

**DHEKIAJAN RAJALI JOINT FOREST MANAGEMENT COMMITTEE (JFMC)  
DIGBOI FOREST DIVISION**

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

**Prepared by  
Dhekiajan Rajali Joint Forest Management Committee**

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

**July 2017**

  
**Divisional Forest Officer  
Digboi Division, Digboi  
Tinsukia, Assam**

## 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>CML</b>	Centre for Microfinance and Livelihood
<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>	Kilometer
<b>MT</b>	Metric Ton
<b>NGO</b>	Non-Governmental Organization
<b>NTFP</b>	Non Timber Forest Product
<b>NWFP</b>	Non Wood Forest Product
<b>PDS</b>	Public Distribution System
<b>PRA</b>	Participatory Rural Appraisal
<b>RGVN</b>	Rashtriya Gramin Vikas Nidhi
<b>Rs.</b>	Indian Rupees
<b>SHG</b>	Self Help Group
<b>VCDC</b>	Village Council Development Committee

**DHEKIAJAN RAJALI JOINT FOREST MANAGEMENT COMMITTEE  
DIGBOI Forest Division**

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

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## 1. Introduction

<p><b>About the Project</b></p>	<p>The vision of the Assam Project on Forest and Biodiversity Conservation (APFBC) is ‘to enable sustainable forest and biodiversity conservation and management in Assam through multi-scale integrative planning and involvement of forest dependent communities in target areas and giving fillip to their livelihood activities through sustainable use of forest and non-forest resources’. The project’s objective has been stated as: ‘In collaboration with the forest dependent communities, to restore forest eco-systems to enhance the forest dependent community’s livelihoods and ensure conservation and sustainable use of biodiversity’.</p> <p>The above project is being mainly funded by the <i>Agence France de Development (AFD)</i> - i.e. the French Development Agency, with cofounding from the Government of Assam. The Assam Project on Forest and Biodiversity Conservation Society (APFBC Society) has the mandate for planning, implementation, monitoring, coordination and management of all the activities under the above mentioned project.</p>
<p><b>Micro-Planning &amp; Livelihood Development</b></p>	<p>In order to promote livelihood activities through market potential based value addition; the present project intends to take up activities like entrepreneurship promotion, product processing value addition and marketing under this project. This has become necessary on account of the pressures on existing forest resources due to the growth of population. There is a need to explore value addition to the existing forest and biodiversity products and services, based on the market potential. In addition, non-forest based livelihoods need to be explored and the capacities of the community members need to be built-up through skills development initiatives.</p> <p>A consortium comprising of Indian Institute of Entrepreneurship (IIE) Guwahati, <i>RashtriyaGraminVikasNidhi (RGVN)</i> 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 ‘<b>various operations of village and forest development ... livelihood support of forest dependent members and keeping sustainable forest management as the broad objective</b>’. It includes both forest development and livelihood development.</p>
<p><b>Micro-Plan for the Dhekiajan Rajali JFMC</b></p>	<p>This document gives the Micro-Plan for the <b>DhekiajanRajali JFMC</b>, which is located in the Tinsukia district of Assam. The JFMC falls under the jurisdiction of the Digboi Forest Division of the Eastern 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 within the JFMC, 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 <b>Indian Institute of Entrepreneurship (IIE) Guwahati in April 2017</b>. The micro-plan has been compiled by IIE based on the project guidelines. The document has been discussed and finalized for adoption in <b>23.04.2017</b>.</p>

## 2. Village Socio-Economic Profile

<b>Location</b>	The DhekiajanRajali Joint Forest Management Committee (JFMC) has been formed to cover the existing community dwelling in MulokGaon, KhalGaon, Nepali Gaon, ChristanGaon Village located on the fringe of the Digboi Forest Range, Digboi Division. The area covered by the above JFMC falls within the Margherita Revenue Circle of Tinsukia District of Assam.																						
<b>Key Information</b>	<p>The key information of the JFMC is furnished below.</p> <p style="text-align: center;"><b>Table-A: Key Information of the JFMC</b></p> <table border="1" data-bbox="313 506 1203 1213"> <tr> <td><b>Name of the JFMC</b></td> <td>DhekiajanRajali</td> </tr> <tr> <td><b>Habitation</b></td> <td>DhekiajanRajali</td> </tr> <tr> <td><b>Name of Revenue Village</b></td> <td>-</td> </tr> <tr> <td><b>Name of the Gram Panchayat / VCDC</b></td> <td>Golai</td> </tr> <tr> <td><b>Revenue Circle</b></td> <td>Margherita</td> </tr> <tr> <td><b>District</b></td> <td>Tinsukia</td> </tr> <tr> <td><b>Forest Division</b></td> <td>Digboi</td> </tr> <tr> <td><b>Forest Range</b></td> <td>Digboi</td> </tr> <tr> <td><b>Forest Beat</b></td> <td>Raja Ali</td> </tr> <tr> <td><b>Year Formed</b></td> <td>2015-2016</td> </tr> <tr> <td><b>Description of Boundary of JFMC</b></td> <td>As below North: Upper Dihing East Block Dibru River South: Digboi Oil Field /DigboiPangeri Road West : BhimPathar Forest Village East: Upper Dihing East Block Rajali Forest Village.</td> </tr> </table> <p><b>Source:</b> JFMC Records &amp; Discussions during PRA Exercise in 23<sup>rd</sup> April 2017 Additional details are given at <b>Table-1</b> of Record-I. (Given at Annexure)</p>	<b>Name of the JFMC</b>	DhekiajanRajali	<b>Habitation</b>	DhekiajanRajali	<b>Name of Revenue Village</b>	-	<b>Name of the Gram Panchayat / VCDC</b>	Golai	<b>Revenue Circle</b>	Margherita	<b>District</b>	Tinsukia	<b>Forest Division</b>	Digboi	<b>Forest Range</b>	Digboi	<b>Forest Beat</b>	Raja Ali	<b>Year Formed</b>	2015-2016	<b>Description of Boundary of JFMC</b>	As below North: Upper Dihing East Block Dibru River South: Digboi Oil Field /DigboiPangeri Road West : BhimPathar Forest Village East: Upper Dihing East Block Rajali Forest Village.
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<b>Brief Details of the Executive Committee &amp; General Body</b>	<p>The brief details of Executive Committee &amp; General Body of the JFMC are contained in the table, which is given below.</p> <p style="text-align: center;"><b>Table-B: Brief Details of Executive Committee &amp; general Body</b></p> <table border="1" data-bbox="313 1423 1203 1686"> <tr> <td><b>Name of President</b></td> <td>Mr. DigantaSonowal</td> </tr> <tr> <td><b>Name of Secretary</b></td> <td>Miss Parineeta Singh</td> </tr> <tr> <td><b>No. of Members in Executive Committee</b></td> <td>Male: 6 Female: 4 Total- 10</td> </tr> <tr> <td><b>No. of Members in the General Body</b></td> <td>300 (The number represents head of each household of under the JFMC)</td> </tr> </table> <p><b>Source:</b> JFMC Records</p>	<b>Name of President</b>	Mr. DigantaSonowal	<b>Name of Secretary</b>	Miss Parineeta Singh	<b>No. of Members in Executive Committee</b>	Male: 6 Female: 4 Total- 10	<b>No. of Members in the General Body</b>	300 (The number represents head of each household of under the JFMC)														
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<p><b>Households &amp; Population Structure</b></p>	<p>The JFMC has 300 households, of which 270 households are BPL (Below Poverty Line) households. The total population is 1490, of which 855 are males and 635 are female members. Majority of the village population belongs to ST community and few households belong to OBC community. <b>Table-2</b> of Record-I may be referred for further details in the above regard. From this, it is inferred that:</p> <p>(1) The average number of persons in a household is 4.96  (2)The sex ratio is 742 females per 1000 males in the village.</p>
<p><b>Education &amp; Skills Development</b></p>	<p>Over 96 % of the population is reported to be literate. Most of the community members have received school level education. On the other hand, relatively smaller amount of households have college educated members. Livelihood skills are usually acquired under various settings – formal &amp; informal. In the JFMC area, informal means for skills development is the traditional norm. People have traditional skills in the following areas:</p> <p>a) Livestock  b) Weaving  c) Cane and Bamboo</p> <p>Government has been active in promoting formal skills development programmes in the country as well as in the state. However, no such programmes have been carried out in the habitation or in nearby areas.</p>
<p><b>Soil</b></p>	<p>The soil type of the project area includes:  The area situated on a layer of clay soil of light yellowish and dark grayish colour up to a depth of about 2.5 m, then a layer of sand (Quartz) up to about 16 m and an under layer of clay, grayish m colour hard and sticky. The soil is found usually acidic in reaction. The major soil groups are (i) new alluvial soil (ii) old alluvial soil, (iii) piedmont soils and (iv) red loamy soil.</p> <p>The soil is reported to be fertile and support various types of crops and different vegetation which includes Radish, Pumpkin, Brinjal, Potato etc.</p>
<p><b>Water</b></p>	<p>The DhekiajanRajali villages have access to few water resources and area is drained by Panipungjan Rivulet.</p>
<p><b>Climate: Temperature &amp; Rainfall</b></p>	<p>The maximum <b>temperature</b> during the summer reaches 34° C. The minimum temperature during the winter is 8-12 ° C.</p> <p>The annual <b>rainfall</b> is about 59-160 cm. About two-thirds of the rainfall usually occurs during the rainy season (June). The village has high levels of <b>humidity</b> (over 90%) during the rainy months and low levels in the winter (Below 30%).</p>
<p><b>Forest &amp; Biodiversity</b></p>	<p>The local forests have been broadly classified as Alluvial Plain Sal Forest and Eastern Terrain Sal Forests. The main tree species Hollong, Titasopa, Holokh, Ajar, Uriam, Bonbogori, Khokon, Nahoretc.The forests can yield a range of NTFP like spices, leafy vegetables, ferns, medicinal plants, bamboo, thatch, fodder, etc.</p> <p>Additional details in this regard are given at the ‘Forest Development Plan’.</p>
<p><b>Land Use Pattern</b></p>	<p><b>Appendix-2</b> gives the land-use pattern of the village. From the same, it is seen that the land-use in the village is as follows:  Paddy: 80%  Road:1.43%  Settlement:18.31%</p>

<b>Land Holdings</b>	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: <ul style="list-style-type: none"> <li>• 100 % of the households are marginal farmers (less than 2 Ha)</li> </ul>
<b>Livestock</b>	The total number of livestock in the village is 1405. The main types of livestock possessed by the households include: Cows: 360 Goats: 230 Bulls: 170 <b>Table-4</b> of Record-I may be referred to for the details in the above connection.
<b>Village Infrastructure &amp; Communication Facilities</b>	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. From the above table, the following have been noted with regard to village infrastructure: <b>Physical Infrastructure:</b> The peoples are deprived of basic physical infrastructure. There is absence of basic physical infrastructure like paved roads, Bank etc. <b>Education &amp; Health Facilities:</b> The education system of this village is not so satisfactory. There are minimal educational facilities. There is only one primary school present inside the JFMC area. Public transport is available but it cannot be said as much as good and the community members have to use bike and bicycles to move around. <b>Govt. Offices:</b> The government offices (such as Police station, Gram Panchayat office, Revenue office, Forest Range office etc.) are not located at a considerable distance, which gets augmented as the villagers do not have access to regular public transport from either the habitation or from nearby areas. <b>Financial Inclusion:</b> Facilities for financial inclusion like bank is not located at a considerable distance from the habitation.
<b>Agricultural Crops</b>	The details of the agricultural crops grown in the village is available at <b>Table6</b> of Record-I. The above shows that the following are the main crops grown in the village. <ol style="list-style-type: none"> <li>a) Kharif Crops: Paddy-Sali;</li> <li>b) Rabi Crops: Seasonal Vegetables- Potato, Mustard, Brinjal, Pumpkin, Radish etc.</li> </ol>
<b>Crop Production Profile</b>	<b>Table-7</b> of Record-I may be referred to for the production and yield details of the crops grown in the village. The maximum numbers of households are involved in growing crops like 65. The production and yield of these crops is given as follows: <ol style="list-style-type: none"> <li>(a) Paddy: 25ha.</li> <li>(b) Vegetable: 10ha.</li> <li>(c) Tea: 30ha.</li> </ol>
<b>Fodder Availability</b>	The matter of fodder availability in the village is dealt with at <b>Table-8</b> of Record-I. The above shows that the main sources of fodder in the village are as follows: <ol style="list-style-type: none"> <li>a) Paddy Waste</li> <li>b) Household Kitchen Waste</li> <li>c) Surplus Vegetables</li> <li>d) Grazing Land</li> <li>e) Forest</li> </ol>
<b>Markets</b>	<b>Table-9</b> of Record-I shows the location of the different markets from the village. The main markets used by the community are as follows: <ol style="list-style-type: none"> <li>(a) Grocery / PDS: Muliabari, Bapabung 6-7 Km</li> <li>(b) Weekly / Bi-weekly Market: Pengaree at 4Km</li> <li>(c) Major Market: DigboiChariali Bazar at Km</li> </ol>

<b>Water Resources</b>	The water resources are tabulated at <b>Table-10</b> of Record-I. The main water resources with the water availability is as follows: (a) River Water (Water Availability: <del>Perennial</del> / Seasonal) (b) Tube well (Water Availability: Perennial / <del>Seasonal</del> )
<b>Energy Consumption</b>	<b>Table-11</b> of Record-I shows the major sources of energy in the village. The same have been listed below. a) Fuel Wood- 195 Nos. Source: Forest Plantation b) LPG- 105 Nos.
<b>Socio-economic status</b>	<b>Social set-up:</b> The village is inhabited by tribal and Non tribal community and is comprised of OBC and Schedule Tribe. The society is not marked by deep social divisions. The observed position of women is satisfactory. <b>Economic Condition:</b> The economic position is / is not satisfactory. The main livelihood is tea plantation and vegetable Cultivation. The household earn from a minimum of Rs. 50,000 to a maximum 60,000 per year. Additional details are available at the next section.
<b>Maps</b>	<b>Appendix-1</b> gives the following maps, based on PRA exercise: <ul style="list-style-type: none"> <li>• Village Map</li> <li>• Village Social Map (with the names and particulars of members in PRA)</li> <li>• Village Resource Map</li> </ul>

### 3. Livelihood Opportunity Analysis

<b>PRA Exercise</b>	Team from IIE Guwahati carried out PRA exercise in KhalgaonDhekiajan village as follows: <b>Date:</b> 23 <sup>rd</sup> of April, 2017 <b>Location:</b> Primary School,DhekiajanRajali Village, <b>Numbers Present: 30</b> <b>In Presence of:</b> JFMC office bearers, Village Headman, community members, Forest Department personnel, etc.
<b>Objective of PRA</b>	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.
<b>Tools Used &amp; Outcomes of the PRA</b>	Different tools were used and outcomes obtained. These include: Social Mapping Wealth Ranking Time Line review Seasonality of Livelihoods Venn Diagram <b>Appendix-3</b> furnishes detailed information of the above.
<b>Ranking</b>	Ranking exercise has been done for the following: <ul style="list-style-type: none"> <li>• <b>Livelihoods &amp; Skills Development</b></li> <li>• <b>Entry Point Activities (EPA)</b></li> </ul> <b>Appendix-3</b> elaborates the above. From the same, it is stated that: Ranking of Livelihoods & Skills Development <ol style="list-style-type: none"> <li>1. Agriculture</li> <li>2. Weaving/Handloom in Modern Tools</li> <li>3. Tailoring</li> <li>4. Driving</li> <li>5. Welding</li> </ol>



<b>Ranking of EPA</b>			
	<b>Village EPA as ranked</b>	<b>Details (Appendix-3 has additional particulars)</b>	<b>Probable source of funding/dept</b>
1.	Community Hall	Community hall with infrastructure facility and sanitation facility nearby	APFBC
2.	Drinking Water Facility	At least 100 tube well to be provided for BPL families of four villages.	APFBC/ PHED
3.	LPG connection with cylinder	At least 100 LPG connections with cylinder to be provided for BPL families of four villages.	APFBC/ UJJWALA
4.	Solar light connection	At least 50 Solar Light should be set up within the main point of 4 village	APFBC/MNRE/NABARD
5.	School Boundary	Construction of two school Boundary namely DhekiajanMadhabdebPrathamikBidiyalya and MulukGaonMadhabdebPrathamikBidiyalya	SSA
6.	Tent House	A tent house along with Chairs and Utensils	APFBC
7.	Watch Tower	At least 4 Watch tower should be set within the JFMC	APFBC
8.	School Boundary	Construction of two school Boundary namely DhekiajanMadhabdebPrathamikBidiyalya and MulukGaonMadhabdebPrathamikBidiyalya	SSA

**Ranking of Livelihoods & Skills Development**

1. Tea Wage earning.
2. Cane & Bamboo.
3. Farming.
4. Handloom.
5. Tailoring

<p><b>Livelihood opportunities</b></p>	<p>Livelihood Opportunities were identified as follows:</p> <ul style="list-style-type: none"> <li>• Agriculture &amp; Horticulture</li> <li>• Livestock</li> <li>• NTFP</li> <li>• Skills Development</li> <li>• Credit Facility</li> </ul> <p>Additional discussion about the above has been given below.</p>
<p><b>Agriculture</b></p>	<p><b>Table-12</b> under Record-2 may be seen in this connection for opportunities in the areas of agriculture and horticulture. The main constraints are: a)Low Production b) Storage &amp; processing c) Marketing The opportunities are: a) Increase annual crop cycle b) Collection Unit, Packaging c) Institutional linkage for marketable outputs</p> <p>The suggested programme is:</p> <ul style="list-style-type: none"> <li>• Agri-skill development programme.</li> <li>• Training on insecticides, pesticides, hybrid cultivation etc.</li> <li>• Irrigation</li> <li>• Credit facilities.</li> </ul>
<p><b>Livestock</b></p>	<p><b>Table-13</b> furnishes additional information about opportunities for livestock rearing. The main constraints are: (a) Unable to buy fodder from market due to poor financial condition and less supply. (b) Trees fodder and crop residue are available only for 3-6 months. Green fodder is also not available for the whole year. (c) No veterinary care clinic (d) Lack of knowledge about the proper rearing of live stock</p> <p>The opportunities are: (a) Higher income from livestock rearing. (b) A huge demand for livestock products like pork, chicken, eggs, etc in the nearby markets.</p> <p>The suggested programme is: (a) High Yielding Variety Pig Rearing (b) High Yielding Variety Poultry Rearing</p>
<p><b>NTFP</b></p>	<p>The opportunities for NTFP are tabulated at <b>Table-14</b> under Record-2 <b>The main constraints are:</b> (a) Less availability of NWFP (b) No technical know-how (c) No processing units <b>The opportunities is:</b> (a) Availability of fertile fallow land (b) Generation of Livelihood from collection <b>The suggested programme are:</b></p>

	<p>a) Plantation of Food plants, Fodder, Etc  b) Medicinal Plants and aromatic plants  c) Herbal plants</p>
<b>Specialized Skills</b>	<p>For skills development, the opportunities are tabulated at <b>Table-15</b> under Record2  The main constraints are:  (a) Lack of product diversification  (b) Lack of research on product quality  (c) Lack of TQM techniques.  The opportunities are:  (a) Providing good communication facility  (b) Training of the skill holder  (c) Financial assistance from govt.  The suggested programme are:  <ul style="list-style-type: none"> <li>• Training on Modern Tools and Equipment</li> <li>• Providing modern technology to the villagers</li> <li>• Skill Up gradation &amp; Training on New Product Development and Product Diversification</li> <li>• Setting up a raw material bank</li> <li>• Providing a bulk buy arrangement of the finished product with institutional buyers.</li> </ul> </p>
<b>Credit Facility</b>	<p><b>Table-16</b> under Record-2 discusses this aspect.  The main constraints with the reasons are:  (a) Financial exclusion  (b) Involvement of unorganized money lender  (c) Lack of Credit Appraisal    The opportunities are:  (a)Setting up modern financial institution (b)Adequate awareness.  The suggested programmes are:  (a) Setting up modern financial institution in the nearby areas.  (b) Financial Inclusion Initiatives</p>
<b>Strategic Interventions</b>	<p>Summarizing the suggested programme at above as strategic interventions for the Livelihood Development Plan:  <b>1. Agriculture &amp; Horticulture:</b> Tractor operation training, Agri-skill development programme, Training on insecticides, pesticides, hybrid cultivation  <b>2. Livestock:</b> Piggery, Poultry  <b>3. NWFP :</b> Plantation of Food plants, Medicinal Plant etc.  <b>4. Skill Development:</b> Weaving. Tailoring .Electrician.  <b>5. Credit facility:</b> Setting up modern financial institution in the nearby areas</p>

#### 4. Livelihood Development Plan

<b>Income Generating Activities</b>	<p>The main income generating activities as planned at the village are:</p> <p><b>Farm Sector :</b></p> <ol style="list-style-type: none"> <li>1. Poultry and Piggery</li> <li>2. Agriculture</li> </ol> <p><b>Non-Farm sector:</b></p> <ol style="list-style-type: none"> <li>1. Handloom/ Weaving</li> <li>2. Heavy Motor Driving</li> <li>3. Welding</li> </ol> <p><b>Source:</b> Table-32 of Record-4</p>
<b>SHG Activities</b>	<p>SHGs of the village can plan the following activities:</p> <ol style="list-style-type: none"> <li>1. To generate entrepreneurial awareness</li> <li>2. To organize and form Joint Liability Groups(JLG)</li> <li>3. To involve the villagers in Livelihood Activities collectively.</li> </ol> <p><b>Source:</b> Table-33 of Record-4</p>
<b>Exposure Trips</b>	<p>The following exposure trips are planned:</p> <p>At least two Exposure tips to Successful JFMC, within Assam and other States.</p> <p><b>Source:</b> Table-34 of Record-4</p>
<b>Summary of Action Plan</b>	<p>As attached in next page.</p>
<b>Convergence</b>	<p>The planned initiatives may be converged with the following schemes of the Government of India:</p> <ol style="list-style-type: none"> <li>(a) National Rural Employment Guarantee Scheme - for rural employment</li> <li>(b) RashtriyaKrishiVikasYojana (RKVY) - for agricultural and allied development</li> <li>(c) RashtriyaKrishiSinchayYojana (RKSJ) - for irrigation, including watershed development</li> <li>(d) National Rural Livelihoods Mission</li> <li>(e) Skills Development Programme</li> <li>(f) Help from departments of education, Sericulture, Veterinary, Irrigation, Industrial and Fishery.</li> <li>(g) Other schemes for rural development and livelihoods as found appropriate.</li> </ol> <p>The above convergence will yield synergies for the present plan, as well as help in sustaining the planned works in the post-project period.</p>

## 5. Forest Development Plan

This Forest Development Plan has been prepared after a detailed PRA exercise at the village level as a part of the Micro-Plan of DhekiajanRajali 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 DhekiajanRajali JFMC:

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

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

### **1.1. Forests & Their Conditions**

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

**Table-1: Conditions of the Forests of DhekiajanRajali JFMC**

<b>Identification</b>	<b>Area of JFMC Forest (Ha)</b>	<b>Distance from Village (Km)</b>	<b>Condition of Forest</b> [Good - Forest with crown density of 40% of more Else 'Degraded']	<b>Frequency of Use by Community</b> [2-3 m / 3-6 m / 6-9 m / Over 9 m]
<b>(A) Assigned Forest</b>				
RF / PRF Name: UDRF (EB) Beat Name- Raja Ali	300 Ha	500mtr	Good Area: 250 Ha Degraded Area:50 Ha	Over 9 m
<b>(B) Other Planted Area (UDRF EastBlock)</b>	50 Ha	Within 100 mtr	Good Area: 10 Ha Degraded Area:10 Ha	Nil
<b>TOTAL</b>	350 Ha		Good Area:260 Ha Degraded Area: 60 Ha	

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

It is seen that the DhekiajanRajali JFMC has 350 Ha forests assigned to them, of which 260 Ha is 'Good' and 60 Ha 'Degraded'.

### **1.2. Forest Soil Type**

The forests of DhekiajanRajali JFMC are located in in old alluvial soil, (iii) piedmont soils and (iv) red loamy soil. Some salient points of the forest soil type have been given in the following table.

**Table-2: Forest Soil Type in DhekiajanRajali JFMC**

<b>Parameter</b>	<b>Status in Assigned Forests</b>	<b>Status in Other Planted Areas</b>
Fertility Level	High	High
Soil Erosion Status	No Soil Erosion	No Soil Erosion
Presence of:		
(a) Silt	Nil	Nil

(b) Mud-flat	Nil	Nil
(c) Newly accreted land	Nil	Nil
(d) Sand dune	Nil	Nil

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

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

- (a) The Red Soil is Fertile in Nature
- (b) No Soil Erosion in the recent past
- (c) No Presence Silt, Mud-flat, newly accreted land or Sand dune

### 1.3.Existing Composition of Flora

In the forests of the DhekiajanRajali JFMC, the existing composition of the flora has been given as follows. It may be noted that the local forests are classified as Upper Assam Tropical Wet Evergreen Forest.

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

Parameter	Local Name(s)	Botanical Name(s)
Major Forest Species	Hollong	<i>Dipterocarpusmacrocarpus</i>
Associates	Hollock	<i>Terminaliamyriocarpa</i>
	Ajar	<i>LagrsroomiaSpeciosa</i>
	Arjun	<i>Terminaliaarjuna</i>
	Udal	<i>SterculiaVillosa</i>
	Simul	<i>Bombaxceiba</i>
	Bakul	<i>Mimusopselengi</i>
	Siris	<i>Albizialebeck</i>
	Dhuna	<i>Canariumbengalenses</i>
	Sam	<i>Artocarpuschapasha</i>
	Nahar	<i>Mesuaferrea</i>
Shrubs	Sassi	<i>Aqeilatiaagallecha</i>
	Betibah	<i>Bambusamastersii</i>
	Bhekuri	<i>Solanumindicum</i>
	Bajal bah	<i>Pseudostachyumpolymorphum</i>
	Bor-manmani	<i>Centellaasiatica</i>
	Ekra, bata	<i>Sclerostachyafusca (Syn:-Saccharum</i>

Medicinal Plants	Hilikha	<i>Terminaliachebula</i>
	Bhomora, Bahera	<i>Terminaliabelerica</i>
	Thutmala	<i>Garugapinnata</i>
	Dalchini	<i>Cinnamomumzeylanicum</i>
Produce	Bamboo- Jati bah Kakobah	<i>Bambusa</i> <i>Dendrocalamushamiltonii</i> <i>tulda</i>
	Bet- Jati bet Lejai bet	<i>Rangi bet</i> <i>Calamusfloribundus</i> <i>Calamusfloribundus</i>
Others, if any	-	-

**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 DhekiajanRajali JFMC.

### **2.1. Past Protection Measures of the JFMC**

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

- (a) Number of households involved: 300
- (b) Number of people involved: 1490
- (c) Summary of the measures: There are no such record of \protection measures taken by the members of the JFMC before formation of the JFMC.
- (d) Any formal mechanism: Nil

[Source: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 DhekiajanRajali JFMC**

Name of Forest Produce	Average Household Requirement		How met at Present	Source
	Frequency of Requirement	Approx. Qty/year		
Firewood	100%	550 kg to 730 kg	Cutting poles & Branches of trees	Reserved Forest Area
Timber for House (pole size)	60%	4 to 5 numbers	Do	Do
Small timber for Implements	100%	0.3 m <sup>3</sup> to 0.45 m <sup>3</sup>	Do	Do
Bamboo	60% to 70%	50 to 60 numbers	Cutting of culms	Do
Fodder from Forest	100%	2190 kg	Cutting of grass, leaves and straying of cattle	Do
NTFP	100%	182 to 200 kg	Collecting manually	Do
Other				

**Source:** Discussions with Forest Department personnel & Community members

There are 300 households in the DhekiajanRajali JFMC. From the above table and this number of households, it is inferred that the total annual requirements of the DhekiajanRajali village for forest produce for own use is as follows:

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

Name of Forest Produce	Community Requirement (Kg per annum) (*)	Remarks
Firewood	55000 to 73000 kg	The villages use firewood besides LPG @ 1.5 kg to 2 kg per day
Timber for House (Pole size)	240 to 300 numbers	-
Small Timber for Implements	30 to 45 m <sup>3</sup>	-
Pole / Bamboo	3000 to 4200 bamboo	Used for Fencing, construction of houses and articles
Fodder from Forest	219000 kg	-
NTFP	18200 kg to 20000 kg	-



Other	-	-
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### 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 DhekiajanRajali JFMC is given in the following table.

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

Name of Forest Produce	Collection for Marketing			Location of Collection
	Season / Months	No of Households Collecting	Average Qty. Collected (Kg) / year	
Firewood	Oct to March	10% to 20 %	4800 kg to 9600 kg	Forest
Timber for House	-	-	-	-
Small timber for Implements	-	-	-	-
Bamboo	Oct to March	10%	4800 numbers	Forest Area
Pole	-	-	-	-
Fodder from Forest	-	-	-	-
NTFP	Throughout the Year	40%	480 kg	Forest
Other	-	-	-	-

**Source:** Discussions with Forest Department personnel & Community members

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

Name of Forest Produce	Surplus Marketed	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	-	-	-
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## 2.4.Total Requirements of Forest Produce - Domestic Use & Marketing

The total requirements of forest produce by the community members of the DhekiajanRajali 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 DhekiajanRajali 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	-	-	-
Timber for House	-	-	-
Small timber for Implements	-	-	-
Bamboo	-	-	-
Pole	-	-	-
Fodder from Forest	-	-	-
NTFP	-	-	-
Other	-	-	-

## 3.Forest Protection Issues

### 3.1.Protection Problems

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

**Table-7: Protection Problems of the DhekiajanRajali JFMC**

Type of Problem	Relevant (Yes / No)	Significant (Yes / No)
Grazing - Local Animals	Yes	Yes
Grazing - Animals from Other Area	No	No
Illicit Felling of Timber	Yes	No
Smuggling of Timber	No	No
Accidental Fires	No	No
Encroachment of Forest Lands	Yes	No
Others(Poaching of wild animals)	Yes	No

**Source:** Discussions with Forest Department personnel & Community members

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

**(a) Grazing of Local Domestic Animals**

**3.2.Reasons for Degradation of the Forest**

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

(a) Grazing of Local Domestic Animals

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

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

**Table-8: Protection Plan of the DhekiajanRajaliJFMC**

<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	UDRF (EB), GPS Co-ordinates	Length= Breath= Area=350 hct	Grazing Season	High
Fire Protection	Nil	Nil	Nil	Nil

**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 DhekiajanRajali JFMC (with high / medium priority) are as follows:

- (a) Social 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 DhekiajanRajali JFMC are given hereunder.

**Table-9: Types of Operations Proposed in the DhekiajanRajaliJFMC**

Treatment	Required (Yes/ No)	Responsibility of JFMC (Yes / No)	Month / Year when can be done	Extent of Area proposed for Treatment (Ha)
Restoration of Degraded Forests	Yes	Yes	March- July	50 Ha
Protection to Cut Stumps of Trees	No	No	No	No
Watershed Treatment	No	No	No	No
Water Reservoirs	No	No	No	No
Grass & Silvi-pasture	Yes	Yes	No	10Ha
Bamboo Plantation	No	No	No	No
Seed Sowing	Yes	Yes	April to June	10Ha
Root & Shoot Cutting & Plantation	Yes	Yes	June-July	
Cut Back & Coppice Treatment	No	No	No	No
Physical Fencing	Yes	Yes	November-February	50 Ha
Social Fencing	Yes	Yes	June-July	100 Ha
Other Activities	No	No	No	No

**Source:** 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 DhekiajanRajali 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 DhekiajanRajaliJFMC**

Treatment	Area in Ha under Plantation Module	Priority for Block Plantation	Species	Spacing (meter x meter)
Assisted Natural Regeneration (with plantation in gap)	20 Ha / year for five year	20 Ha Block of ANR	Holong, Halokh, Azaretc	2m x 2 m
Block Plantation	20 (Fire wood) Ha / Year for five year	20 Ha Block of Fire wood	Maz,	2m x 2 m

*Dhekiajan Rajali Joint Forest Management Committee (JFMC), Digboi Forest Division*

Plantation of Neem, Amla, (Medicinal Plants)	20 Ha / year for five year	20 Ha Block of Medicinal plantation		2m x 2 m
Enrichment Plantation	0			
Direct Plantation	0			
Other	0			
<b>TOTAL AREA (in Ha)</b>	60 Ha / year			

**Source:** Discussions with Forest Department personnel & Community members

#### **4.4. Forest Improvement – (Action Plan Enclosed as annexure-I)**

##### **1.1. Nursery Development Plan**

The Nursery Development Plan for the DhekiajanRajali JFMC are taken as follows with due consultation of the Committee and Forest Department Personnel.

<b>SL</b>	<b>Particulars</b>	<b>Location</b>	<b>Area</b>	<b>Remarks</b>
1	Central Nursery / people nursery for plantation, free distribution on various occasions, sale to earn income of JFMC	Within the JFMC boundary	3 Ha	400 beds to produce 3 lakhs stump, direct and tall planting seedlings; 50 mother beds to produce 2 lakhs poly pot seedlings with estimated cost of Rs. 19,91,541.00 (Enclosed as annexure-II)
1	Central Nursery / people nursery for plantation, free distribution on various occasions, sale to earn income of JFMC	Within the JFMC boundary	Ha	135 beds to produce 1 lakhs stump, direct and tall planting seedlings; 25 mother beds to produce 1 lakhs poly pot seedlings with estimated cost of Rs. 17,68,015 (Enclosed as annexure-III)

##### **1.2 Nursery Action Plan**

**Nursery Action Plan for DhekiajanRajali JFMC**

SL	Particulars	2015-2016 Rs	2016-2017 Rs	2017-2018 Rs	2018-2019 Rs	2019-2020 Rs
1	3 Ha Nursery (Cr + Maint.)	0	19,91,541.00			
	Maint. (60% of Cr.)	0		11,94,925.00	11,94,925.00	So on if it is continued
2	1 Ha Nursery (Cr + Maint.)		17,68,015.00			
	Maint. (60% of Cr.)			10,60,809.00	10,60,809.00	Do

**1.2. Maintenance Plan - 10 Years (As stated above in action plan of plantation)**

**2. Expected Benefits**

This sub-section furnishes the benefits expected from the forests protected by members of the BalijanMilijuli, as well as the sharing mechanism for the usufruct benefits.

**2.1. Expected Benefits Related to Wood & Grass**

The above has been tabulated below for the DhekiajanRajali 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 DhekiajanRajali JFMC**

Item	Month	Year (Indicative)	Quantity
Firewood	Throughout the year	2026-27 onwards	
Timber for House	Throughout the year	2040 Onwards	
Small timber for Implements	-	-	
Bamboo	Throughout the year	2030 Onwards	
Pole	-	-	
Fodder from Forest Trees & Grass	Throughout the year	2026-27 onwards	
NTFP	Throughout the year	2035 onwards	
Wages	Throughout the year	2016-17 onwards	
Other	-	-	

**Source:** Discussions with Forest Department personnel & Community members

## 2.2. Sharing Mechanisms

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

**Table-15: Sharing Mechanism for DhekiajanRajali JFMC**

<b>Method</b>	<b>Items</b>
To be shared equally	NTFP
To be freely collected by the members	Firewood,
Other Methods	Processing of NTFPs

**Source:** Discussions with Forest Department personnel & Community

## 6. List of Appendices

<b>Appendix No</b>	<b>Heading</b>
1	<b>Maps</b> Village 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 Priority Ranking- Potential Livelihoods and EPA
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

## Appendix 1

### HOW TO REACH

#### **Digboi to Guwahati distance, location, road map and direction:**

Digboi is located in Assam, India at the longitude of 95.61 and latitude of 27.4. Guwahati is located in Assam, India at the longitude of 91.75 and latitude of 26.19.

#### **Distance between Digboi and Guwahati:**

The total straight line distance between Digboi and Guwahati is 503 KM. This is a straight line distance and so most of the time the actual travel distance between Digboi and Guwahati may be higher or vary due to curvature of the road.

#### **Digboi to Guwahati Travel Time:**

Digboi is located around 503 KM away from Guwahati so if you travel at the consistent speed of 50 KM per hour you can reach Guwahati in 11 hours. The Guwahati travel time may vary due to the bus speed, train speed or depending upon the vehicle use.

#### **Digboi to Guwahati Bus:**

Bus timings from Digboi to Guwahati are around 6.77 hours when bus maintains an average speed of 60 KM per hour over the course of journey. The estimated travel time from Digboi 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.

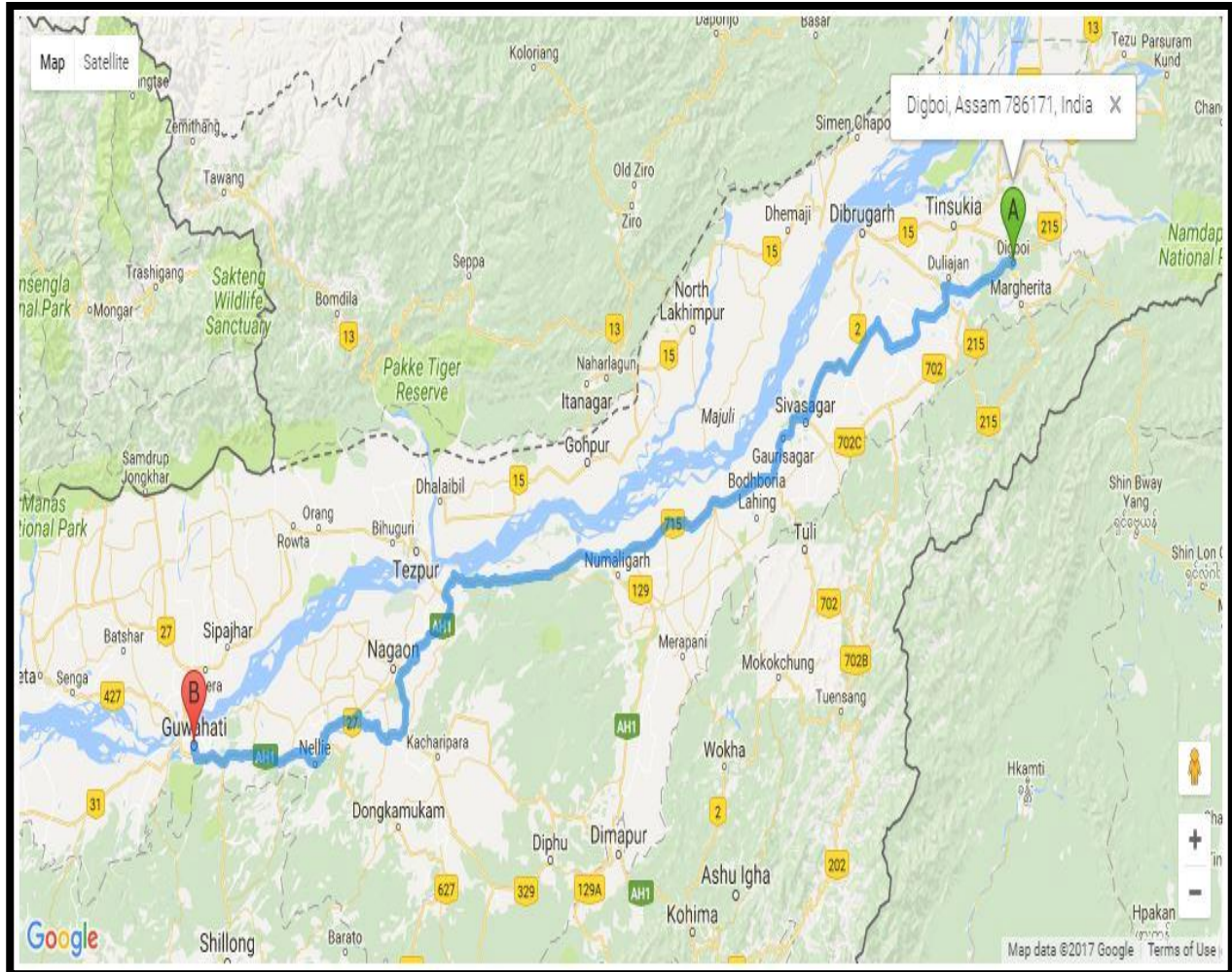
Bus fare from Digboi to Guwahati may be around Rs.550/-(approx).

#### **Digboi to Guwahati Road Map:**

Digboi is located nearly east side to Guwahati. The given east direction from Digboi 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 enrooted hotels, tourist spots, picnic spots, petrol pumps and various religious places. The given Google map shows the travel road map of Digboi to Guwahati.



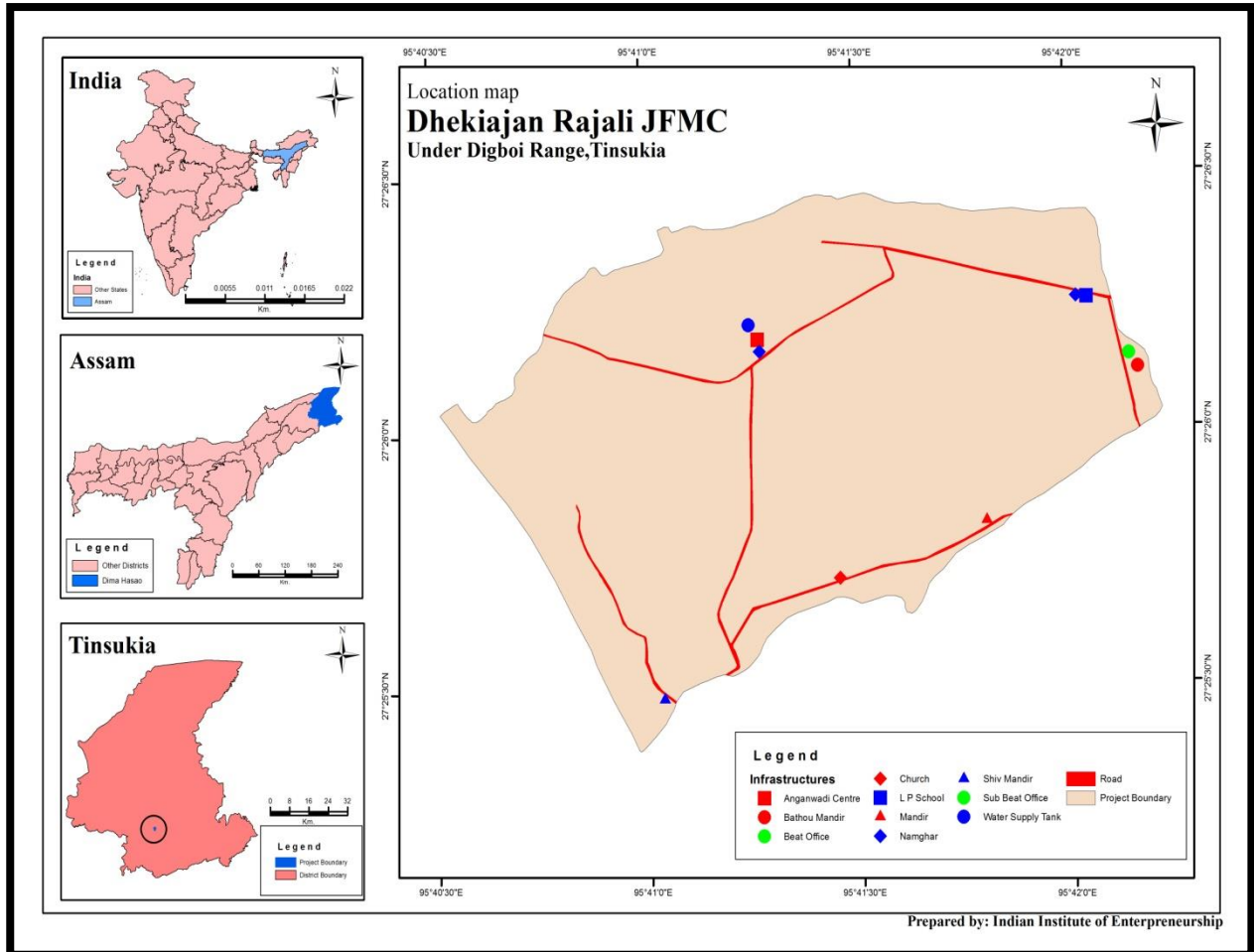
*Dhekiajan Rajali Joint Forest Management Committee (JFMC), Digboi Forest Division*

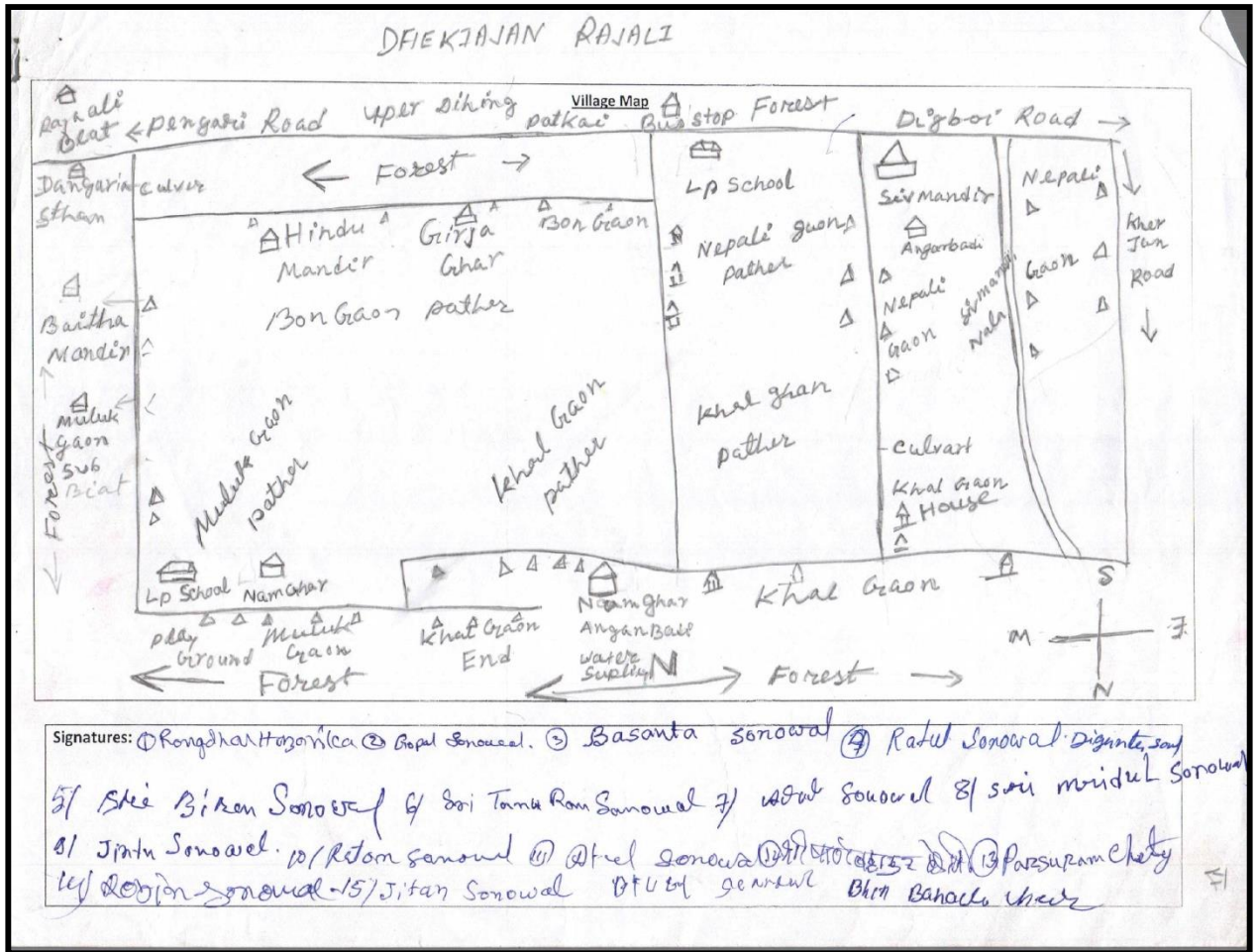


*Source: Google Maps*

Appendix 1

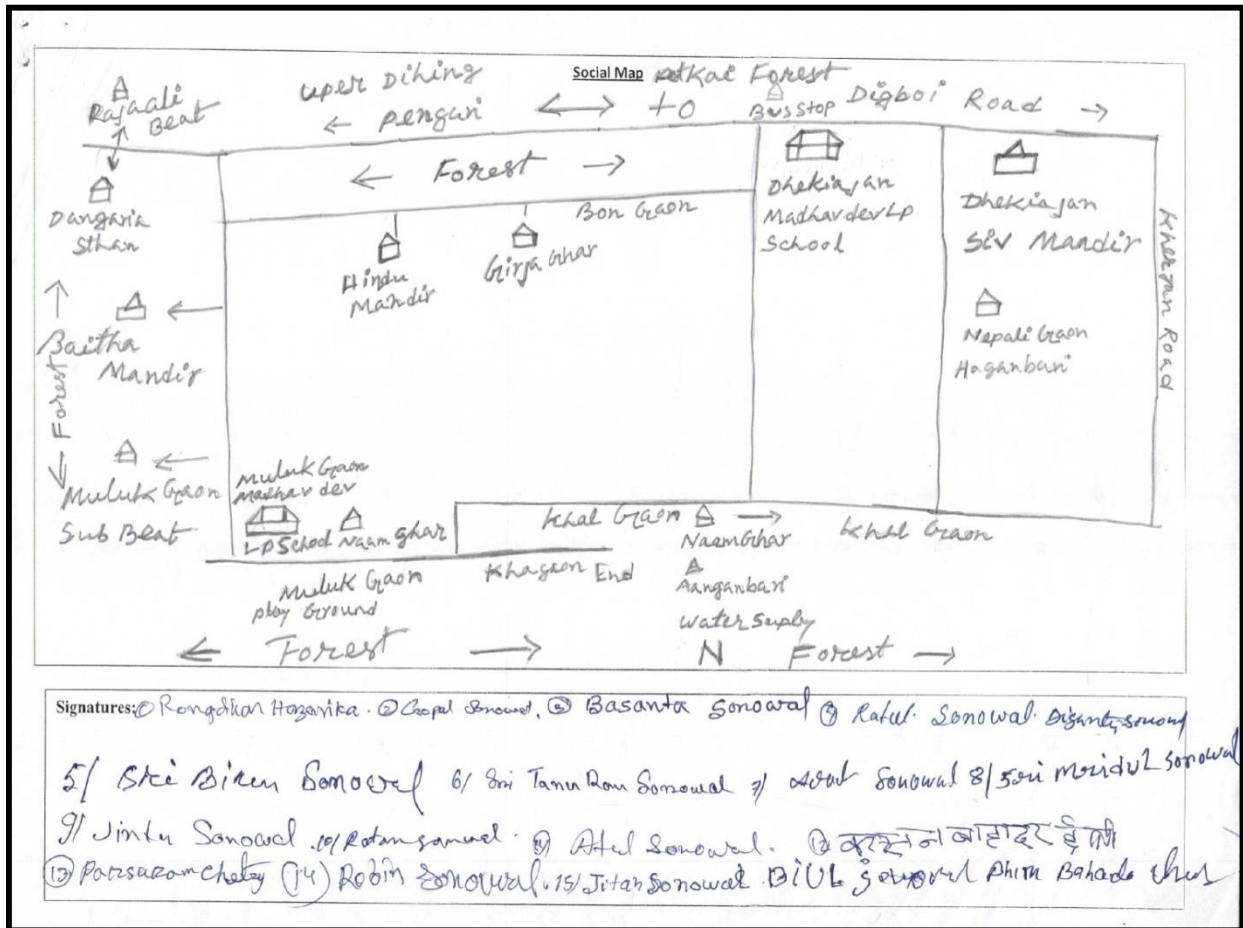
Location Map





Village Map of the JFMC being drawn by the villagers

Village Social Map



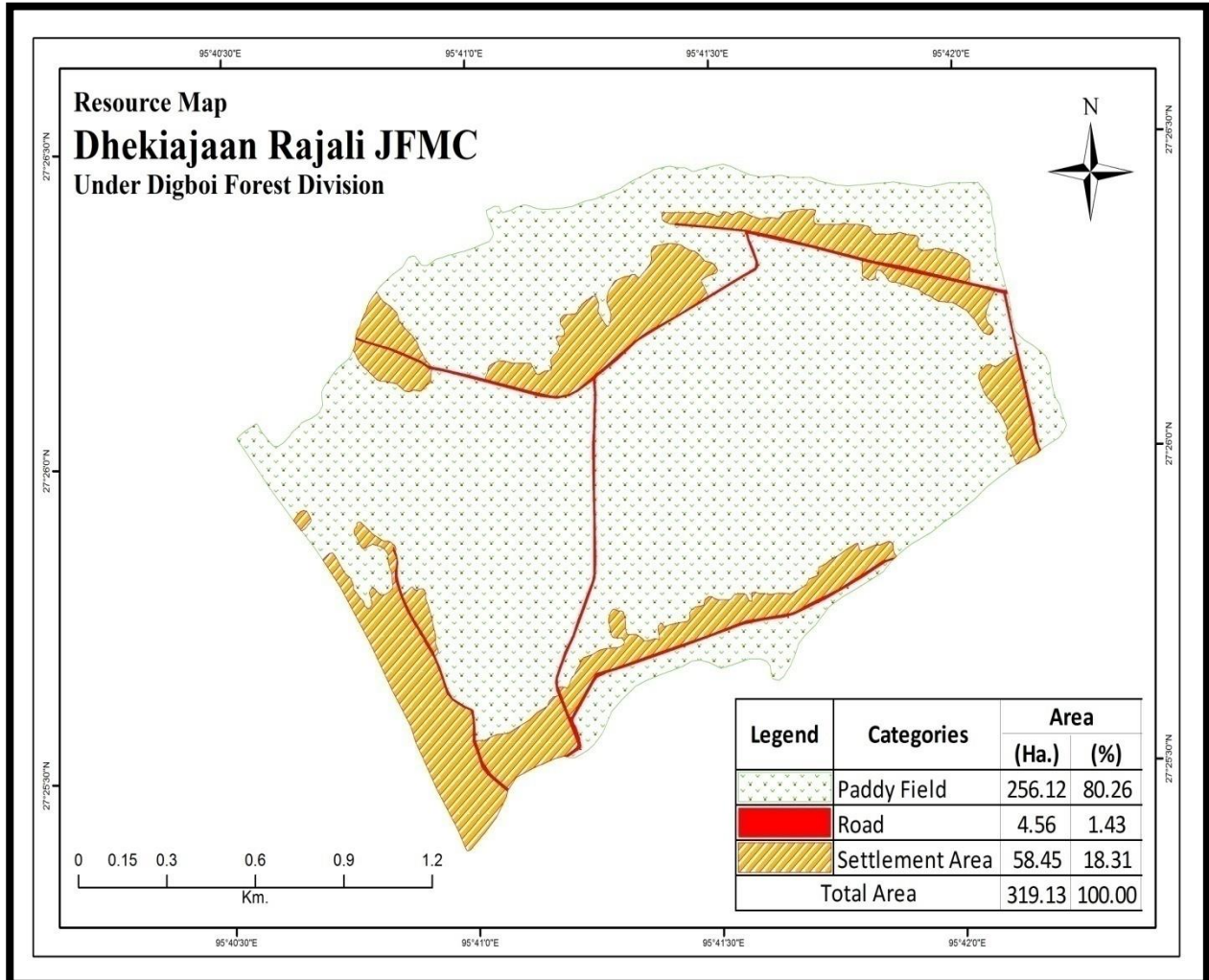
Village Social Map of the JFMC being drawn by the villagers





Appendix 2

Land Use Map/ Resource Map of the JFMC (GIS)



### Appendix 3

#### PRA ACTIVITY

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

<b>Numbers of participants</b>	30
<b>Time</b>	11:30 am, 23 <sup>rd</sup> April, 2017
<b>Venue</b>	LP School ( DhekiajanKhalgaon Village)

**Table – 3.1** Brief about the villages under DhekiajanRajali JFMC

Sl. No.	Name of Village	Households (No.)	Population (No.)		
			Total	Male	Female
1.	MolokGaon	60	300	175	125
2.	KhalGaon	125	600	350	250
3.	Nepali Gaon	60	300	180	120
4.	ChristanBasti	55	290	150	140

**Source: Field Survey**

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

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

#### 3.1 Social Mapping:

Social mapping is used to visualize the socio-economic aspects of the DhekiajanRajali JFMC where the land holding patterns of the households, the numbers of schools, social infrastructure, and religious beliefs among households. Awareness among the villagers was carried out by the field teams; in order to infuse the self-consciousness for protection and enhancement of the forest areas. People from all the households of the village gathered for the PRA process, which was conducted in the community hall of the village. The PRA process was marked with enthusiasm and active participation from all people present.

The social and resource mapping process, was undertaken with the help of the villagers in identifying and marking the village. Villagers voluntarily came out to draw the maps. All the villagers spotted their households in the map. After the mapping process the team members collected the information about the pattern of their dwelling namely pucca, semi pucca, and tin roof thatch house.

**Table 3.2: Information about the DhekiajanRajali Village**

<b>Social Information</b>	<b>Details</b>	<b>Numbers</b>
	Total population	1490
	Male	855
	Female	635
	Total households	300
	Pucca House(Nos.)	30
	Semi-Pucca House(Nos.)	50
	Tin Roof Kuccha House (Nos.)	220
	Rivelute (Nos.)	1
	PHC(Nos.)	1
	Community hall(Nos.)	0
	Tube Wells(Nos.)	240

**Source: - Field survey report.**

### Findings of social map:

- The participants of social mapping have identified all 300 households out of which 8 households have pucca house; 13 households have semi pucca house, and 26 households have Kuccha house with Tin Roof.
- Other than the class based division of the households, important places like community hall, schools, and playground, Tube well, PHC, Namgarh, and Church are mapped.
- Main sources of water for the villagers are the hand pump. The water from hand-pumps are used for day to day purposes. The agricultural land of the village is rain-fed.
- The primary education facility is available in the village which includes a L.P. School and 2 Anganwadi Centre.
- There is not any community hall available in the village.
- Majority of the people belong to the Sonowal community and are of schedule tribe caste. There is also peoples who belong to the Christian community. The religion of the villagers is Hindu and Christian.

### Learnings:

- Electricity is available in 300 homes of the DhekiajanRajali Village. There is LPG gas connections in 105 homes. The 195 households still dependent on forest and use firewood for their cooking purposes. They used to go to the forest for collecting the firewood, which includes branches and snags. Occasionally, villagers cut down trees from the forest, for their personal use which is a concern for forest department as it is leading to degradation for the forest.
- The one LP school and two Anganwari school are located inside the JFMC area. Primary Health Centre, Post Office, Bank, Police Station and Railway Station is located in outside of the JFMC accordingly at Dhekiajan and Digboi which is 13 km, 4km away from the JFMC area. High schools and ME Schools are located outside the JFMC area in Kherjan which is 4 KM away from the JFMC.
- There is not any community hall in the village. Therefore villagers have to face much trouble during the time of organizing any social functions and official 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 DhekiajanRajali Village is 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 fields 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 DhekiajanRajali JFMC have to go Tingrai, a distance covered with 15 km, for their weekly marketing activity.

### 3.2 Wealth Ranking

Wealth ranking contains community members identifying and analysing the different wealth groups in a community. It allows us to evaluate various socio-economic stratification of project beneficiaries and local people's classifications and thought of wealth/well-being.

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

- a) Land holding
- b) Occupation
- c) BPL holders

As such about 93.33% people are poor, about 3.33% belong to middle class and about 3.33% are considered to be rich. Poor people are mainly irregular wage earners and marginal farmers.

**Figure 3.1: Wealth Ranking**



**Source: - Field survey report.**

### 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
1958	Established a LP School at MulokGaonPathar	Constructive
1991	Operation Bajrang was launched by Govt in the village	Constructive
1993	One person was killed by the Indian Army of MolukGaon	Destructive
1996	Another village person named NipenSonowal was killed by the Indian Army	Destructive
2004	First Army Camp was setup by the Govt at Molukgaon	Constructive
2015	One person was killed by the Elephant	Destructive
2015	JFMC was formed	Constructive
2016	Militancy ambush was took place	Destructive

**Source: - Field survey report.**

The DhekiajanRajali Village has a history behind as the village has gone through many Army operations and militancy ambush. During that period the village peoples are harassed by the army and many innocent villagers are also killed.

In the year 2004 the first Army camp was setup by the govt in the village Molukgaon.

During the year 2015 with the establishment of the JFMC there is a major impact in the JFMC for prevented the illegal activities and promoted conservation of the forest and it take along awareness among the villager how it is very important to protect the forest for seek of their next generation and it help in the progress of the concerned project. The JFMC has undertaken various plantation initiatives in the past years in regenerating of forest area.

#### **Learning:**

- The villagers are aware of the fact that cutting down of the trees lead to the less down the number of animals in the forest which indicates the forest preserving awareness of the people.
- From the discussion with the villagers it was noticed that people are now become aware about the conservation of the forestry, we can say that after the formation of the JFMC they are also engaged in plantation process.

### 3.4 Seasonal Mapping of Livelihood Activities

Seasonal calendars drawn by the local people are very useful means of generating information about seasonal leanings within the community and identifying periods of particular anxiety 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, Tea, Radish, Pumpkin, Brinjal, Mustard etc. The FGD conducted revealed that other major livelihood options available in the JFMC are Livestock rearing (poultry, Piggery), Weaving, Tailoring, Driving, Welding etc. which are not seasonal in nature but is showed in the seasonal mapping.

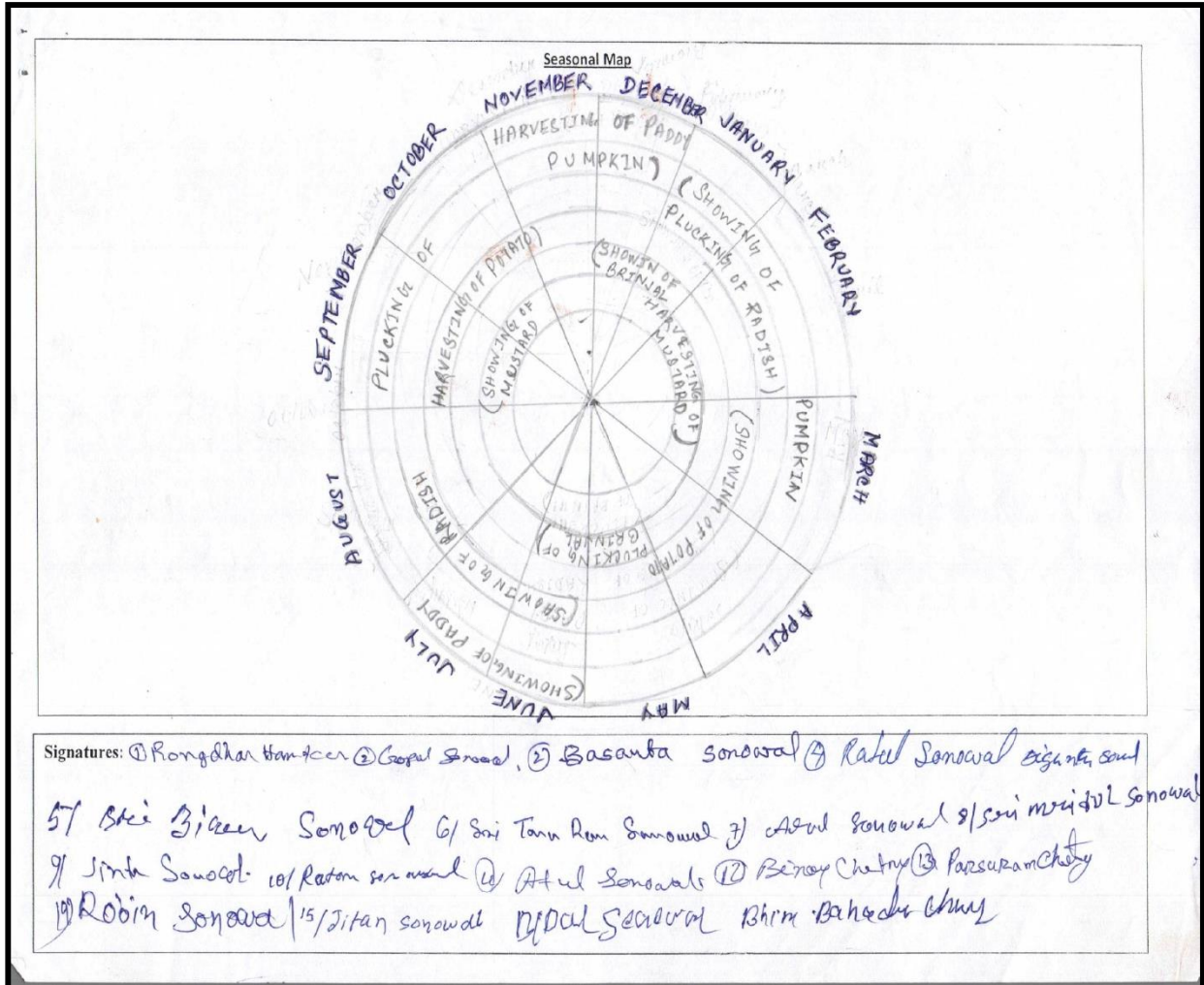
Table 3.4 Seasonal cropping pattern of the JFMC

Categories	Time of Activity			
		Sowing	Harvesting	Plucking
Farming	Sali	June- July	Nov- Dec	-----
	Radish	June-Aug	-----	Jan-Feb
	Pumpkin	Jan-March	-----	Sept-Dec
	Potato	March-April	Sept-Oct	-----
	Brinjal	Dec-Jan	-----	May-June
Non- farming	Weaving	Throughout the year		
	Livestock Rearing			
	Daily Wage Earning			
	Tailoring			

*Source: - Field survey report.*

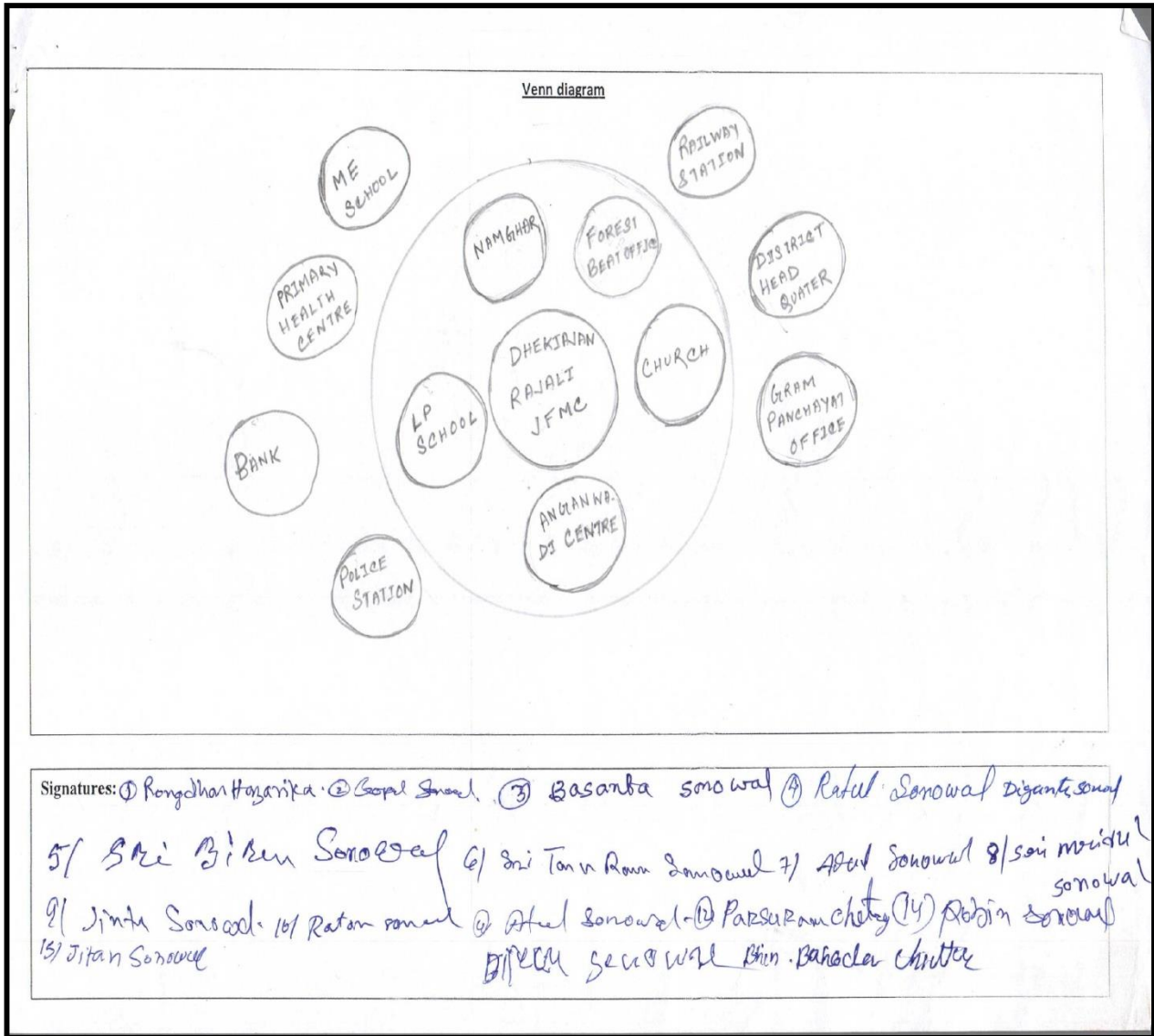
**Learning's:**

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

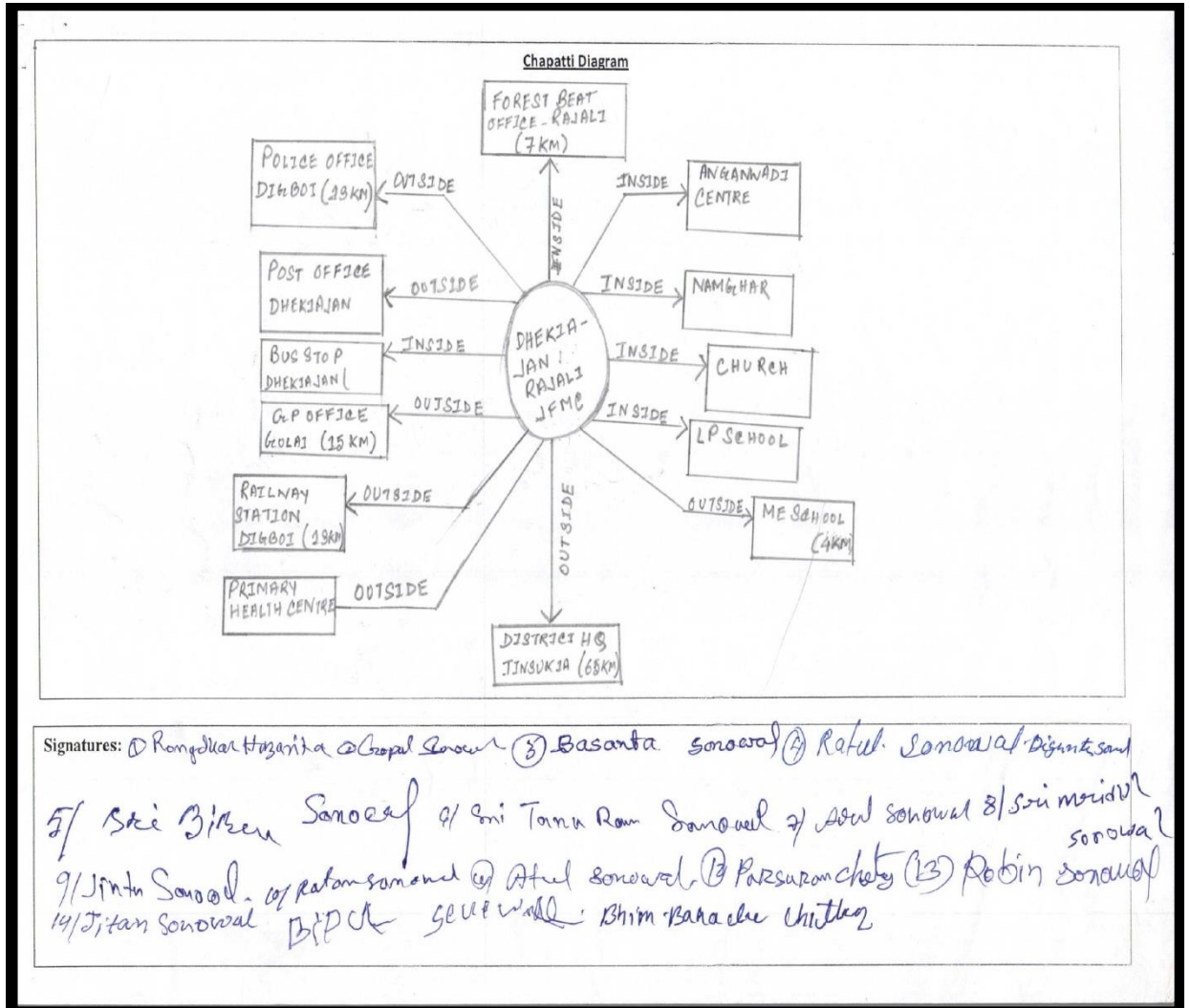


Seasonal Map being drawn by the JFMC people

Venn diagram



**Chapatti Diagram**



**Chapatti Diagram being drawn by the JFMC people**



**Priority Rankings: Potential Livelihoods and PRA**

Priority Ranking of Livelihood Activities

Livelihood Activities		weaving	Tailoring	Knitting	Welding	Agriculture					Marks	Rank
		A	B	C	D	E	F	G	H	I		
Weaving	A	X	A	A	A	A					4	1
Tailoring	B		X	B	B	B					3	2
Knitting	C			X	C	C					2	3
Welding	D				X	D					1	4
Agriculture	E					X					0	5
	F											
	G											
	H											
	I											

Signatures: ① Rengkhazhazanka ② Gorkh Soud ③ Basanta Sonowal ④ Rafal Sonowal ⑤ Ganta Sonowal  
 5/ Rhi Biken Sonowal 6/ Sri Tamu Ram Sonowal 7/ Arul Sonowal 8/ Sri Manidul  
 9/ Jitan Sonowal 10/ Ratan Sonowal 11/ Afal Sonowal 12/ Pansuranchetey 13/ Robin Sonowal  
 14/ Jitan Sonowal 'Bin Bahale Chiny

**Appendix 4**

**Photographs**



*Awareness cum PRA Photos*





**Appendix 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	Name 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
	<b>DhekiajanRajali</b>	<b>2015</b>	<b>10</b>	<b>Sri DigantaSonowal</b>	<b>Miss Parineeta Singh</b>					

Source: - Field survey report.

**Table 2: Village wise population data:**

*Table -2.1: Demographic status of the project villages*

Name of Village	No. of House Hold	SC		ST		OBC		General		Total- all category
		Ma le	Fema le	Male	Female	Male	Female	Male	Female	
<b>DhekiajanRajali</b>	60			175	125					<b>300</b>
<b>Khalgaon</b>	125			350	250					<b>600</b>
<b>Nepaligaon</b>	60					180	120			<b>300</b>
<b>Christianbasti</b>	55					150	140			<b>290</b>

Source: Field Survey Report

*Table -2.2: Age Profile of the population*

Age Classification	Below-14	Between 15-30	Between 31-45	Between 46-60	Above-60	Total
<b>Male</b>	65	470	160	100	60	<b>855</b>
<b>Female</b>	60	325	140	78	32	<b>635</b>

Source: Field Survey Report

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

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

SI 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	DhekiajanRajali	-	-	60	-	60
2	Khalgaon	-	-	125	-	125
3	Nepaligaon	-	-	60	-	60
4	Christianbasti	-	-	55	-	55

Source: Field Survey Report

**Table 4: Cattle Population**

*Table 4: Cattle Population of the JFMC*

SI No	Name Of The Village	Village Wise No Of Cattles Or Type Of Animal			
		Cows	Goat	Bulls	Total
1	DhekiajanRajali	120	80	80	280
2	Khalgaon	135	60	60	255
3	Nepaligaon	80	60	30	170
4	Christianbasti	20	30	30	80

Source: Field Survey Report

**Table 5: Village wise Infrastructure**

*Table 5 Showing village wise infrastructure*

SI No	Infrastructure	Location	Distance from village
1	Electricity		-
2	Gas connection		
3	Transport		
4	PHE	Kherjan	4km
5	LP school	Inside	-
6	High school	Kherjan	4
7	Bank	Digboi	13km
8	Anganawadicentre	Inside	-

9	Police station	Digboi	13km
10	Forest Office	Rajali	7km
11	Post office		
12	Bus facility		
13	Railway Station	Digboi	13km
14	District head quarter	Tinsukia	65km

Source: Field Survey Report

**Table 6: Agricultural crops**

*Table 6: Agriculture Crops*

Type of Crop	Rain Fed		Irrigation	
	Name of the crop	Area (in ha.)	Name of the crop	Area (in hac)
<b>Kharif</b>	Paddy (Aijong, Pankaj, Sali ,Ranjit)	<b>256</b>	-	-
<b>Rabi</b>	Radish, Pumpkin, Potato, Brinjal	<b>13</b>	-	-
<b>Others</b>	Tea	<b>50</b>	-	-

Source: Field Survey Report

**Table 7: Crop production profile**

*Table 7 Crop production profile of JFMC*

Type of crop	Total Production (approx) in Quintals	No of household growing	Average production (Quintals / hac) approx.	Area under crop (hac) approx
<b>Paddy</b>	2100q	250	8.4	256
<b>Vegetable</b>	2,090q	190	11.0	13
<b>Tea</b>	9,150q	150	61.36	50

Source: Field Survey Report

**Table 7: Fodder Availability**

*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			✓

Source: Field Survey Report

**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 centre	Inside	2km
Weekly Market	Tingrai	7km
Major Market	Digboi	13km

Source: Field Survey Report

**Table 10: Water Resources Facility:**

*Table 10: Showing the water resource facility available in the village*

Water source	Number	Availability of water	uses
Tube well	240	Adequacy	Drinking, bathing
River/Nala	1	Seasonality	Bathing

Source: Field Survey Report

**Table 11: Energy consumption:**

*Table 11: Showing the Energy Consumption of the JFMC*

Type of Fuel	Number of household depending	Number of months dependent	Sources (local, village, forest, other sources)	Major/ Secondary
Fuel wood	195HH	12 month	Forest	Major
LPG	105HH	12 month	Pvt	Secondary

Source: Field Survey Report

**Table 11 (A): Education Status**

SI No	Categories	Number
1	Up to ME	470
2	Class VIII to class X	503
3	Class X to XII	375
4	Graduate	82
6	Illiterate	60

Source: Field Survey Report

**Record II : LIVELIHOOD OPPORTUNITY ANALYSIS**

**Table 12: Agriculture and Horticulture:**

*Table 12: showing the agricultural and horticultural status*

	<b>Reason</b>	<b>Opportunities</b>	<b>Programme</b>
<b>Low Production</b>	<ul style="list-style-type: none"> <li>• Lack of proper knowledge about cultivation</li> <li>• Traditional way of cultivation.</li> <li>• Very insignificant use of fertilizers and other pesticides, insecticides.</li> <li>• Non availability of irrigation facilities.</li> <li>• Unavailability of agricultural infrastructure, modern tools and equipment's.</li> <li>• Unaware about use of high yielding seeds.</li> </ul>	<ul style="list-style-type: none"> <li>• Giving proper training on agriculture. Agriculture is a culture of Assamese people. Proper training can give them knowledge about modern techniques.</li> <li>• Application of pesticides and insecticides in a scientific way.</li> <li>• Introduction of modern technologies.</li> <li>• Introduction of organic Cultivation.</li> <li>• Usage of high yielding seed programme.</li> </ul>	
<b>Storage and Production</b>	<ul style="list-style-type: none"> <li>• Lack of awareness about preservation system.</li> <li>• Unavailability of storing place</li> </ul>	<ul style="list-style-type: none"> <li>• It will help in preserving the unsold products for a longer period of time.</li> <li>• They can store their products without facing any damaging and sell it when there is a higher demand in market.</li> </ul>	
<b>Marketing</b>	<ul style="list-style-type: none"> <li>• Presence of middleman for which they didn't setup any contact with the direct market.</li> <li>• Transportation system is very poor.</li> <li>• No knowledge on marketing know-how, dependence on traditional system of selling.</li> </ul>	<ul style="list-style-type: none"> <li>• Proper road connectivity facility will help them to carry their products to the nearby markets.</li> <li>• Generating suitable 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> <li>• They can sell their products outside of the state by introducing exporting system.</li> </ul>	

**Table 13: Livestock**

*Table 13 Livestock*

<b>Constraints</b>	<b>Reasons</b>	<b>Opportunities</b>	<b>Programme</b>
<b>Less grazing land</b>	<ul style="list-style-type: none"> <li>• Not Applicable</li> </ul>	-	-
<b>Availability of fodder</b>	<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 is 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>• Higher income from livestock rearing.</li> <li>• The villagers can make it as an alternative livelihood opportunity if they have the easy access of livestock fodder.</li> </ul>	
<b>Veterinary care facility</b>	<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> </ul>	

**Table 14: NWFP**

*Table 14 NWFP*

<b>Constraints</b>	<b>Reasons</b>	<b>Opportunities</b>	<b>Programme</b>
<b>Less collection</b>	Less availability of NWFP	<ul style="list-style-type: none"> <li>• Availability of fertile fallow land</li> </ul>	
<b>Unsustainable extraction</b>	-	<ul style="list-style-type: none"> <li>• Availability of fertile fallow land</li> </ul>	
<b>Low rates</b>	-	-	
<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 knowhow</li> </ul>	-	
<b>Credit Facilities</b>	<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>• Financial assistance by the Govt.</li> <li>• Providing easy access to credit.</li> </ul>	
<b>Product Diversification</b>	<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>	

DhekiajanRajali Joint Forest Management Committee (JFMC) Digboi Forest Division

**Table 15: Credit facility**

Table 15 Credit facility

Constraints	Reason	Opportunities	Programme
<b>Indebtness</b>	<ul style="list-style-type: none"> <li>No Access to organized lending source</li> </ul>	<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>Subsidized 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>	
<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>	



*[Signature]*  
 Divisional Forest Officer  
 Digboi Division, Digboi  
 Tinsukia, Assam