা  
 চিন তাই রাভা

Land Use/Resource map of GIS



## Appendix 3

### PRA ACTIVITY

#### Location and Timing of Participatory Rural Appraisal:

<b>Name of the JFMC</b>	Nama Modati
<b>Numbers of participants</b>	50-60
<b>Time</b>	9.30 am, 7 <sup>th</sup> June 2016
<b>Venue</b>	Youth Club

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 visualise the socio-economic aspects of the Nama Modati village 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 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

<b>Social Information</b>	Total households	52
	Numbers of Kutcha Houses	46
	Numbers of semi-Pucca Houses	6
<b>Landmarks</b>	Bridges	1
	Stream	1
	Transformer	1
	Temple	2
	School(L.P)	1
	Anganbadi school	1
	Fisheries	2
	Sluice Gate	1
	Cremation Ground	1

Source: PRA

#### Findings of social map:

- The participants of social mapping have identified 52 households. Out of 52 households 6 of the houses are semi pucca.
- Other than construction based division of the households, important places like temple, and schools, under constructed sluice gate, two numbers of fisheries and location of transformers and one stream

are mapped. Also allocated plantation area of 50Hec of the Namamodati JFMC has been mapped accordingly.

- Waterfacility is not adequate in the village. There is one stream present where people availed water 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.
- Provision of Education facility up to school level is not satisfactory in the village. There is only LP school present within the JFMC area. And one Middle school is very nearby just on the boundary of the JFMC. But higher secondary school and college are located at far distances. Due to which, people are less interested to continue their education post matric as communication to the nearby towns are very costly. There is also 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.
- All of the people belong to the Rabha community and are of schedule tribe caste. The religion of all the villagers is Hindu.

### Learnings

- The main road accessible from the village is National Highway (NH 31) and is 7 km away from the village. And the roads connecting the village with the national highway are halfway kutchha and halfway pucca.
- 90 percent households have electricity connection 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 used to go to the forest for collecting the firewood which is still a concern for the forest department for degradation of the forest.
- As public transport is very pathetic, the villagers have to walk and use bicycles to avail the basic facilities. Very few individuals have two wheelers motor cycle.
- The nearest primary health centre is located in Gauripur which is 7 km away from the JFMC village. Due to poor availability of transportation system, it has been very difficult for the villagers to cope up with their bad health situation. Many a times, they compel to resort on the locally available medicinal plants.
- A few individuals have bank account as well as account in post office. But again, due to the long distance to bank and post office, they are not very keen to save or borrow money from the financial institutions. Apart from the fact that they are lack of knowledge about availability of credit from bank for their livelihood enhancement activities.

### 3.2 Wealth Ranking:

Wealth ranking, or well-being ranking, involves community members identifying and analyzing 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.

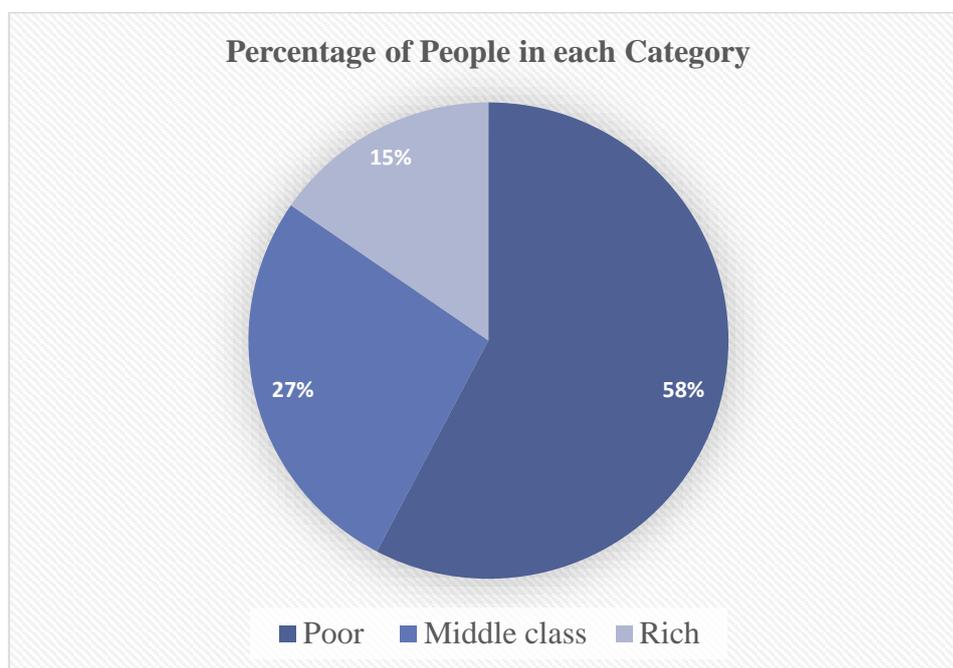
Wealth ranking was done with the help of the following information about the households

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

As such it is found that about 58 per cent people are poor, about 27 per cent are belonging to middle class and about 15 per cent are categorized to be rich. Poor people are mainly irregular wage earners and mostly mortgage land for the paddy cultivation. Rich people cultivate paddy, vegetables for their own consumption as

well as to sell in the market with good amount of agricultural land. Some of the people under rich category are the government employee. They also have televisions sets, two wheelers, radio etc. People in the middle class category are wage earners, paddy cultivators, and business owner.

Figure 3.1: Wealth Ranking



Source: PRA

### 3.3 Time Line Review:

Table 3.3: Timeline review

Year	Event	Type
1947	The village temple was constructed	Construction
1989	Lower Primary school was established	Construction
1998	JFMC orchard	Construction
2000	First fishery	Construction
2001	Electricity supply started	Construction
2002	First scooter was purchased	Socio-economic
2003	For the first time, television set was purchased by one villager	Socio-economic

Source: PRA

It has been observed from above table that the village has got electricity connection just in 2001 which reflects the poor development venture in the particular village. Also, first television set was purchased by one of the villagers in 2003 to watch the Cricket World Cup. So it has been very recent for them to view pictures in television sets. However, now almost 60 percent households have own television sets.

### 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.

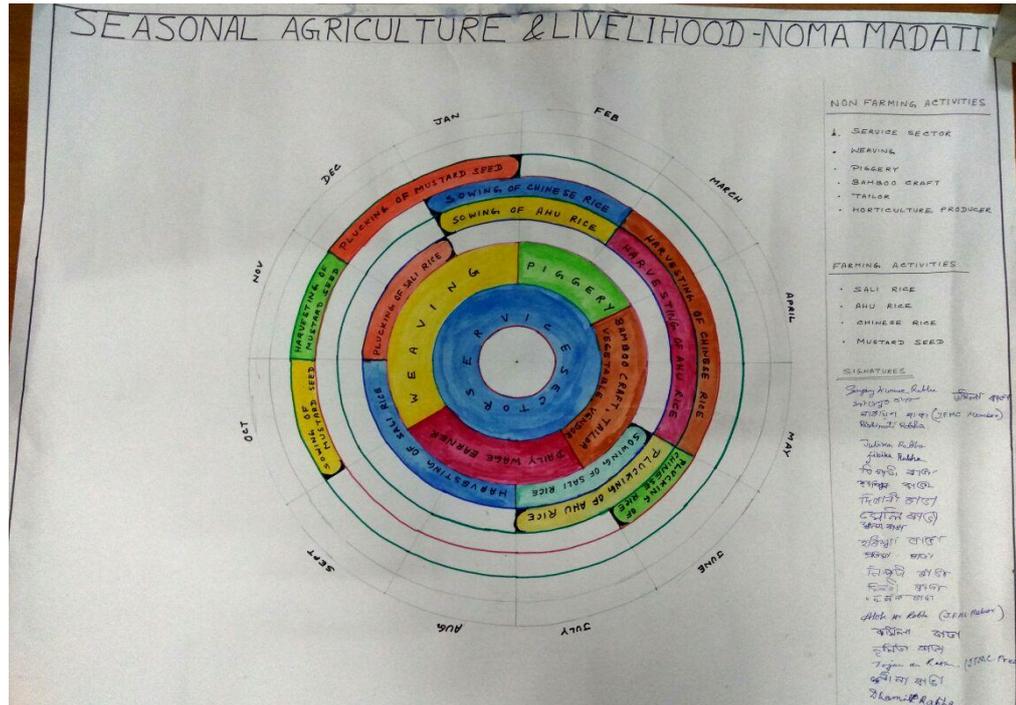
In the present JFMC, Seasonal mapping was done in such a process to cover mainly seasonal variation of crops, where we have considered agricultural crops and the timing of three activities viz. sowing, cropping and harvesting details throughout the year. From the seasonal mapping, it has been noticed that the main crops grown in the village are rice, yam, tapioca, Laos etc. The FGD conducted revealed that other major livelihood options available in the Nama Modati JFMC are Livestock rearing (Piggery), shop-keeping, weaving, daily wage laborers, 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	Mustard seeds	October	November	December- January
	SaliRice	June- July	August- October	November-December
	Ahu	January-March	March- May	June-July
	Chinese/ Boro Rice	January-February	March- May	June
	Yam	February-March	April-August	September-October
	Tapioca	Throughout the year		
	Weaving			
Livestock Rearing				
Daily Wage Earning				
Shop-keeper				
Bamboo- Craft				
Tailoring				
Insurance Agent				
Service	Govt Job/Retired/ Company	Throughout the year		

Source: PRA

Figure 3.2: Seasonal and livelihood Map



Source: PRA

### Learnings:

- All horticulture outputs of the village includes mango, jack-fruits, etc are abundant in number, though these are not marketed by the households as there is proper market for selling these outputs. Additional benefits may be earned by the households if these outputs can be value added in form of processing and preservation. By selling those 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.
- The numbers of available trained or skilled resources have been found to be very less in the JFMC. A very few of the JFMC dwellers are skilled in weaving and take to part-time weaving for their own consumption.

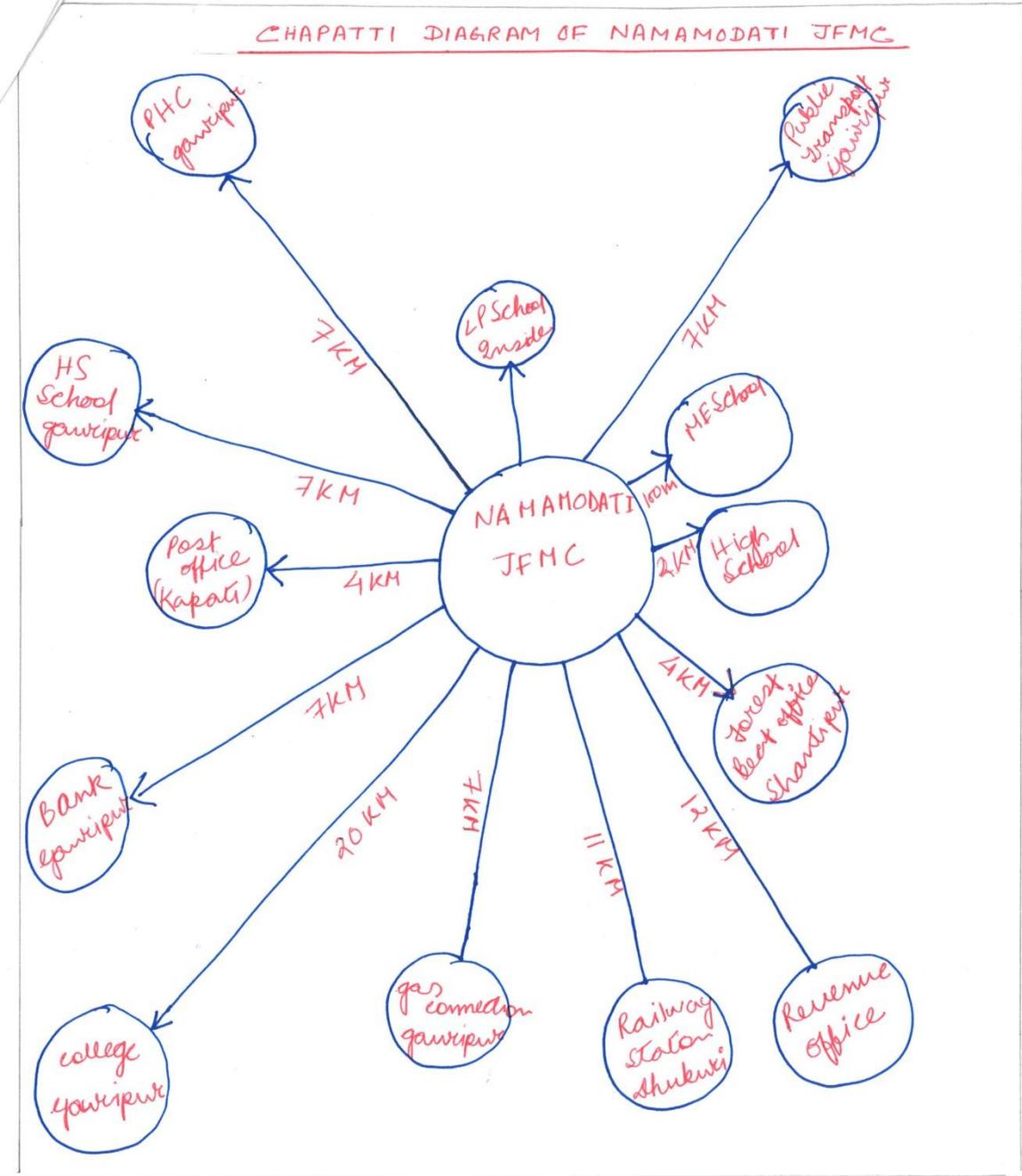
Venn diagram

VENN DIAGRAM OF NAMAMODATI JFMC



Sanjay & Umar Rabha    ন/সাঁহুনা বাই    Rishimati Rabha.  
 সন্ধ্যা বাবু    সন্ধ্যা    Alek ur Rabha (J.F.M.C Member)  
 jibika Rabha    বাউ    Julika Rabha    নীল বাউ  
 স্নিহা বাবু    স্নিহা    বাউদিানী বাউ  
 Shamila Rabha

Chapatti Diagram



Sanjay Kumar Ratha      ଜନସମୂହ ତରଫ  
 Pishimati Robha      ଶତ୍ରୁକ ଚନ୍ଦ୍ର ରାଉତ (J.F.M.C Member)  
 ଜିବିକା ରାଉତ      ଜୁଲିକା ରାଉତ      ବିଜୟ ବାରି      ମାତାଙ୍କ ସାହାଯ୍ୟ  
 ସିନିତା ବସନ୍ତ      ସିନିତା ବାରି      ଦିଲୀପୀ ଚାନ୍ଦା

**NAMA MODATI.**

Priority Matrix Ranking of JFMC for Potential Livelihood Activities

Potential Livelihood Activities	come of members (A)	livelihood scoring (B)	stand loan (C)	fishing (D)	electrician (E)	dentistry (F)	tailoring (G)	horticulture (H)	maasonry (I)	Marks	Position
come of members (A)	X	B	C	A	A	A	A	H	A	8	1
livelihood scoring (B)	X	X	B	B	B	B	B	B	B	8	1
stand loan (C)	X	X	X	C	C	C	C	C	C	7	2
fishing (D)	X	X	X	X	D	D	D	H	D	7	3
electrician (E)	X	X	X	X	X	E	E	H	E	7	4
tailoring (F)	X	X	X	X	X	X	F	H	I	7	5
driving (G)	X	X	X	X	X	X	X	H	G	6	6
horticulture (H)	X	X	X	X	X	X	X	X	H	6	7
Masonry (I)	X	X	X	X	X	X	X	X	X	5	8

A =  
A to 2nd best.

Signature of villagers  
 Tuliza Rabha  
 Ahamida Rabha

Sanjay Kumar Rabha  
 Rish.mol. Rabha

সংগঠন কমিটি  
 শোক কো. রাভা (J.F. MC Members)  
 বর্গে নতুন জীবিকা রাভা

স্বাক্ষর  
 সোনিয়া বাণ্ডে  
 বিমলি বাণ্ডে  
 সিদিকা বাণ্ডে

# NAMA MODATI

JFMC for Entry Point Activities

Priority Matrix Ranking of

Entry Point Activities	Road (A)	Community Health (B)	Health Center (C)	High School (D)	Drinking water (E)	LPB connection (F)	Sanitation (G)	Electricity (H)	Members	Priority
Road (A)	X	A	A	A	A	A	A	A	7	1
Community Health (B)	X	X	B	B	B	B	B	B	6	2
Health Center (C)	X	X	X	C	E	F	G	C	2	5th
High School (D)	X	X	X	X	E	F	D	H	1	7th
Drinking water (E)	X	X	X	X	X	E	F	E	5	3
LPB connection (F)	X	X	X	X	X	X	F	F	4	4
Sanitation (G)	X	X	X	X	X	X	X	G	2	5
Electricity (H)	X	X	X	X	X	X	X	X	1	7

Reshimol. Rabha, Sanjay Kumar Rabha, মনোজ কুমার বসু  
 শিবগুণ্ডী কল্যাণী, ষণ্মি ষাও তুলিমা কল্যাণী, জিবিএম মেম্বার  
 শিবগুণ্ডী কল্যাণী, ষণ্মি ষাও তুলিমা কল্যাণী, জিবিএম মেম্বার  
 শিবগুণ্ডী কল্যাণী, ষণ্মি ষাও তুলিমা কল্যাণী, জিবিএম মেম্বার

Annexure 4

Photographs





Annexure 5

LIST OF JFMC MEMBERS

Name	Father's / Husband's name	Age	Male / Female	Education	SC/ST / BC/OBC
Alok K. Rabha		27	M.		ST
Himendra Rabha		51	M		ST
Narayan Rabha		55	M.		ST
Sonjay K. Rabha		28	M.		ST
Kalank Ch. Rabha		49	M		ST
Arpan Rabha		34	M		ST
Pratima Rabha		36	F		ST
Dipali Rabha		41	F		ST
1) Rishmanti Rabha		42	F		ST
2) Gupendrea Rabha		32	M		- ST
3) Mocesum Rabha		40	M		- ST
2) Jutika Rabha		35	M		

\*\*\* Nama Modati

## Annexure 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
	Nama Modati	2015	21	Tojendra Rabha	Dipak Kumar Roy			Yes		

Source: Field survey

### Table 2: Village wise population data:

Table 2: Village Population data

Sl. No.	Name of JFMC	Households (No.)	Population (No.)			Sex ratio	Avg. HH size
			Total	Male	Female		
1	NamaModati	52	320	188	136	702	6

Source: - Field survey

**Table-2.1**

No of the households	Community	Caste	Religion
52	Rabha	Schedule Tribe	Hindu

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
Nama Modati	NIL	NIL	42	10	52

Source: - Field survey

### Table 4: Cattle Population:

Table 4: Cattle Population

Village wise numbers of cattle or type of animal							
Cows	Buffaloes	Goats	Sheep	Bulls/Oxen	Camels	Pigs	Total
62	Nil	28	Nil	Nil	Nil	72	162

Source: - Field survey

### Table 5: Village wise Infrastructure:

Table 5: Infrastructure in the Nama Modati JFMC

Infrastructure	Location	Distance from Village (in km)
Main Road	Gauripur (outside village)	7 km
Electricity	Gauripur (outside village)	7 km
Cooking Gas	Gauripur (outside village)	7 km
Public Transport	Gauripur (outside village)	7 km
Primary Health Centre	Gauripur (outside village)	7km
School	Lower Primary School	Within the village
	Middle and High School (outside village)	100 m
	High School	2 km
HS School	Gauripur (outside village)	5 km
College	Gauripur (outside village)	20 km
Post Office	Kapati (outside village)	4 km
Bank	Gauripur (outside village)	7 km
Drinking Water	Piped supply not available	---
Anganwadi Centre	Within the village	No building
VCDC	Modati	
Railway Station	Gauripu (outside village)	7 km
Revenue Office	Bogribari(outside village)	12 km
Forest Beat Office	Shantipur	4 km
District Head Quarter	Kokrajahr (outside village)	85 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 hac)
<b>Kharif</b>	Sali rice, chines rice, Ahu rice	31	NA	
<b>Rabi</b>	Mustard	Negligible area	NA	
<b>Others</b>	Vegetable, Fruits	9	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
<b>Paddy</b>	627	45	19.93	31.46
<b>Vegetable</b>	176	40	22.39	7.86

Source: - Field survey \*1 ha= 1.68 Bigha

### Table 8: Fodder Availability

Table 8: Fodder Availability

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

Source: - Field survey

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

Table 9: Location of the markets from the village

For Purchase	Location	Distance from village if in other village (in km)
Grocery shop	Within the village	–
Weekly Market	Gauripur	7
Major Market	Gauripur	7
Forest Corporation Sale Depo	NA	
TenduPatta PHAD	NA	
Fish Market	Gauripur	7
Medicinal Plant collection Center	NA	
Forest Corporation Medicinal plant Collection Center	NA	

**Table 10: Water Resources Facility:**

Table 10: Water Resource Facilities

Water Source	Number	Water Availability	Uses
Water Harvesting Structure	NA		
Tube Well	3	Not adequate	Drinking
Ring Well	2	Not adequate	Drinking
Stream	1	Not adequate Adequate only during rainy seasons	Irrigation Livestock rearing
River	NA		

Source: - Field survey

**Table 11: Energy Consumption**

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	52	12	Forest	Major
Kerosene stove	10	7	Market	Secondary
Gobar/Bio gas	NA			
LPG	6	3	Market, Authorised Agency	Secondary
Electric Heater	NA			

Source: - Field survey

## Additional tables:

### Table i: Income Distribution

Table 12: Income distribution of the households

Categories		No. of households in each category
BPL	below 25000	29
APL	25000-50000	10
	above 50000	13

Source: - Field survey

### Table ii: Education Status:

Table 13: Education status

Categories	% of total population
<b>Illiterate</b>	10.48
<b>Upto ME</b>	40
<b>Upto X</b>	20.95
<b>X pass</b>	11.43
<b>12 pass</b>	4.76
<b>Children</b>	13

Source: - Field survey

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"> <li>• Negligible knowledge for organic farming</li> <li>• No use of HYV seeds</li> <li>• Lack of irrigation facilities</li> <li>• Negligible use of modern machineries like tractor, power tiller etc.</li> <li>• Not driven by the market demand</li> </ul>	<ul style="list-style-type: none"> <li>• Use of irrigation facilities, modern machineries which directly lead to increase production</li> <li>• Application of HYV (high yielding variety) seeds</li> </ul>	<ul style="list-style-type: none"> <li>• Training on organic farming</li> <li>• Provide training on the application of modern seeds, machineries etc.</li> <li>• Provide credit facilities to buy modern machineries.</li> </ul>
Storage and Processing	<ul style="list-style-type: none"> <li>• Lack of common storing place</li> <li>• Lack of cold storage facility due to non-availability of electricity</li> </ul>	<ul style="list-style-type: none"> <li>• Helpful in preserving unsold products for a longer period of time</li> </ul>	
Marketing	<ul style="list-style-type: none"> <li>• Lack of transporting facilities for carrying products</li> <li>• Less contact with the direct market; much dependency upon middle man</li> <li>• No knowledge on marketing know-how, dependence on traditional system of selling.</li> </ul>	<ul style="list-style-type: none"> <li>• Smooth transportation facility will help the farmers to carry their products to the nearby markets.</li> <li>• Generate highest market price by removing middle men.</li> <li>• More knowledge about the current market situation as well as the current value of their products.</li> </ul>	<ul style="list-style-type: none"> <li>• Buyer seller meet</li> </ul>

**Table 13: Livestock**

Table-13: Livestock

Constraints	Reasons	Opportunities	Programme
Less grazing land	Not Applicable		
Availability of fodder	<ul style="list-style-type: none"> <li>• Unable to buy fodder from market due to poor financial condition</li> <li>• Trees fodder n crop residue are available only for 3-6 months. Green fodder is also not available for the whole year.</li> </ul>	<ul style="list-style-type: none"> <li>• Faster growth of cattle</li> <li>• Higher income from livestock rearing</li> </ul>	
Veterinary care facility	<ul style="list-style-type: none"> <li>• No veterinary care clinic</li> <li>• Lack of knowledge about the proper rearing of live stock</li> </ul>	<ul style="list-style-type: none"> <li>• Disease control</li> <li>• Increases the life span of cattle</li> <li>• encourage livestock rearing for earning purpose</li> </ul>	
Production of milk	<ul style="list-style-type: none"> <li>• Less availability of fodder</li> <li>• No scientific knowledge about the cattle rearing for increasing milk production</li> </ul>	<ul style="list-style-type: none"> <li>• High demand for milk products</li> <li>• Availability of supplements to cattle like “Milk Booster, Milk Plus” etc. can increase the production of milk in the area.</li> </ul>	
Milk market	<ul style="list-style-type: none"> <li>• Less contact with the direct market for milk</li> <li>• Unaware of the market demand of different milk made products.</li> </ul>	<ul style="list-style-type: none"> <li>• A huge demanded market for milk is available as Kokrajhar district head quarter.</li> </ul>	

**Table 14: NWFP****Table 14 NWFP**

Constraints	Reasons	Opportunities	Programme
<b>Less collection</b>	<ul style="list-style-type: none"> <li>Less availability of NWFP</li> </ul>	<ul style="list-style-type: none"> <li>Availability of fertile fallow land</li> </ul>	<ul style="list-style-type: none"> <li>Plantation of Food plans, Medicinal Plant etc.</li> </ul>
<b>Unsustainable extraction</b>	<ul style="list-style-type: none"> <li>NA</li> </ul>	<ul style="list-style-type: none"> <li>Availability of fertile fallow land</li> </ul>	
<b>Low rates</b>	<ul style="list-style-type: none"> <li>NA</li> </ul>		
<b>Value addition</b>	<ul style="list-style-type: none"> <li>No processing units</li> <li>Non availability of required resources</li> <li>No technical know-how</li> </ul>		

**Table 15: Specialized Skills****Table 15: Specialized Skills: Livestock Rearing**

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

			consultant Introduction of product catalogues
Credit facilities	<ul style="list-style-type: none"> <li>No linkage with the banks or post office saving banks</li> <li>Unaware of the development schemes of banks and government</li> </ul>		<ul style="list-style-type: none"> <li>Microfinance, Term Loans, Working Capital Arrangement</li> </ul>
Product Diversification	<ul style="list-style-type: none"> <li>No Product Diversification or New Product Development.</li> <li>Lack of concept for product diversification.</li> </ul>	<ul style="list-style-type: none"> <li>Developing Demand Based Products, as per the needs of the modern day market.</li> </ul>	<ul style="list-style-type: none"> <li>Skill Up gradation &amp; Training on New Product Development and Product Diversification</li> </ul>

## 16. Credit Facility

Table 16 Credit facility

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