



HATIKHULI JOINT FOREST MANAGEMENT COMMITTEE (JFMC)

LUMDING RANGE, NAGAON SOUTH DIVISION

NORTHERN ASSAM CIRCLE

MICRO-PLAN

(2016-17 to 2025-26)

Prepared by Hatikhuli Joint Forest Management Committee

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

July 2016

Approved
onm
Divisional Forest Officer
Nagaon South Division
Hojai.

List of Acronyms

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

HATIKHULI JOINT FOREST MANAGEMENT COMMITTEE
Lumding Forest Range, Nagaon South Forest Division

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

Table of Contents

	Section No	Heading	Page No
	1	Introduction	1
	2	Village Socio-Economic Profile	2
	3	Livelihood Opportunity Analysis	5
	4	Livelihood Development Plan	10
	5	Forest Development Plan	11
	6	Annexure-1- List of Beneficiaries Identified for Livelihood Generation activities: (1)Livestock Rearing (Mixed Livestock)	57

1. Introduction

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

2. Village Socio-Economic Profile

Location	<p>The Hatikhuli Joint Forest Management Committee (JFMC) has been formed to cover the existing community dwelling in Hatikhuli village located on the fringe of the Lumding Social Forest. The area covered by the above JFMC falls within the Lanka Revenue Circle of Hojai District of Assam.</p> <p>Appendix-1 Gives the Village Map.</p>																						
Key Information	<p>The key information of the JFMC is furnished below.</p> <p>Table-A: Key Information of the JFMC</p> <table> <tr> <td>Name of the JFMC</td><td>Hatikhuli</td></tr> <tr> <td>Habitation</td><td>Hatikhuli</td></tr> <tr> <td>Name of Revenue Village</td><td>Nil</td></tr> <tr> <td>Name of the Gram Panchayat / VCDC</td><td>Paschim Lumding</td></tr> <tr> <td>Revenue Circle</td><td>Lanka</td></tr> <tr> <td>District</td><td>Hojai</td></tr> <tr> <td>Forest Division</td><td>Nagaon South</td></tr> <tr> <td>Forest Range</td><td>Lumding</td></tr> <tr> <td>Forest Beat</td><td>Borlongphar</td></tr> <tr> <td>Year Formed</td><td>2008-2009</td></tr> <tr> <td>Description of Boundary of JFMC</td><td>As below North: Reserve Forest South: Haflong Road West: APFBC Plantation East: Sadhukhuti JFMC Plantation</td></tr> </table> <p>Source: JFMC Records & Discussions during PRA Exercise in June 2016</p> <p>Additional details are given at Table-1 of Record-I (Given at Annexure)</p>	Name of the JFMC	Hatikhuli	Habitation	Hatikhuli	Name of Revenue Village	Nil	Name of the Gram Panchayat / VCDC	Paschim Lumding	Revenue Circle	Lanka	District	Hojai	Forest Division	Nagaon South	Forest Range	Lumding	Forest Beat	Borlongphar	Year Formed	2008-2009	Description of Boundary of JFMC	As below North: Reserve Forest South: Haflong Road West: APFBC Plantation East: Sadhukhuti JFMC Plantation
Name of the JFMC	Hatikhuli																						
Habitation	Hatikhuli																						
Name of Revenue Village	Nil																						
Name of the Gram Panchayat / VCDC	Paschim Lumding																						
Revenue Circle	Lanka																						
District	Hojai																						
Forest Division	Nagaon South																						
Forest Range	Lumding																						
Forest Beat	Borlongphar																						
Year Formed	2008-2009																						
Description of Boundary of JFMC	As below North: Reserve Forest South: Haflong Road West: APFBC Plantation East: Sadhukhuti JFMC Plantation																						
Brief Details of the Executive Committee & General Body	<p>The brief details of Executive Committee & General Body of the JFMC are contained in the table, which is given below.</p> <p>Table-B: Brief Details of Executive Committee & general Body</p> <table> <tr> <td>Name of President</td><td>Mr. Tapan Dey</td></tr> <tr> <td>Name of Member Secretary</td><td>Ms. Nalini Kalita, Forester-I</td></tr> <tr> <td>Name of Treasurer</td><td>Mr. Suresh Majumdar</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>266 (The number represents each adult member of the household of the JFMC)</td></tr> </table> <p>Source: JFMC Records</p>	Name of President	Mr. Tapan Dey	Name of Member Secretary	Ms. Nalini Kalita, Forester-I	Name of Treasurer	Mr. Suresh Majumdar	No. of Members in Executive Committee	Male: 7 Female: 4	No. of Members in the General Body	266 (The number represents each adult member of the household of the JFMC)												
Name of President	Mr. Tapan Dey																						
Name of Member Secretary	Ms. Nalini Kalita, Forester-I																						
Name of Treasurer	Mr. Suresh Majumdar																						
No. of Members in Executive Committee	Male: 7 Female: 4																						
No. of Members in the General Body	266 (The number represents each adult member of the household of the JFMC)																						
Households & Population Structure	<p>The village has 266 households. The number of female headed households is nil. The total population is 1537, of which 820 are male and the 717 are female members. Out of 266 HH 1006 people belong to the SC community, 111 people belong to the OBC community and 420 people are of General category.</p> <p>Table-2 of Record-I may be referred for further details in the above regard.</p> <p>From this, it is inferred that:</p>																						

	<p>(1) The average number of persons in a household is 5.7.</p> <p>(2) The sex ratio is 874 females per 1000 males in the village.</p>
Education & Skills Development	<p>Over 77 % of the population is reported to be literate. Most of the community members have received school level education. 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 skills in the following areas:</p> <p>(a) Tailoring (b) Food Processing (c) Livestock rearing (d) Farming (e) Driving (f) Masonry (g) Carpentry</p> <p>Government has been active in promoting formal skills development programmes in the country as well as in the state. The village has not reported receipt of benefits of any such programme has been carried out in the habitation or in nearby areas.</p>
Soil	<p>The soil type of the project area includes:</p> <ul style="list-style-type: none"> • Sand dune soil in plain areas. <p>This type of soil can support different kind of crops, as the soil is reported to be fertile on the whole.</p>
Water	<p>The area is drained by the river Borlungphur which flows from the adjoining hills of Karbi Anglong into the project area before joining the River Doiyung to the south. This is a perennial river.</p>
Climate: Temperature & Rainfall	<p>The maximum temperature during the summer is 40°C. The minimum temperature during the winter is 8°-11 ° C.</p> <p>The annual rainfall is about 65-300 mm. About one-third of the rainfall usually occurs during the rainy season (June-September). The village has a high level of humidity (over 95%) during the rainy season and has a low level in the winter (Below 25%). Lumding and adjoining areas Rain shadow Zone and is known to be an area with least rainfall.</p>
Forest & Bio-diversity	<p>The local forests have been broadly classified as Semi hilly and densely vegetated. The main tree species are Neem, Amla, Silica, Arjuna, Bhoira, Fire wood and many other medicinal plants. Additional details in this regard are given in 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>Cultivated wasteland (low line)32 % Firewood Plantation 15% Paddy Field 20% Road .2% Settlement Area 27% River 2.03% Pond 3%</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"> • 16 % of the households are landless (41 HH) • 82 % of the households are marginal farmers (209 HH) • 2% of the households belong to small categories.(5 HH)
Livestock	<p>The total number of livestock in the village is 2282. The main types of livestock possessed by the households include:</p> <p>Cows: 300 Goats: 370 Buffaloes : Nil Bulls : Nil Poultry :1612</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, Primary Health Centre, Bank etc.</p> <p>Education & Health Facilities: There are minimal educational and no health facilities. Public transport is not available, and the community members have to use bicycles to move around.</p> <p>Govt. Offices: The government offices (such as Police station, Gram Panchayat office, Revenue office, Forest Range office etc.) are located at a considerable distance, which gets amplified as the villagers do not have access to regular public transport from either the habitation or from nearby areas.</p> <p>Financial Inclusion: Facilities for financial inclusion like bank and post office are located at a considerable distance from the habitation. The community members have accounts in faraway places.</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: Paddy Rabi Crops: Mustard Others: Jack fruit, Mango, Brinjal, Chilli, etc.</p> <p>All the 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.</p> <p>The maximum numbers of households are involved in growing crops like rice and mustard.</p> <p>The production and yield of these crops is given as follows:</p> <p>(a) Paddy : Production 3192 Quintals Yield 95.57 q /ha</p>

	(b) Mustard : Production 200 Quintals Yield 6.25 q/ha (c) Vegetables: Production 1064 Quintals Yield 12.5 q/ha
Fodder Availability	<p>The matter of fodder availability in the village is dealt with at Table-8 of Record-I. The above shows that the main sources of fodder in the village are as follows:</p> <p>(a) Crop residue (b) Grazing in forest (c) Household wastage (d) Green fodder</p>
Markets	<p>Table-9 of Record-I shows the location of the different markets from the village. The main markets used by the community are as follows:</p> <p>(a) Grocery / PDS: Lumding at 9 km away (b) Weekly / Bi-weekly Market: : Lumding at 9 km away (c) Major Market: : Lumding at 9 km away</p>
Water Resources	<p>The water resources are tabulated at Table-10 of Record-I. The main water resources with the water availability is as follows:</p> <p>(a) check dam (Water Availability: Perennial / Seasonal) (b) tube well (Water Availability: Perennial / Seasonal) (c) river (Water Availability: Perennial/ Seasonal) (d) stream (Water Availability: Perennial/ Seasonal) (e) ring well (Water Availability: Perennial-/ Seasonal) (f) Hand Pump (Water Availability: Perennial-/ Seasonal)</p>
Energy Consumption	<p>Table-11 of Record-I shows the major sources of energy in the village. The same have been listed below.</p> <p>(a) FUEL WOOD- Households Depending 200 Nos. Source: forest (b) KEROSENE-Households Depending: 120-180 Nos. Source: Open Market and PDS (c) LPG- Households Depending: 80 Nos. Source: Govt. & Pvt</p>
Socio-economic status	<p>Social set-up: The village is inhabited by Bengali (Hindu) and Nepali (Hindu) community and is comprised of General, OBC and Schedule Caste System. The observed position of women is satisfactory.</p> <p>Economic Condition: The economic position is not satisfactory. The main livelihoods are Farming, Daily wages, Vegetable Vending etc. Most households earn Rs. 70,000 to Rs. 80,000 per year.</p> <p>There is some migration of the youth and others for livelihoods. Additional details are available at the next section.</p>
Maps	<p>Appendix-1 Gives the following maps, based on PRA exercise:</p> <ul style="list-style-type: none"> • Village Map • Village Social Map (with the names and particulars of members in PRA) • Village Resource Map • Venn Diagram • Chapatti Diagram

3. 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 Hatikhuli 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 –

- a) Natural Capital
- b) Physical Capital
- c) Social Capital
- d) Human Capital
- e) Financial Capital

4. Natural Capital

In Hatikhuli JFMC under Lumding Reserve Forest, major natural capital are Bamboo, Teak, Sal and various species of Bamboo and there is only one River namely Borlongphur.

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)

5. Physical Capital

Majority of the households in the Hatikhuli 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.

The village has 167 numbers of semi-pucca houses, 38 numbers of Pucca houses and the remaining houses are thatch. Among the various sources of energy consumption such as Biomass, kerosene, electricity and LPG, villagers depend on the firewood and kerosene for household and other uses. Although some of the household have LPG, but reliability is very less. (Refer to table 10, 11)

There are three LP schools, one High school, three anganwadi centres present within the JFMC area. No other education institution is present. (Refer to table 5)

In case of water sources, most of the HH have access to tube well, river and ring well.

6. Social Capital

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

There are no SHG in the village. However, the village have three L.P schools, two Anganwadi Centres and three temples where social meetings of the villages are held.

7. Human Capital

75 per cent of total population of the JFMC are literate and 25 per cent are illiterate. (Refer to table 3.3)

8. 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.

1200 numbers of people have bank account in commercial banks, but they are not aware of the benefits of financial inclusion.

9. Livelihood Context

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

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

10. Priority Ranking Through PRA Exercise

PRA Exercise	<p>Team from IIE Guwahati carried out PRA exercise at Hatikhuli village as follows:</p> <p>Date: 13th June, 2016 Location: Maa Surabhi L.P School, Hatikhuli</p> <p>Numbers Present: 55</p> <p>In Presence of: JFMC office bearers, Village Headman, community members, Forest Department personnel, etc.</p>
Objective of PRA	<p>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.</p>
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> <p>1. Agriculture 2. Livestock 3. Bee Keeping 4. Food Processing</p> <p>Ranking of EPA</p> <table><tr><th>Rank</th><th>Village EPA as ranked</th><th>Details (Appendix-3 has additional particulars)</th><th>Probable source of funding/dept.</th></tr><tr><td>1.</td><td>Drinking Water</td><td>At least 40 ring wells should be provided in the JFMC area(as the water contains high amount of fluoride and arsenic)</td><td>APFBC/ PHED & Govt. Schemes</td></tr><tr><td>2.</td><td>Road Connectivity</td><td>Black Topping of road From National Highway Hatikhuli village (~9 KM)</td><td>PMGSY/PWD</td></tr><tr><td>3.</td><td>Electricity</td><td>Every Households should be Electrified of the JFMC area.</td><td>DDUGJY(Deendayal Upadhayaya Gram Jyoti Yojana)</td></tr><tr><td>4.</td><td>School</td><td>Upper Primary School</td><td>SSA/ Elementary Education Deptt.</td></tr><tr><td>5.</td><td>Sanitation</td><td>Providing HHL (House Hold Latrine) - Low cost, septic and sanitary type.</td><td>Swach Bharat Mission/ PHED</td></tr></table> <p>➤ An arrangement of working capital worth Rs 2 Lacs should be arranged from the EPA fund for promoting livelihood activities.</p> <p>➤ A low cost community work shed cum JFMC office to be setup within the JFMC boundaries.</p> <p>➤ A low cost livestock rearing shed have to be arranged from the EPA fund for promoting a common livelihood Activity.</p>	Rank	Village EPA as ranked	Details (Appendix-3 has additional particulars)	Probable source of funding/dept.	1.	Drinking Water	At least 40 ring wells should be provided in the JFMC area(as the water contains high amount of fluoride and arsenic)	APFBC/ PHED & Govt. Schemes	2.	Road Connectivity	Black Topping of road From National Highway Hatikhuli village (~9 KM)	PMGSY/PWD	3.	Electricity	Every Households should be Electrified of the JFMC area.	DDUGJY(Deendayal Upadhayaya Gram Jyoti Yojana)	4.	School	Upper Primary School	SSA/ Elementary Education Deptt.	5.	Sanitation	Providing HHL (House Hold Latrine) - Low cost, septic and sanitary type.	Swach Bharat Mission/ PHED
Rank	Village EPA as ranked	Details (Appendix-3 has additional particulars)	Probable source of funding/dept.																						
1.	Drinking Water	At least 40 ring wells should be provided in the JFMC area(as the water contains high amount of fluoride and arsenic)	APFBC/ PHED & Govt. Schemes																						
2.	Road Connectivity	Black Topping of road From National Highway Hatikhuli village (~9 KM)	PMGSY/PWD																						
3.	Electricity	Every Households should be Electrified of the JFMC area.	DDUGJY(Deendayal Upadhayaya Gram Jyoti Yojana)																						
4.	School	Upper Primary School	SSA/ Elementary Education Deptt.																						
5.	Sanitation	Providing HHL (House Hold Latrine) - Low cost, septic and sanitary type.	Swach Bharat Mission/ PHED																						
Livelihood opportunities	<p>Livelihood Opportunities were identified as follows:</p> <p>Agriculture & Horticulture Livestock NTFP Skills Development Credit Facility</p> <p>Additional discussion about the above has been given below.</p>																								
Agriculture & Horticulture	<p>Table-12 under Record-2 may be seen in this connection for opportunities in the areas of agriculture and horticulture.</p> <p>The main constraints are:</p> <p>(a) Very negligible use of fertilizers and pesticides, insecticides. (b) Lack of irrigation facilities. (c) Lack of agricultural infrastructure, modern tools and equipment’s viz, power tillers, tractors etc. (d) Non usages of high yielding seeds etc.</p>																								

	<p>The opportunities are:</p> <p>(a) Application of proper and controlled pesticides and insecticides. (b) Introduction of new and advance technology. (c) Well-structured training programme. The villagers are inherited with the skill of cultivation. All they need is improvisation of their skill level.</p> <p>The suggested programmes are:</p> <ul style="list-style-type: none"> • Tractor operation training. • Agro-skill development programme. • Training on insecticides, pesticides, hybrid cultivation etc.
Livestock	<p>Table-13 furnishes additional information about opportunities for livestock rearing.</p> <p>The main constraints are:</p> <p>(a) Unable to buy fodder from market due to poor financial condition. (b) Trees fodder and crop residue are available only for 3-6 months. Green fodder is also not available for the whole year. (c) No veterinary care clinic. (d) Lack of modern scientific knowledge on livestock rearing.</p> <p>The opportunities are:</p> <p>(a) Higher income from livestock rearing.</p> <p>The suggested programme is:</p> <p>(a) Goatery (b) Poultry</p>
NWFP	<p>The opportunities for NWFP are tabulated at Table-14 under Record-2</p> <p>The main constraints are:</p> <p>(a) Less availability of NWFP. (b) No technical know-how. (c) No processing units.</p> <p>The opportunities is:</p> <p>(a) Availability of fertile fallow land.</p> <p>The suggested programme are:</p> <p>(a) Plantation of Food plants. (b) Medicinal Plant etc.</p>
Specialized Skills	<p>For skills development, the opportunities are tabulated at Table-15 under Record-2</p> <p>The main constraints are:</p> <p>(a) Lack of product diversification. (b) Lack of research on product quality. (c) Lack of TQM techniques.</p> <p>The opportunities are:</p>

	<p>(a) Providing good communication facility. (b) Training of the skill holder. (c) Financial assistance from govt.</p> <p>The suggested programme are:</p> <ul style="list-style-type: none"> • Training on Modern Tools and Equipment. • Providing training on modern technology to the villagers. • Skill Up-gradation & Training on New Product Development and Product Diversification. • Setting up a raw material bank. • Providing a bulk buy arrangement of the finished product with institutional buyers.
Credit Facility	<p>Table-16 under Record-2 discusses this aspect.</p> <p>The main constraints with the reasons are: (a) Financial exclusion. (b) Higher rate charged by the private money lender.</p> <p>The opportunities are: (a) setting up modern financial institution. (b) Adequate awareness.</p> <p>The suggested programme is: (a) Setting up modern financial institution in the nearby areas.</p>
Strategic Interventions	<p>Summarizing the suggested programmes at above as strategic interventions for the Livelihood Development Plan:</p> <ol style="list-style-type: none"> 1 Agriculture & Horticulture: Tractor operation training, Agro-skill development programme ,Training on insecticides, pesticides, hybrid cultivation 2. Livestock: Goatery, Poultry. 3. NWFP : Plantation of Food plants, Medicinal Plant etc 4. Specialized Skills: Training on Modern Tools and Equipment, Providing training on 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

11. Livelihood Development Plan

Income Generating Activities	<p>The main income generating activities as planned at the village are:</p> <p>Farm Sector :</p> <ol style="list-style-type: none"> 1. Poultry and Goatery 2. Food Processing 3. Horticulture
-------------------------------------	---

	Non-Farm sector: 1.Tailoring & embroidery 2.Driving 3. Electrician 4. Carpentry
SHG Activities	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.
Exposure Trips	The following exposure trips are planned: 1. Exposure visit on Bamboo plantation at Tripura once with 3 nos. of participant for 10 days. 2. Exposure visit to Andhra Pradesh JFMC once with 3 nos. of participant for 12 days. Source: Table-34 of Record-4
Summary of Action Plan	As attached in next page.
Convergence	<p>The planned initiatives may be converged with the following schemes of the Government of India:</p> <ul style="list-style-type: none"> (a) National Rural Employment Guarantee Scheme - for rural employment (b) Rashtriya Krishi Vikas Yojana (RKVY) - for agricultural and allied development (c) Swarna Jayanti Gram Swarajgar Yojana (SJGSY) - for irrigation, including watershed development (d) National Rural Livelihood Mission (e) Skills Development schemes (f) Other schemes for rural development and livelihood 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>

12. Forest Development Plan of Hatikhuli 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 Hatikhuli 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 Hatikhuli JFMC:

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

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

1.1. Forests & Their Conditions

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

Table-1: Conditions of the Forests of Hatikhuli JFMC

Identification	Area of JFMC Forest (Ha)	Distance from Village (Km)	Condition of Forest [Good - Forest with crown density of 40% of more Else 'Degraded']	Frequency of Use by Community [2-3 m / 3-6 m / 6-9 m / Over 9 m]
(A) Assigned Forest				
RF / PF Name: Beat: Borlongphar Compartment:	175 Ha	10 km	Good Area: -175 Ha Degraded Area:- Nil	3-6 m
(B) Other Planted Area				
Location: Type of Forest: VF / Other _____				
TOTAL	175 Ha		Good Area: - 175Ha Degraded Area: Nil	

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

It is seen that the Hatikhuli JFMC has 115 Ha under its forests, of which 115 Ha area is 'Good' and none is 'Degraded'.

1.2. Forest Soil Type

The forests of Hatikhuli 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 Hatikhuli JFMC

Parameter	Status in Assigned Forests	Status in Other Planted Areas
Fertility Level	2.3 to 2.94% organic. The available N, P205 and K20 content of the Soil is comparatively less.	-

Parameter	Status in Assigned Forests	Status in Other Planted Areas
Soil Erosion Status	-	-
Presence of:		
(a) Silt	15%	-
(b) Mud-flat	20%	-
(c) Newly accreted land	Low	-
(d) Sand dune	65%	-

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

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

1. Entisol (32.3%)
2. Inceptisol (49.3%)
3. Alfisols (12.3%)
4. Ultisols (6.1%)

1.3. Existing Composition of Flora

In the forests of the Hatikhuli JFMC, the existing composition of the flora has been given as follows. It may be noted that the local forests are classified as ever green Forest.

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

Parameter	Local Name(s)	Biological Name(s)
Major Forest Species	Teak	<i>Tectona grandis</i> Linn
Associates	Gamari	<i>Gmelina Arborea</i>
Shrubs	Dhekia	<i>Ferns</i>
	Bhot jalakia	<i>Capsicum chinense</i>
Medicinal Plants	Arjun,	<i>Terminalia arjuna</i>
	Hilikha	<i>Terminalia Chebula</i>
	Neem	<i>Azadirachta indica</i>
	Amlakhi	<i>Phyllanthus emblica</i>
Produces		
	Pahari Jati Bah	<i>Oxytennera parvifolia</i>
	Dulu Bah	<i>Schizostachyum dulloa</i>
	Amlakhi	<i>Emblica officinalis</i>
	Halakh	<i>Terminalia myriocarpa</i>

	Hollong	<i>Dipterocarpus macrocarpus</i>
	Arjun	<i>Terminalia arjuna</i>
	Agar	<i>Aquillaria agallocha</i>

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

2. Other Inputs for the Forest Development Plan

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

2.1. Past Protection Measures of the JFMC

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

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

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

2.2. Domestic Requirements of Forest Produce

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

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

Name of Forest Produce	Average Household Requirement		How met at Present	Source
	Frequency of Requirement	Approx. Qty		
Firewood	monthly	60-70 kg		Forest
Timber for House	Once in a year	2-3 nos./yr		
Small timber for Implements	-	-	-	-
Pole / Bamboo	-	-	-	-
Fodder from Forest	monthly	4 kg		Forest
NTFP	-	-	-	-
Other	-	-	-	-

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

There are 266 households in the Hatikhuli JFMC. From the above table and this number of households, it is inferred that the total annual requirements of the Hatikhuli village for forest produce for own use is as follows:

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

Name of Forest Produce	Community Requirement (Kg per annum) (*)	Remarks
Firewood	161000	Throughout the year
Timber for House	2-3 nos.	Throughout the year
Small Timber for Implements	-	-
Pole / Bamboo	-	-
Fodder from Forest	530 kg	Throughout the year
NTFP	-	-
Other	-	-

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

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

2.3. Collection & Marketing of Forest Produce by Villagers

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

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

Name of Forest Produce	Collection for Marketing			Location of Collection
	Season/ Months	No of Households Collecting	Average Qty. Collected (Kg)	
Firewood	-	-	-	-
Timber for House	-	-	-	-
Small timber for Implements	-	-	-	-
Bamboo	-	-	-	-
Pole	-	-	-	-
Fodder from Forest	-	-	-	-
NTFP	-	-	-	-

Other	-	-	-	-
-------	---	---	---	---

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

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

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

Name of Forest Produce	Surplus Marketed (Kg)	How marketed	Average Income per HH from sale of Forest Produce
Firewood	-	-	-
Timber for House	-	-	-
Small timber for Implements	-	-	-
Bamboo	-	-	-
Pole	-	-	-
Fodder from Forest	-	-	-
NTFP	-	-	-
Other	-	-	-

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

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

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

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

Name of Forest Produce	Community Requirement (Kg per annum) From Table-4(B)	Surplus Marketed (Kg) From Table-5(B)	Total Requirements (Kg)
Firewood	161000 kg	-	161000 kg
Timber for House	2-3 nos.	-	2-3 nos.
Small timber for Implements	-	-	-
Bamboo	-	-	-
Pole	-	-	-

Name of Forest Produce	Community Requirement (Kg per annum) From Table-4(B)	Surplus Marketed (Kg) From Table-5(B)	Total Requirements (Kg)
Fodder from Forest	530 kg	-	530 kg
NTFP	-	-	-
Other	-	-	-

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

3. Forest Protection Issues

3.1. Protection Problems

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

Table-7: Protection Problems of the Hatikhuli 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	No	No
Accidental Fires	Yes	Yes
Encroachment of Forest Lands	No	No
Others(Poaching of wild animals)	No	No

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

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

- (a) Grazing - Local Animals
- (b) Grazing - Animals from Other Area
- (c) Illicit Felling of Timber
- (d) Accidental Fires

4. Components of the Forest Development Plan

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

Table-8: Protection Plan of the Hatikhuli 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]
1. Fencing	Hatikhuli forest	150 Ha	-	High

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

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

- (a) Fencing
- (b) Fire protection

4.2. Types of Operations Proposed

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

Table-9: Types of Operations Proposed in the Hatikhuli 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	No	No	-	-
Protection to Cut Stumps of Trees	Yes	Yes	Any time	-
Watershed Treatment	Yes	Yes	Any time	-
Water Reservoirs	Yes	Yes	Any time	-
Grass & Silvi-pasture	No	No	-	-
Bamboo Plantation	Yes	Yes	Jun- August	-
Seed Sowing	Yes	Yes	Jun/July	-
Root & Shoot Cutting & Plantation	Yes	Yes	Jun/July	-
Cut Back & Coppice Treatment	No	No	-	-
Physical Fencing	Yes	Yes	Sep- Nov	-
Social Fencing	Yes	Yes	Any time	-
Other Activities	No	No	-	-

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

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

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

4.3. Forest Improvement Plan - Advance Works & Creation

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

Table-10: Forest Improvement Planned in the Hatikhuli JFMC.

Treatment	Area in Ha under Plantation Module	Priority for Block Plantation	Species	Spacing (metre x metre)
Assisted Natural Regeneration (with plantation in gap)	-	-	-	-
Block Planting	-	-	-	-
Sowing of Neem, Amla, Mahua, Bahera (Medicinal Plants)	-	-	-	-
Enrichment Plantation/ Sowing	-	-	-	-
Direct Plantation	115 Ha (90 Ha under NARMIL and 25 Ha under APFBC)	-	Fuelwood(under APFBC), Neem,Silica,Bogipoma,Sidha,Lichu(under NARMIL)	-
Other	-	-	-	-
Total Area (in Ha.)	115 Ha	-	Fuelwood(under APFBC), Neem,Silica,Bogipoma,Sidha,Lichu(under NARMIL)	-

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

4.4. Forest Improvement – Action Plan

Action Plan for Block Plantation of Saal Mixed with Associates

Name of Plantation : Block Plantation of Saal Mixed with Associates
 Plantation Period : 2016-17 to 2025-26 (10 Years)
 Plantation Area : -
 Spacing : -
 No. of Plants to be Raised : -
 Number Blocks : -
 Species : -
 Rates : -

Financial Year	Activities	Amount
2016-17	Identification of suitable site for regeneration-examine possibilities of natural seed fall-determine intensity and nature of biotic interference-Area Not Less than 100 ha, Demarcation of land during the month of December-January, Partition of land in 4 blocks, Land development, Soil Working @ Rs 1000/ha	-
2017-18*	Block Plantation 3m x 3m, 1111 plants/ha-during the season of April-June ; GPS marking of the area	-
2018-19*	Block Plantation 3m x 3m, 1111 plants/ha-during the season of April-June ; GPS marking of the area	-
	1st Weeding; Replacement of dead/struggling saplings raised in the previous year	-
2019-20*	Block Plantation 3m x 3m, 1111 plants/ha-during the season of April-June ; GPS marking of the area	-
	2nd Weeding; Replacement of dead/struggling saplings raised in the previous year	-
2020-21*	Block Plantation 3m x 3m, 1111 plants/ha-during the season of April-June ; GPS marking of the area	-
	3rd Weeding	-
2021-22*	4th Weeding; Replacement of dead/struggling saplings raised in the previous year	-
2022-13*	5th Weeding; Replacement of dead/struggling saplings raised in the previous year	-
2023-24*	6th Weeding; Replacement of dead/struggling saplings raised in the previous year	-
2024-25*	7th Weeding	-
2025-26*	8th Weeding	-
Total Budgetary Requirement		-

* Silvicultural thinning to be undertaken on intervals of five years post plantation

Action Plan for Block Plantation of Mixed Harwood Plantation - Teak with Associates, Firewood and Bamboo

Name of Plantation : Block Plantation of Mixed Harwood Plantation - Teak with Associates, Firewood and Bamboo

Plantation Period : 2016-17 to 2025-26 (10 Years)
 Plantation Area : -
 Spacing : -
 No. of Plants to be Raised : -
 Number Blocks : -
 Species : -

Action Plan for Creation of Plantation		
Financial Year	Activities	Amount
2016-17	Identification of suitable site for regeneration-examine possibilities of natural seed fall-determine intensity and nature of biotic interference-Area Not Less than 100 ha, Demarcation of land during the month of December-January, Partition of land in 4 blocks, Land development, Soil Working @ Rs 1000/ha	-
2017-18*	Block Plantation 2m x 2m, 2500 plants/ha-during the season of April-June ; GPS marking of the area	-
2018-19*	Block Plantation 2m x 2m, 2500 plants/ha-during the season of April-June; GPS marking of the area	-
	1st Weeding; Replacement of dead/struggling saplings raised in the previous year	-
2019-20*	Block Plantation 2m x 2m, 2500 plants/ha-during the season of April-June; GPS marking of the area	-
	2nd Weeding; Replacement of dead/struggling saplings raised in the previous year	-
2020-21*	Block Plantation 2m x 2m, 2500 plants/ha-during the season of April-June; GPS marking of the area	-
	3rd Weeding	-
2021-22*	4th Weeding; Replacement of dead/struggling saplings raised in the previous year	-
2022-23*	5th Weeding; Replacement of dead/struggling saplings raised in the previous year	-
2023-24*	6th Weeding; Replacement of dead/struggling saplings raised in the previous year	-
2024-25*	7th Weeding	-
2025-26*	8th Weeding	-
Total Budgetary Requirement		-

* Silvicultural thinning to be undertaken on intervals of five years post plantation

Source: Proforma-3, Table-3.10 / Discussions with Forest Department personnel & Community members

Action Plan for Block Plantation of Non Timber Forest Produce

Name of Plantation : NTFP PLANTATION
 Plantation Period : 2016-17 to 2025-26 (10 Years)
 Plantation Area : -
 Spacing : -
 No. of Plants to be Raised : -
 Number Blocks : -
 Species : -

Financial Year	Activities	Amount
2016-17	Identification of suitable site for regeneration-examine possibilities of natural seed fall-determine intensity and nature of biotic interference-Area Not Less than 50 ha, Demarcation of land during the month of December-January, Partition of land in 4 blocks, Land development, Soil Working @ Rs 1000/ha, 3 wired barb fencing 2800 RM @ Rs56.36/RM	-
2017-18*	Block Plantation 2m x 2m, 2500 plants/ha-during the season of April-June ; GPS marking of the area	-
2018-19*	Block Plantation 2m x 2m, 2500 plants/ha-during the season of April-June ; GPS marking of the area	-
	1st Weeding; Replacement of dead/struggling saplings raised in the previous year	-
2019-20*	Block Plantation 2m x 2m, 2500 plants/ha-during the season of April-June ; GPS marking of the area	-
	2nd Weeding; Replacement of dead/struggling saplings raised in the previous year	-
2020-21*	Block Plantation 2m x 2m, 2500 plants/ha-during the season of April-June ; GPS marking of the area	-
	3rd Weeding & Pruning	-
2021-22*	4th Weeding & Pruning; Replacement of dead/struggling saplings raised in the previous year	-
2022-23*	5th Weeding & Pruning; Replacement of dead/struggling saplings raised in the previous year	-
2023-24*	6th Weeding & Pruning	-
2024-25*	7th Weeding	-
2025-26*	8th Weeding	-
Total Budgetary Requirement		-

4.5. Nursery Development Plan

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

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

Location of Nursery	Species	Year of Development	Number of Seedlings	Remarks
-	-	-	-	-

Location of Nursery	Species	Year of Development	Number of Seedlings	Remarks
	-		-	
	-		-	
	-	-	-	-
	-		-	
	-		-	
	-	-	-	-
	-		-	
	-		-	
	-	-	-	-
	-		-	
	-		-	

Source: Proforma-3, Table-3.11 / Discussions with Forest Department personnel & Community members

4.6. Maintenance Plan - 10 Years

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

(A) Timber Species non-Saal, Teak, Associates

Table-12 (A): Maintenance Plan of Plantation in the Hatikhuli JFMC

Year(s)	Treatment
-	-
-	-

Source: Discussions with Forest Department personnel & Community members

(B) Bamboo

Table-12 (B): Maintenance Plan of Bamboo Plantation in the Hatikhuli JFMC

Year(s)	Treatment
-	-

Source: Discussions with Forest Department personnel & Community members

(C) Fuel wood Plantation

Table-12 (C): Maintenance Plan of Fuel Wood Plantation in the Hatikhuli JFMC

Year(s)	Treatment
-	-

Source: Discussions with Forest Department personnel & Community members

(D) NTFP / Medicinal Plantation

Table-12 (D): Maintenance Plan of NTFP / Medicinal Plantation in the Hatikhuli JFMC

Year(s)	Treatment
-	-

Source: Discussions with Forest Department personnel & Community members

4.7. Miscellaneous Operations Plan

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

Table-13): Miscellaneous Operations in the Hatikhuli JFMC

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

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

5. Expected Benefits

This sub-section furnishes the benefits expected from the forests protected by members of the Hatikhuli 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 Hatikhuli 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 Hatikhuli JFMC

Item	Month	Year (Indicative)	Quantity
-	-	-	-

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

NB::As Confirmed by DFO there is no available area for Plantation(Copy enclosed below)

According to Forest Officials of Lunding Range the sharing mechanism process has not been started officially and the people who work in the plantation collect the residual remains only.

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

List of Appendices

Appendix No	Heading	Page No
1	How To Reach	27
2	Maps Village Map Village Social Map Village Resources Map	29 30 31
3	Land Use Map of Village (GIS)	32
4	PRA Exercise	
	Social Mapping Wealth Ranking Time Line review Seasonality of Livelihoods Venn Diagram Chapatti Diagram Priority ranking and EPA	33 36 36 38 41 42 43
5	Photographs	45-46
6	List of JFMC Members	47
7	Filled Up Tables (Proforma-1 to Proforma-4) Table Nos. 1-16	49-56

Appendix 1

HOW TO REACH:

Lumding to Guwahati distance, location, road map and direction

Lumding is located in **India** at the longitude of 93.17 and latitude of 25.75. Guwahati is located in **India** at the longitude of 91.75 and latitude of 26.19.

Distance between Lumding and Guwahati

The total straight line distance between Lumding and Guwahati is **150 KM** (kilometers) and 188.93 meters. The miles based distance from Lumding to Guwahati is **93.3** miles. This is a straight line distance and so most of the time the actual travel distance between Lumding and Guwahati may be higher or vary due to curvature of the road.

Lumding to Guwahati travel time

Lumding is located around 150 KM away from Guwahati so if you travel at the consistent speed of 50 KM per hour you can reach Guwahati in 3 hours. Your Guwahati travel time may vary due to your bus speed, train speed or depending upon the vehicle you use.

Lumding to Guwahati Bus

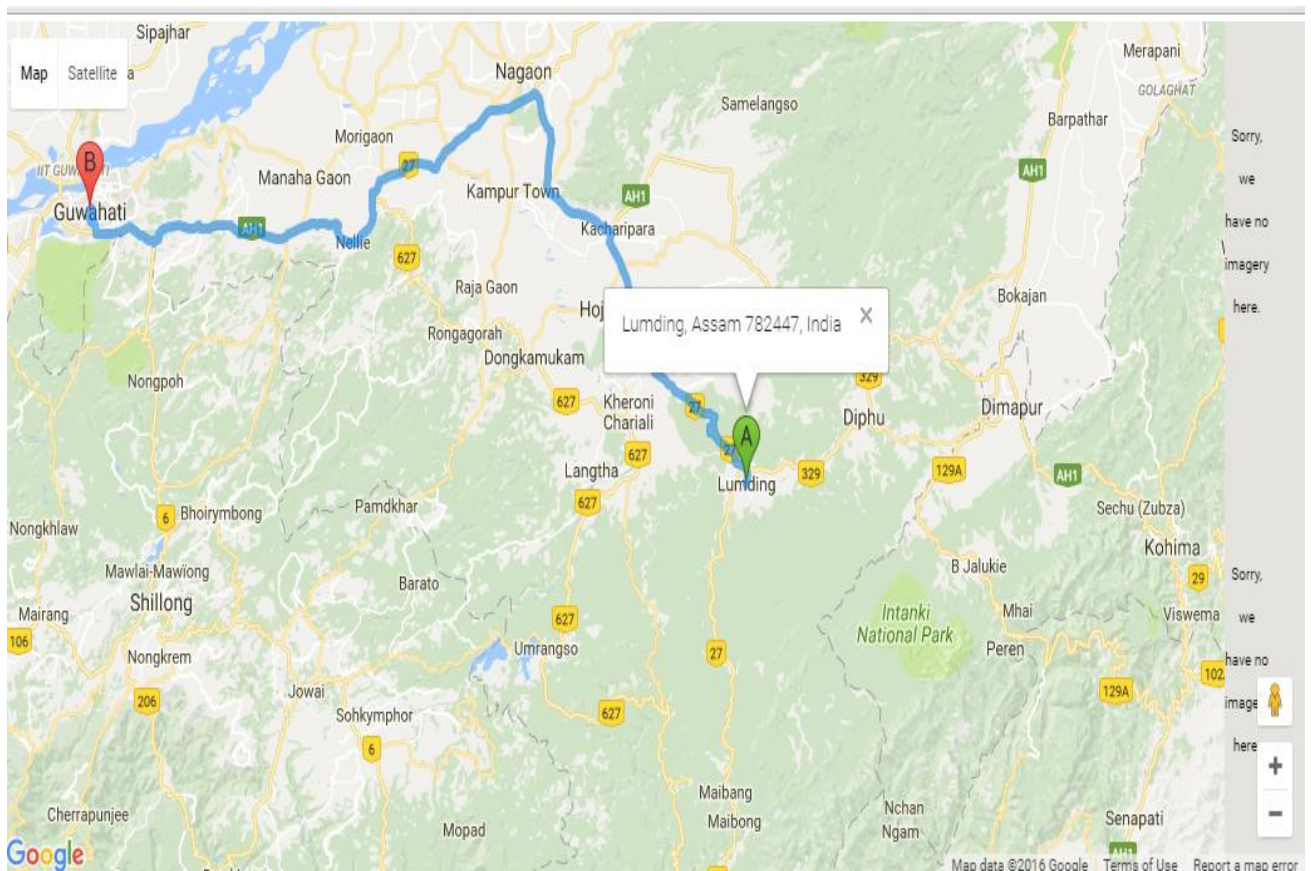
Bus timings from Lumding to Guwahati is around **2.5 hours** when your bus maintains an average speed of sixty kilometer per hour over the course of your journey. The estimated travel time from Lumding to Guwahati by bus may vary or it will take more time than the above mentioned time due to the road condition and different travel route. Travel time has been calculated based on crow fly distance so there may not be any road or bus connectivity also.

Bus fare from Lumding to Guwahati

May be around Rs.120.

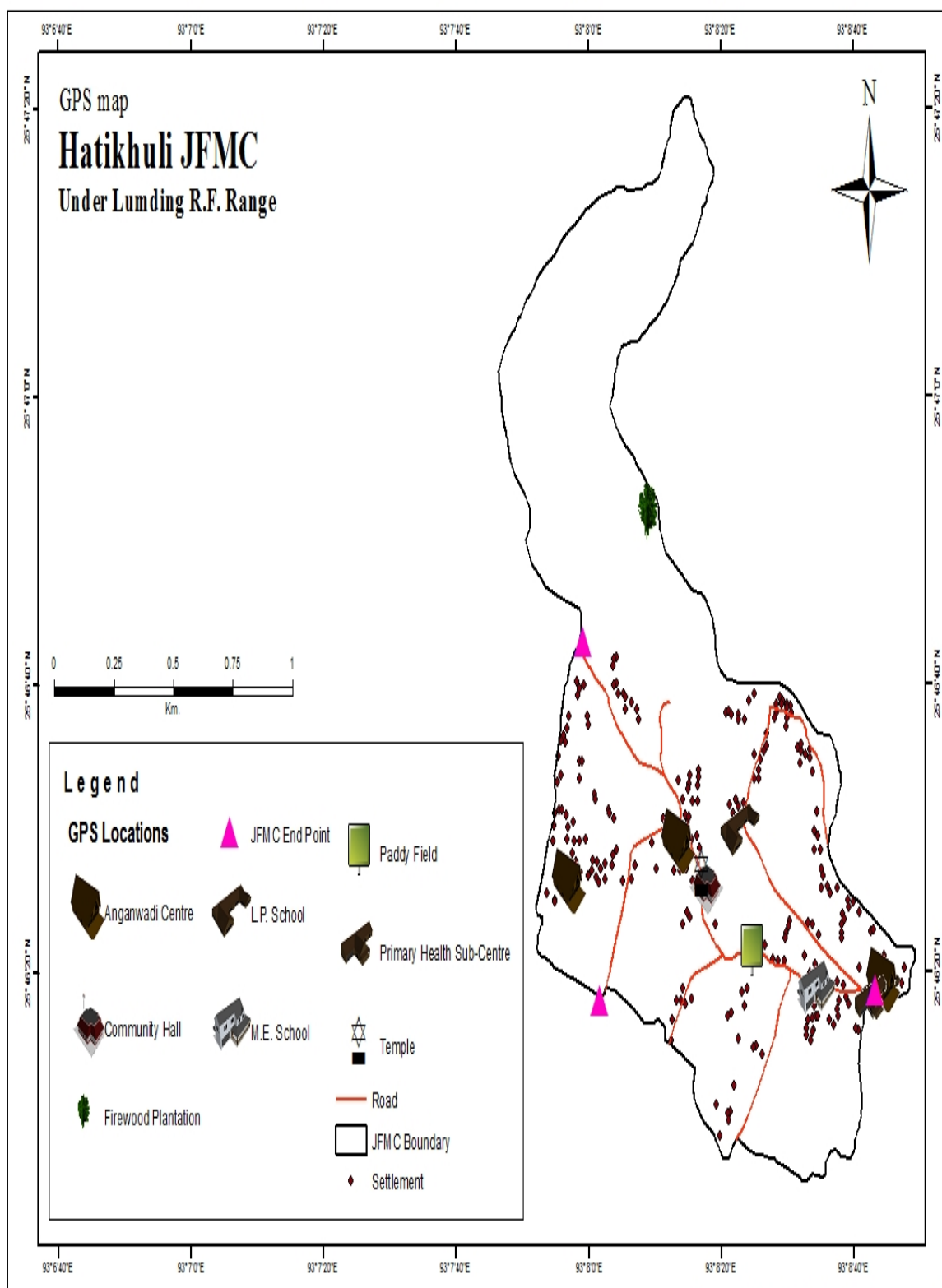
Lumding to Guwahati road map

Lumding is located nearly **east** side to Guwahati. The given east direction from Lumding is only approximate. The given google map shows the direction in which the blue color line indicates road connectivity to Guwahati. In the travel map towards Guwahati you may find enroute hotels, tourist spots, picnic spots, petrol pumps and various religious places. The given google map is not comfortable to view all the places as per your expectation then to view street maps, local places see our detailed map here.

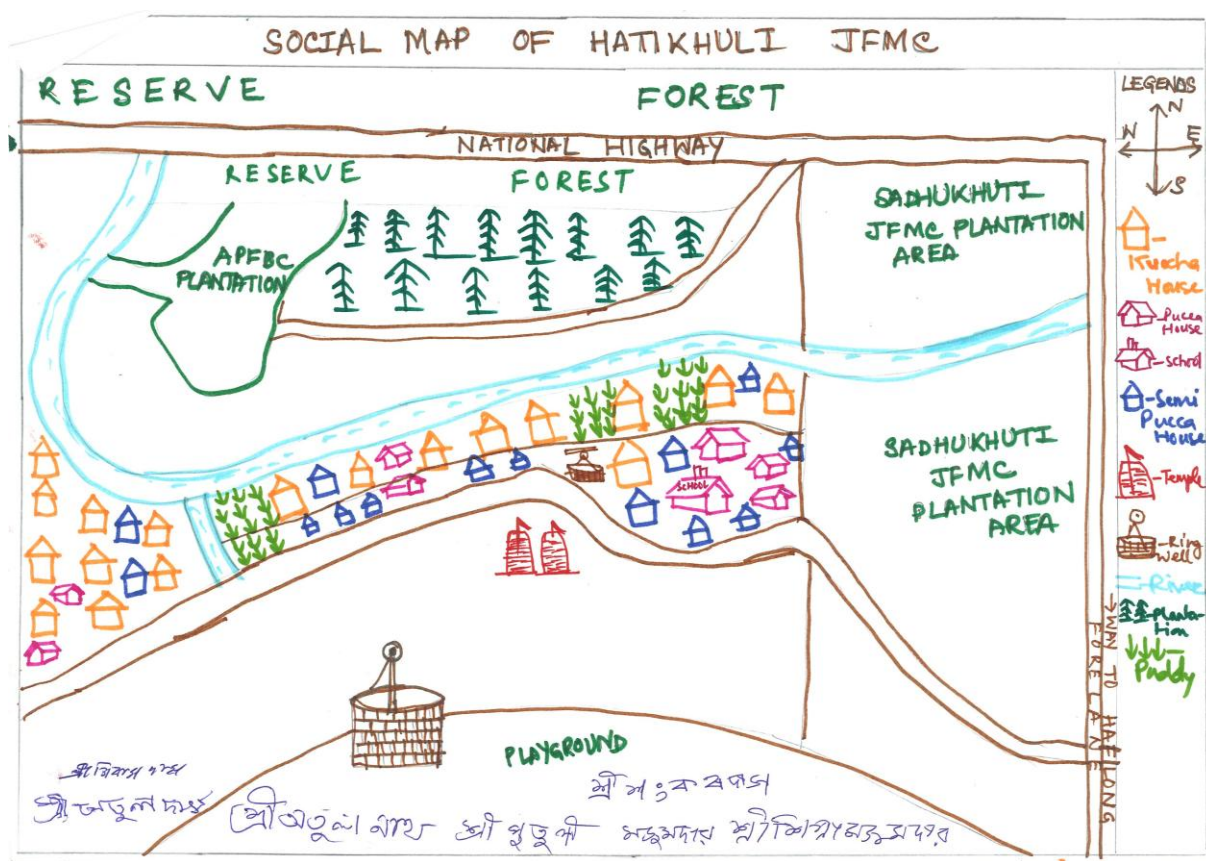


Appendix 2

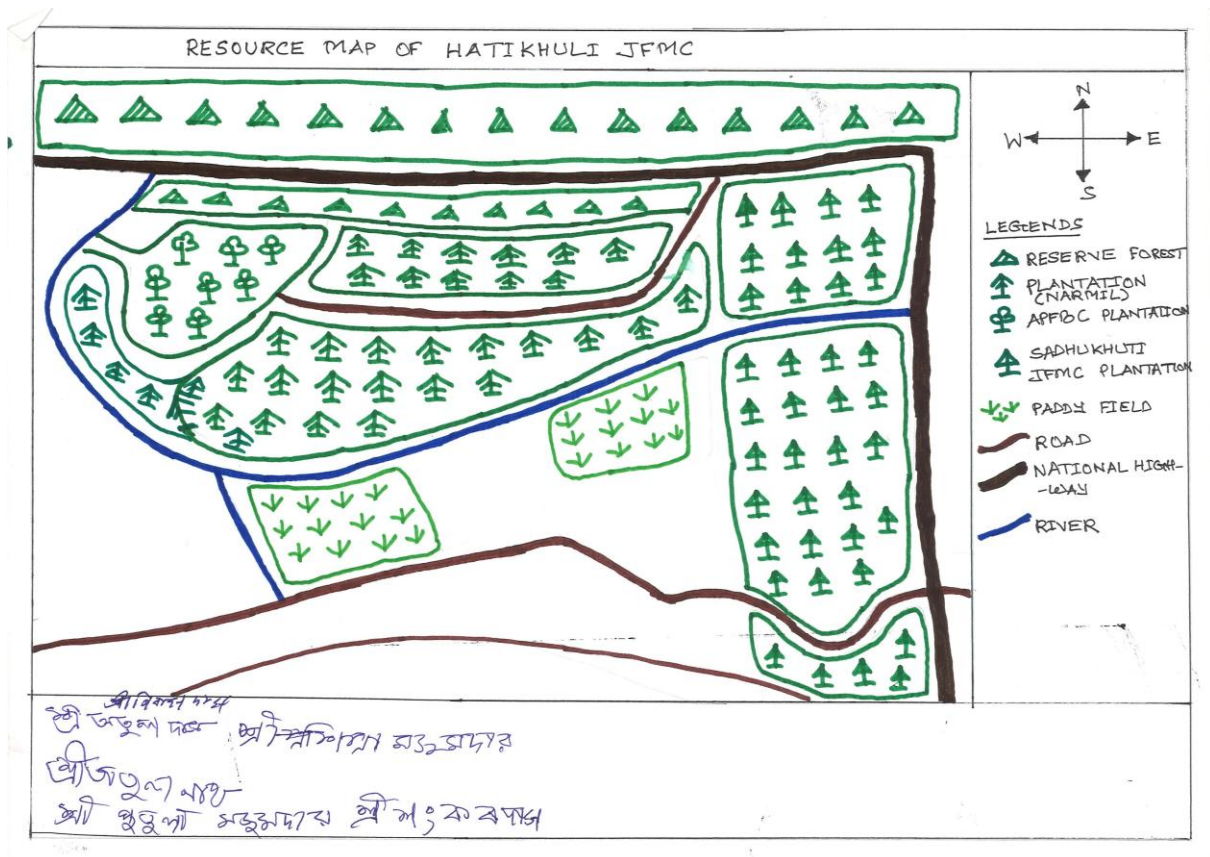
1. Village Map:



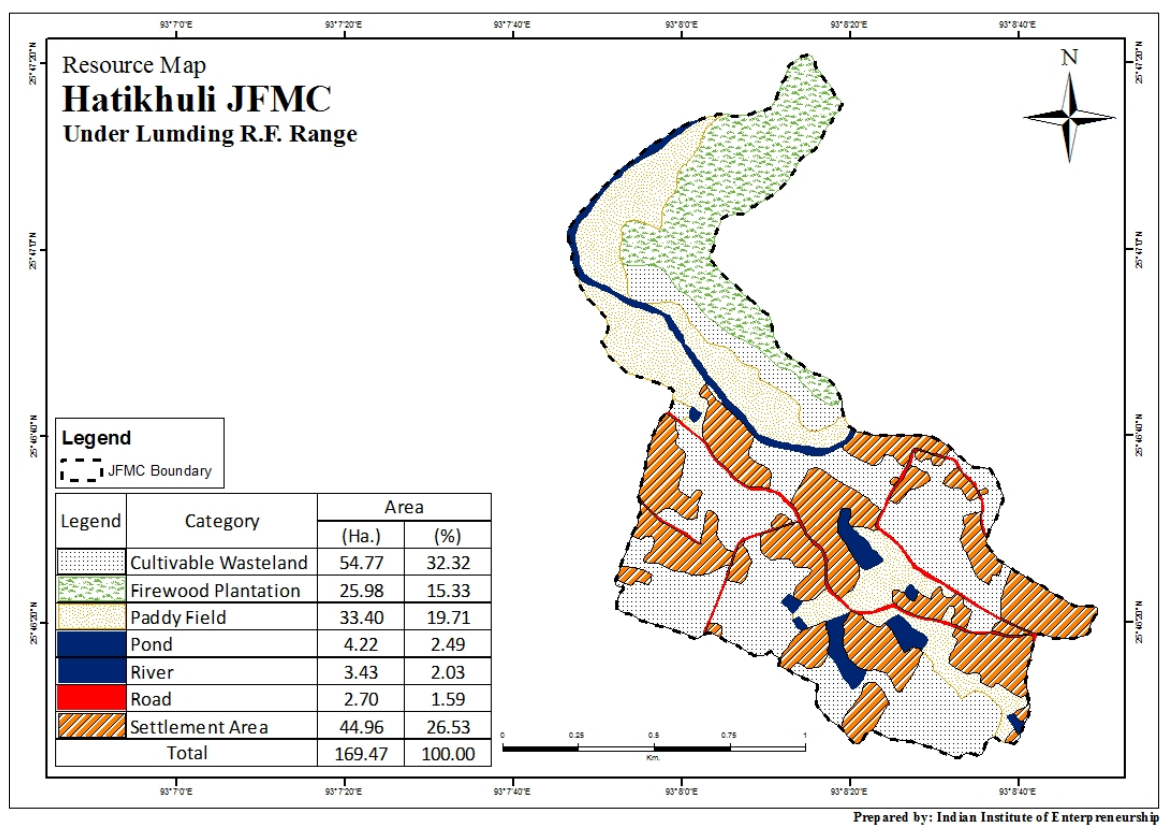
2. Social map



3. Resource Map:



Land Use map of GIS



Appendix 4

PRA ACTIVITY

Location and Timing of Participatory Rural Appraisal:

Numbers of participants :	55
Time :	4.30 pm, 13 th June 2016
Venue :	Maa Surabhi L.P School

Table – 3.1 Brief Profile about the villages under Hatikhuli JFMC

Sl. No.	Name of the Village	No. of households	Population		
			Total	Male	Female
1	Hatikhuli	266	1537	820	717
Total		266	233	820	717

Source: Field Survey.

Table – 3.2 Age Profile of the Hatikhuli JFMC

Age Class	< 5 years	5-18 Years	18-45 Years	45-60 Years	>60 Years
Male	80	301	282	131	26
Female	72	260	231	125	29
Total	152	561	513	256	55

Table – 3.3 Education profile of Hatikhuli JFMC

Age Class	K.G/Nursery	Upto IV	V-VII	VIII-X	X-XII	Graduate	Masters	Illiterate
<25 Years	19	120	78	485	82	-	-	17
>25 Years(Adult)	-	109	39	56	15	2	-	291
TOTAL	19	229	117	541	97	2	-	308

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

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

3.1 Social Mapping:

Social mapping is used to visualise the socio-economic aspects of the Hatikhuli JFMC where the housing patterns of the households, the numbers of schools, social infrastructure, and religious beliefs among households. Awareness camp about the project was carried out beforehand. So it was easy to

gather people for the PRA process in the community hall. And due to time constraint we have to skip the transect walk. The villagers were enthusiastic about the mapping process and they actively participated in the process.

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

Table 3.2: Information about the villages

	Village	Hatikhuli
Social information	Total population	1537
	Male	820
	Female	717
	Total households	266
	Numbers of Pucca Houses	38
	No of thatch house	61
	Nos. of semi pukka house	167
Landmarks	Bridges	0
	Stream	1
	River	1
	LP School	3
	Secondary School	1
	PHE	0
	Power Transformer	0
	Community hall	1
	Anganwadi centre	3
	Temple	3

Findings of social map:

- The participants of social mapping have identified all 266 households out of which 61 households are thatch houses or kuccha house. There are 167 semi Pukka houses and 38 Pucca Houses. This signifies that the village has not yet achieved considerable coverage of poor people residing in the rural area.

- Other than the class based division of the household important places like community hall, schools, and playground, stream, well, Community Hall, bridges are mapped.
- Main sources of water for the villagers are the Govt. Ring Well and the river which is used by villagers for their day to day use.
- Provision of Education facility is comparatively satisfactory in the villages as there are three primary schools and one secondary school available within the boundary of the village. There are three Anganwadi centres in the village.
- The people of the JFMC belong to the Bengali and Nepali community and are of SC, OBC and General caste. The religion of all the villagers is Hindu.

Learnings:

- Electricity is available inside the village of the Hatikhuli JFMC. There is LPG gas connections in the 80 HHs of the JFMC villages. 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.
- The primary health centre along with post office is located in Lumding, which is 9 KM away from the JFMC. The villagers have to cover a long distance for their health check-up.
- There is also one community hall available in the JFMC where various meetings are held. Major meeting are – Gram panchayat meeting, village head meetings, forest department meetings and other political meetings.
- The availability of fodder for domestic animals depends on the resource available in the forest area and the capacity of the household who can rear the livestock's. The village of the JFMC are fully dependent on crop residue, trees fodder, grasses, and green fodder. Field residues are materials left in an agricultural field after the crop has been harvested. These residues include stalks and stubble (stems), leaves, and seed pods.
- There are some grazing field where 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.
- The villagers of the Hatikhuli JFMC have to move Lumding, a distance covered with 9km, for their weekly marketing activity. Domestic materials, utensils, bangles, cloths and stationeries are sold in different stalls.

3.2 Wealth Ranking:

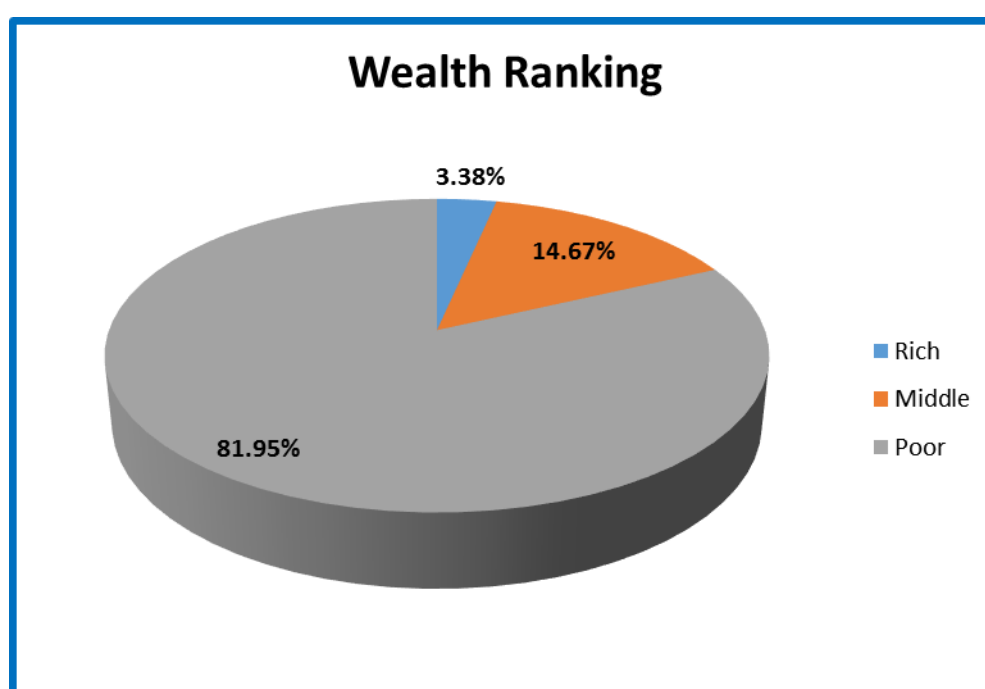
Wealth ranking, or well-being ranking, involves community members identifying and analysing the different wealth groups in a community. It enables evaluators to learn about the socio-economic stratification of project beneficiaries and local people's definitions and indicators of wealth/well-being.

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

- a) Land holding
- b) Occupation

As such about 81.95% people are poor, about 14.67% belong to middle class and about 3.38% are categorised to be rich. Poor people are mainly irregular wage earners, sometimes they lease (adhi lua) others land. They also have good amount of agricultural land.

Figure 3.1: Wealth Ranking



3.3 Timeline Review

In order to know the past important cum historical events over time, the team has conducted the timeline analysis. The team members discussed about the local events to the village head, elderly persons and also to some young people to have an idea about how they dealt with those situations and what was the impact of those events on their lives as well as on the development of the village. Our time line illustrates the following events.

Table 3.3: Timeline review

Year		Event	Type
Pre independence	1939	The village is named Hathikhuli as there are lot of elephants in the village.	Recognition of the village
	1940	Many Karbi people migrated to the village of Hathikhuli to Settle there.	Migration
Post - Independence	1975	Establishment of L.P School named Vivekananda L.P school.	Starting of Primary Education.
	1981	Establishment Of Maa Surabhi, Second L.P School.	Faster increase of Students.
	1985	MR Sushil Das & Ikramak Sarkar was the first to complete their master's Degree.	Completion of Higher Education
	1990	First Anganwadi Centre Was established.	Development of children both mentally and physically.
	1992	Establishment of M.E School	A step towards Higher Education
20 th century	2006-2007	The main Road of the village was constructed under CMGSY.	Construction
	2008	Formation of JFMC	Conservation of forest & development of the included villagers.

In order to know the past important cum historical events over time, the team has conducted the timeline analysis. The team members discussed about the local events to the village head, elderly persons and also to some young people to have an idea about how they dealt with those situations and what was the impact of those events on their lives as well as on the development of the village. Our time line illustrates the major events in the Hathikhuli JFMC.

The Hathikhuli village people had suffered a worst elephant depredation over the years and it is still a major problem existing for the people of the village of the Hathikhuli, the village people suffers a lot of damage of their houses and vegetation due to this elephant depredation. This is a major setback in the lives of the villagers which forced most of the villagers to leave their houses and move to other nearby places.

In the year 1990 and 1992 the first Anganwadi centre and first M.E school were established respectively which is a step for the development of children both mentally and physically.

During the year 2006-2007 the main road of the village was constructed under CMGSY which is one of the remarkable event for the people of the village towards better Road communication.

In the year 2008 the First JFMC was formed which prevented the illegal activities and promoted conservation of the forest and the progress of the concerned project.

Learning:

- The villagers are aware of the fact that post cutting down of the trees, the number of animals becomes less in the forest which indicates the forest preserving awareness of the people.
- The processes of conserving the forest area start mainly after the formation of JFMC.

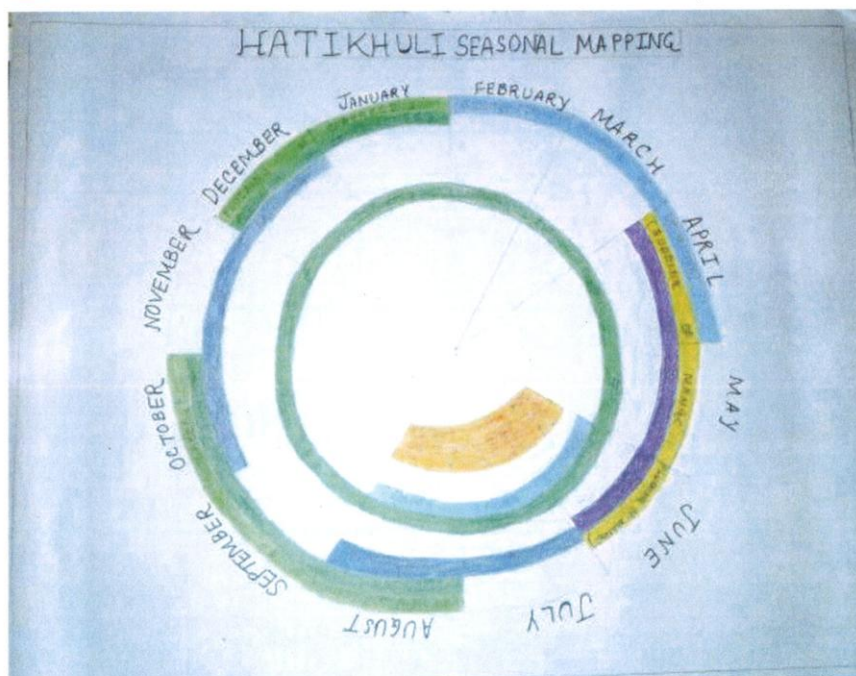
3.4 Seasonal Mapping of livelihood activities:

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

Seasonal mapping mainly covers the seasonal variation of crops. In seasonal mapping, we considered agricultural crops and the timing of three activities viz. sowing, cropping and harvesting criteria and collected the details throughout the year. From the seasonal mapping, it has been noticed that the main crops grown in the village are Sali rice, Mustard, Jute, Betel-nut, Ginger, Maize etc. The FGD conducted revealed that other major livelihood options available in the JFMC are Livestock rearing (Piggery, poultry), shop-keeping, weaving, daily wage labourers, mason, tailoring, carpentry which are not seasonal in nature but is showed in the seasonal mapping.

Figure 3.2: Seasonal Map of Hatikhuli JFMC

SEASONAL MAPPING OF HATIKHULI



શ્રી વિરજા દાસ
 શ્રી અરુણ દાસ
 શ્રી અરુણ વાસ
 શ્રી વૃંદાવતી મહાદેવ
 શ્રી વિદ્યા મહાદેવ
 શ્રી મહાવિજય

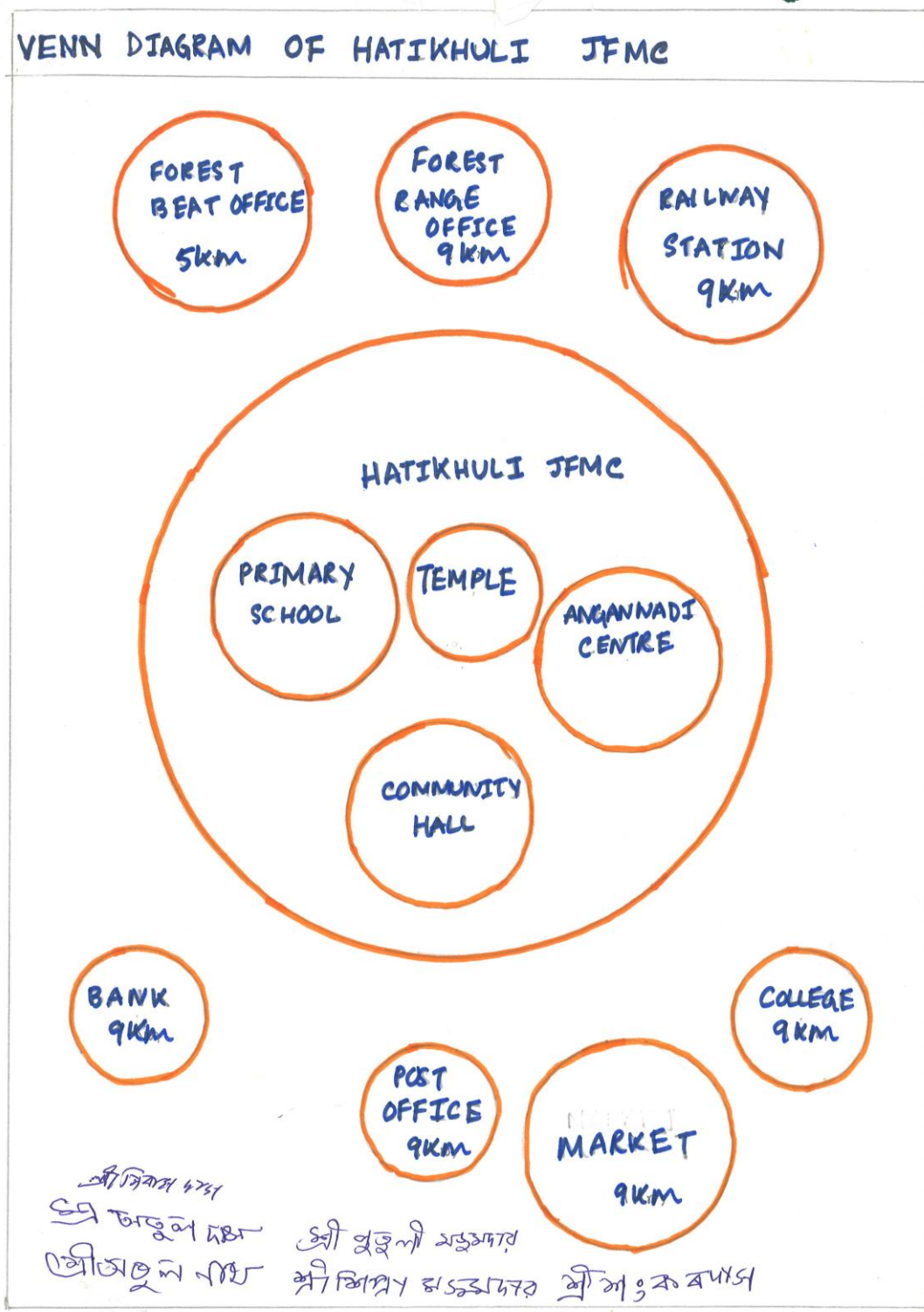
Table 3.4 Seasonal cropping pattern

Agricultural crop	Sowing	Harvesting	Plucking
Cabbage	July	August	November-December
Cauliflower	July	August	November-December
Brinjal	July		November-December
Pumpkin	Jan – March		May-June
Mango	Dec-Jan(Budding)		May-June
Jackfruit	Dec-Jan		May-June
Wheat	July-Sep		Sept-Oct
Mustard	Oct		Nov-Dec
Chilli	Throughout the year		
Rice	Throughout the year		

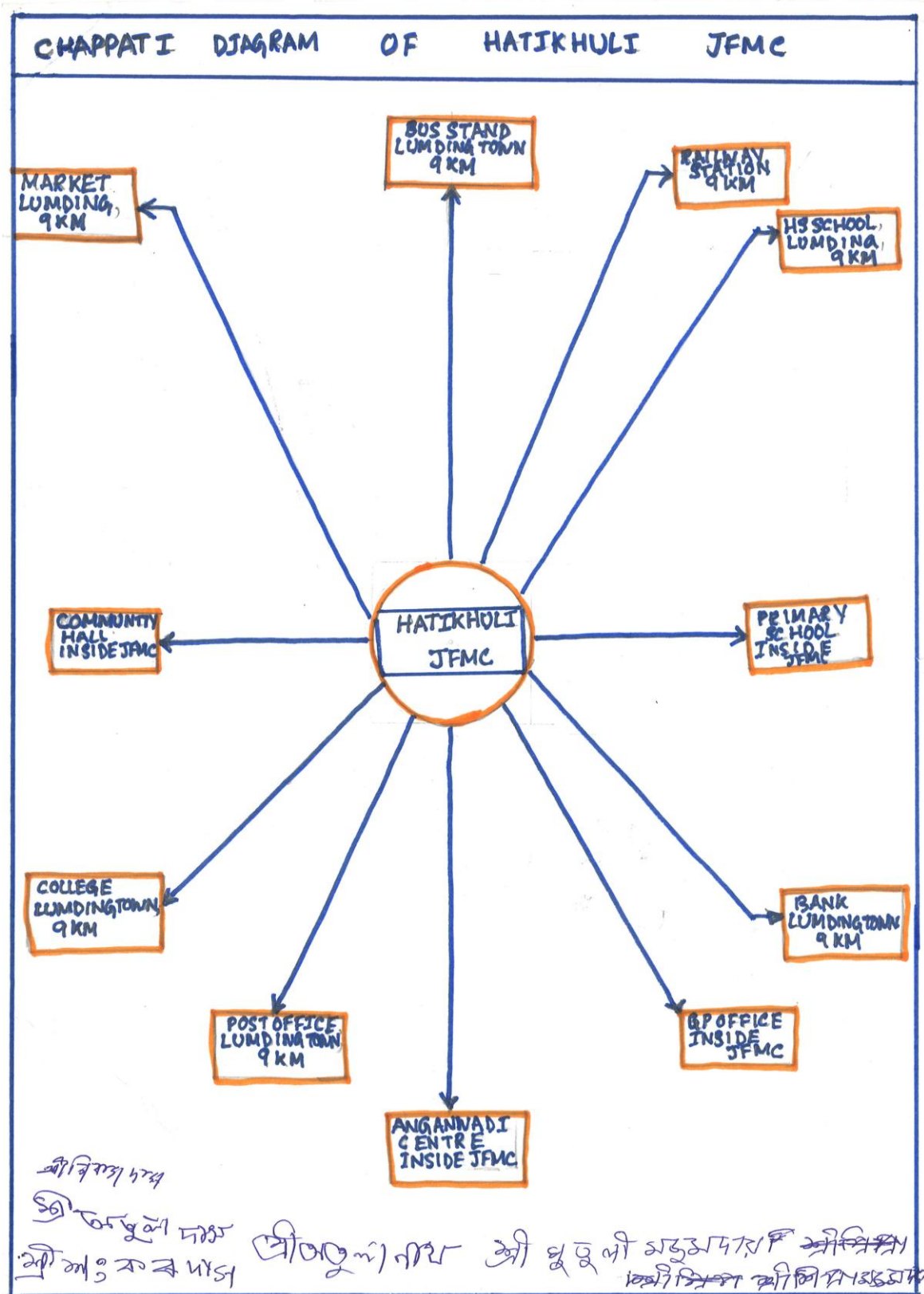
Learnings:

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

3.5 Venn Diagram



3.6 Chapatti Diagram



Priority Ranking- EPA and Livelihood

EPA Activities		Drinking Water A	Road Connectivity B	Electricity C	School D	Sanitation E	Marks	Rank
Drinking Water	A	x	A	A	A	A	4	1
Road Connectivity	B		x	B	B	E	3	2
Electricity	C			x	D	E	2	4
School	D				x	E	1	5
Sanitation	E					x	2+	3

Livelihood activity:

Livelihood Activities		Agriculture & Horticulture A	Livestock B	Food Processing C	Bee Keeping D	Cane & Bamboo E	Marks	Rank
Agriculture & Horticulture	A	x	A	A	A	A	4	1
Livestock	B	x	x	B	B	B	3	2
Food Processing	C	x	x	x	C	C	2	3
Bee Keeping	D	x	x	x	x	E	1	5
Cane & Bamboo	E	x	x	x	x	x	1+	4

EPA and Livelihood Activity of HATIKHULI JFMC

EPA activity

EPA Activities	Drinking water (A)	Road Connectivity (B)	Electricity (C)	School (D)	Sanitation (E)	Marks	Rank
Drinking Water (A)	X	A	A	A	A	4	1
Road Connectivity (B)		X	B	B	E	3	2
Electricity (C)			X	D	E	2	4
School (D)				X	E	1	5
Sanitation (E)					X	2 ⁺	3

Livelihood activity

Livelihood Activities	Agriculture & Horticulture (A)	Livestock (B)	Food Processing (C)	Bee Keeping (D)	Cane & Bamboo (E)	Marks	Rank
Agriculture & Horticulture (A)	X	A	A	A	A	4	1
Livestock (B)	X	X	B	B	B	3	2
Food Processing (C)	X	X	X	C	C	2	3
Bee Keeping (D)	X	X	X	X	E	1	4
Cane & Bamboo (E)	X	X	X	X	X	1 ⁺	5

Signature

ଅବିନାଶ ଦାଶ
 ଶ୍ରୀ ଗୁରୁଜୀ
 ଶ୍ରୀ ଗୁରୁଜୀ
 ଶ୍ରୀ ଗୁରୁଜୀ
 ଶ୍ରୀ ଗୁରୁଜୀ
 ଶ୍ରୀ ଗୁରୁଜୀ

PHOTOGRAPHS



PRA ACTIVITY



COMPLETION OF SOCIAL MAPPING



A SNAP WITH THE VILLAGERS

Annexure 5

LIST OF JFMC MEMBERS

SDK → Sadhukhuh

RECORD 7 : MEMBERSHIP REGISTER

Hatikhubi N. Guelh
 Name of JFMC Division Range Lurding

Beat Borlongfar JFMC Code HKL

Sr. No.	Name	Father's/ Husband's name	Age	Male/ Female	Education	SC/ST/ BC/OBC
1	Taran Doy	late Chitta- varan Doy	62	M.	PU	General
2	Sipra Sankari	Ratan Sankari (H)	40	F	3	"
3	Nalini Kalida	Ananda Ch. Kalida	51	M	PU	"
4	Suresh Majumdar	Late Nitya- lal Majumdar	45	M	4	SC
5	Narayan Das	Krushnababu DAS.	43	M	3	"
6	Nibash Das	L. Kushendra Das.	50	M	3	"
7	Atul Nath		51	M	4	OBC
8	Lokenra Das	Bireoj Das	51	M	4	SC
9	Sipra Majumdar	Harendhan Majumdar(H)	40	F	6	SC
10	Preeti Majumdar	Jagmohan Majumdar(H)	43	F	9	SC
11	Lakhi Singh	Doy Singh (H)	40	F	4	Gen.

୧. ମୂଳ-ଆ-ସୁବର୍ଣ୍ଣ-ପତ୍ର-ସୁଲ.
 ୨. ମୂଳ-ଆ-ସୁବର୍ଣ୍ଣ-ପତ୍ର-ସୁଲ.
 ୩. ମୂଳ-ଆ-ସୁବର୍ଣ୍ଣ-ପତ୍ର-ସୁଲ.

- ১) মাইলিগাহি নিব্বাণে আৰু আত্মন হুইন.
- ২) মাইলিগাহি নিব্বাণে আৰু আত্মন হুইন.
- ৩) PRA কাম কাত্তৰ বিম্মে আত্মনো
- ৪) আৰু বুৰুয়া হুইন.
- ৫) অন্তৰ্গত নিব্বাণে.
- ৬) মাইলিগাহি নিব্বাণে আৰু আত্মন হুইন.

ମୋହନ ବାହର ଆଧାର.

- [illegible]

कार्य विवरणी

আদি ২: বাণী ২০১৬ তারিখে মা-দুর্ভাগী বন-পি. দ্বন্দ্ব সাক্ষাৎ
 প্রধান বাণীমা মায়ে আহ্বান করা হয়। ১০ মাসের মধ্যে মায়ে আহ্বান
 হাতিয়াই মেম-পরিচালনা আমতিব দ্বারা মায়ে আহ্বান হাতিয়াই
 হেরে। মায়ে ৬ মাসে ব্যাখ্যা করা আমতিব কার্যকর হয়।
 হাতিয়াই নিবান নাম হেরে।

কৰ্মকৰ্তৃ অকাল
২২৭ কাম কৰি আৰু আন আন বিষয়ে বান্ধব মাজত দাঙ
বুৰ। যাদো সোমত বান্ধব মাজেৰে সন্মিলন বিহাৰি অলপতি
মোদমে-অমজিব মনে গুণে বুজি ঘোষণা কৰে।

Japan Day

Annexure 6 (Record I)

Table 1: Basic data of the village:

Table 1: Basic data of the JFMC

Sl no	Name of the JFMC	Date of establishment	No. of members in executive	Name of the president	Name of the Member secretary	Money in VDF	Contribution per family /per person	Social fencing used Yes / No	Remarks on special attainment	Grading %of success by RFO
	Hatikhuli	2009	11	Tapan Dey	Nalini Kalita, Forester-I	-	-	-	-	80%

Table 2: Village wise population data:

Table -2: Demographic status of the project villages

Name of Village	No. of House hold	SC		ST		OBC		General		Total-all category
		Male	Female	Male	Female	Male	Female	Male	Female	
Hatikhuli	266	525	481	-	-	62	49	233	187	1537

Source: - Field survey report.

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

Table3 Village wise farmer category on the basis of land holding

Sl no	Name of the village	Type of famer according to land holding				
		Large farmer >10 ha.	small farmer 2-10 ha.	Marginal farmer (household) <2ha.	Land less (household)	total
1	Hatikhuli	-	5	209	41	255
Total		-	5	209	41	255

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

Sl.No	Name of Village	Village – wise No. of cattle's or Type of animals								Total
		Cows	Buffaloes	Goats	Sheep	Bulls/Oxen	Camels	Hens / Cocks	Others	
1	Hatikhuli	300	-	370	-	-	-	1612	-	2082

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

Sl.No	Infrastructure	Location	Distance from village, if in another location (in Kilometers)	Condition and status of present use
1	Main Road	NH	7 Km	Good
2	Electricity	Lumding	9 Km	Good
3	Gas connection	Lumding	9 Km	Good
4	Transport	Lumding	9 Km	Good
5	Primary Health Centre	Lumding	9KM	Poor
6	School (LP)	Hatikhuli Village	Local	Good
7	Post Office	Lumding	9KM	Good
8	Bank	SBI, UBI,ICICI,AGVB,CBI,(Lumding)	9KM	Good
9	Phone	Lumding	9 Km	Good
10	Anganwadi Centre	Hatikhuli Village	0.5 Km	Good
11	Gram Panchayat Office	Pachim Lumding	2 Km	Good

12	Police Office	Lumding	4 Km	Good
13	Forest Office (Beat)	Borlongphar	4 Km	Good
14	Post Office	Lumding	9Km	Poor
15	Bus facility	Lumding	9Km	Poor
16	Railway Station	Lumding	9Km	Good
17	Drinking Water	Ring well (31 Nos)	Under Village area	Average
18	JFMC assets community hall petromax loudspeaker utensils etc.	Inside		Poor
19	District Head Quarter	Hojai	62Km	Good

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)
Kharif	Paddy(Aijong,Pankaj)	33.40	-	-
Rabi	Mustard	32	-	-
Others	Vegetable, Fruits	85.12	-	-

Table 7: Crop production profile of HATIKHULI JFMC:

Table 7 Crop production profile of Hatikhuli JFMC

Type of crop	Total Production (approx) in quintals	No of household growing	Average production (quintal/ hac) approx	Area under crop (hac) approx
Paddy	3192	266	95.57	33.40
Oil seeds	200	201	6.25	32
Vegetable	1064	266	12.5	85.12

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

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

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

For purchase	Location	Distance from village if in other village kilometer
Grocery Shop/PDS center	Lumding Town	9 km
Weekly Market	Lumding Town	9 km
Major Market	Lumding Town	9 km
Other Specify	-	-

Table 10: Water Resources Facility:*Table 10: showing the water resource facility available in the village*

Water Source	Number	Water Availability (Adequacy, seasonality)	Uses (drinking, irrigation, livestock bathing)
Tube well	4	Adequacy	Drinking, bathing
River/Nala	1	Seasonality	Bathing
Spring	-	-	-
Canal	-	-	-

Water Reservoir	-	-	-
Other, pl specify, Ring well	30 (Individual),1(Govt Source)	Adequacy	Drinking

Table 11: Energy consumption:

Table11 showing the Energy Consumption of the JFMC

Type of fuel	Number of household depending	Number of months dependent	Source (local village, forest, other source)	Major/Secondary
Fuel wood	100% (266 HHs)	12 month	Forest	Major
Kerosene stove	67.66%(180 HHs)	12 month	Pvt	Secondary
Gobar/Bio Gas	-	-	-	-
Cow dung cake	-	-	-	-
LPG	30% (80HHs)	12 month	Govt	Secondary
Electric Heater	-	-	-	-
Other, pl specify, Solar	-	-	-	-

RECORD: II

LIVELIHOOD OPPORTUNITY ANALYSIS

Table 12: Agriculture and Horticulture:

Table 12: showing the agricultural and horticultural status

Constraints	Reason	Opportunities	Programme
Low Production	<ul style="list-style-type: none"> Traditional way of cultivation. Only one crop undertaken annually (Sali) Very negligible use of fertilizers and pesticides, insecticides. Lack of irrigation facilities. 	<ul style="list-style-type: none"> Application of proper and controlled pesticides and insecticides. Introduction of new and advance technology. Well-structured training programme. The villagers are inherited with the skill of cultivation. But an improvisation of skills is 	<ul style="list-style-type: none"> Tractor operation training Agro-skill development programme. Training on

	<ul style="list-style-type: none"> Lack of agricultural infrastructure, modern tools and equipment's viz, power tillers, tractors etc. Non usages of high yielding seeds. 	<ul style="list-style-type: none"> the need of the hour. Usage of high yielding seed programme. 	insecticides, pesticides, hybrid cultivation
Storage and Production	<ul style="list-style-type: none"> Lack of common storing place Lack of cold storage facility due to non-availability of electricity 	<ul style="list-style-type: none"> Helpful in preserving unsold products for a longer period of time. They can store their product and sell it when there is a higher demand. 	<ul style="list-style-type: none"> Packaging Transportation and distribution.
Marketing	<ul style="list-style-type: none"> Lack of transporting facilities for carrying products Less contact with the direct market; much dependency upon middle man No knowledge on marketing know-how, dependence on traditional system of selling. 	<ul style="list-style-type: none"> Smooth transportation facility will help the farmers to carry their products to the nearby markets. Generate highest market price by removing middle men. More knowledge about the current market situation as well as the current value of their products. They can sell their products outside of the state, as the JFMC is located in Assam West Bengal border and Bhutan border is also not far from it. 	<ul style="list-style-type: none"> Buyers sellers meet

Table 13: Livestock

Table 13 Livestock

Constraints	Reasons	Opportunities	Programme
Less grazing land	<ul style="list-style-type: none"> Not Applicable 		
Availability of fodder	<ul style="list-style-type: none"> Unable to buy fodder from market due to poor financial condition Trees fodder and 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"> High income from livestock rearing. The villagers can make it as an alternative livelihood opportunity if they have the easy access of livestock fodder. 	
Veterinary care facility	<ul style="list-style-type: none"> No veterinary care clinic Lack of knowledge about the proper rearing of live stock 	<ul style="list-style-type: none"> Disease control Increases the life span of cattle. It will also help to 	

		aware the villagers and will encourage them for livestock rearing.	
Production of milk	<ul style="list-style-type: none"> Less availability of fodder No scientific knowledge on cattle rearing to increase the milk production. 	<ul style="list-style-type: none"> Training on the milk production can enhance the skill of milk production. Availability of supplements like cattle “Milk Booster, Milk Plus” etc. can increase the production of milk in the area. 	
Milk market	<ul style="list-style-type: none"> Less contact with the direct market for milk Unaware of the market demand of different milk made products. 	<ul style="list-style-type: none"> A huge demanded market for milk is available 	

Table 13: NWFP

Table 14 NWFP

Constraints	Reasons	Opportunities	Programme
Less collection	<ul style="list-style-type: none"> Less availability of NWFP 	<ul style="list-style-type: none"> Availability of fertile fallow land 	<ul style="list-style-type: none"> Plantation of 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 	<ul style="list-style-type: none">
Low rates	<ul style="list-style-type: none"> NA 	<ul style="list-style-type: none"> 	<ul style="list-style-type: none">
Value addition	<ul style="list-style-type: none"> No processing units Non availability of required resources No technical know-how 	<ul style="list-style-type: none"> 	<ul style="list-style-type: none">

Table 15: Specialised skill

Table 15: Specialised skills: Driving

Constraints	Reasons	Opportunities	Programme
Training Centre	<ul style="list-style-type: none"> Non-Availability of Well-equipped training centre Lack of Proper Knowledge of the utilisation of the skill 	<ul style="list-style-type: none"> A majority of Youth is interested in Driving Training This Skill is creative and Productive and there are abundant opportunities for 	<ul style="list-style-type: none"> Driving Training

		a Driver today's market.	
Trainer quality	<ul style="list-style-type: none"> Absence of High Quality of Trainers Non usage of modern automobile products 	<ul style="list-style-type: none"> Developing Quality Products for new automobile exploration. 	<ul style="list-style-type: none"> Training on Modern Tools and Equipment. Providing expert trainers to the villagers
Credit facilities	<ul style="list-style-type: none"> No linkage with the banks or post office saving banks. Unaware of the development schemes of banks and government 	<ul style="list-style-type: none"> Financial assistance by the Govt. Providing easy access to credit. 	<ul style="list-style-type: none"> Microfinance, Term Loans, Working Capital Arrangement
Absence of Govt. Technical Institutions	<ul style="list-style-type: none"> Non availability of ITI (Industrial Training Institute). Lack of concept for the value of such modernised trainings 	<ul style="list-style-type: none"> Developing Demand Based Modern Institutes for proper and expert trainings both nationally and overseas. 	<ul style="list-style-type: none"> Skill Upgradation & Training on New Automobile Technology and the demand in the Global Market.

Table 16: Credit facility

Table 16 Credit facility

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