



ASSAM PROJECT ON  
FOREST & BIODIVERSITY  
CONSERVATION



AGENCE FRANÇAISE  
DE DÉVELOPPEMENT

**MADLIJHAR ECO DEVELOPMENT COMMITTEE MANAS TIGER PROJECT  
BANSBARI FOREST RANGE**

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

**Prepared by  
Madlijar Eco Development Committee Assisted by**

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

**July 2016**

*Approved*

  
Field Director Manas Tiger Project  
Barpeta Road 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>BTC</b>	Bodoland Territorial Council
<b>COMPELO</b>	Consortium for Micro Planning and Enhancing Livelihood Opportunities
<b>EPA</b>	Entry Point Activities
<b>GIS</b>	Geographical Information System
<b>Ha</b>	Hectare
<b>IIE</b>	Indian Institute of Entrepreneurship
<b>EDC</b>	Eco Development Committee
<b>Kg</b>	Kilogram
<b>Km</b>	Kilometre
<b>Manas NP</b>	Manas National Park
<b>Manas TP</b>	Manas Tiger Project
<b>NGO</b>	Non-Governmental Organization
<b>NTFP</b>	Non Timber Forest Product
<b>PDS</b>	Public Distribution System
<b>PRA</b>	Participatory Rural Appraisal
<b>Rs.</b>	Indian Rupees
<b>SHG</b>	Self Help Group
<b>VCDC</b>	Village Council Development Committee

**MADLIJHAR ECO DEVELOPMENT COMMITTEE  
FIELD DIRECTOR, MANAS TIGER PROJECT**

**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 Développement</i> (AFD) - i.e. the French Development Agency, with co-funding from the Government of Assam. The Assam Project on Forest and Biodiversity Conservation Society (APFBC Society) has the mandate for planning, implementation, monitoring, coordination and management of all the activities under the above mentioned project.</p>
<p><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>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 ‘<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 <u>both</u> forest development and livelihood development.</p>
<p><b>Micro-Plan for the MADLIJHAR EDC</b></p>	<p>This document gives the Micro-Plan for the MADLIJHAR EDC, which is located in the Baksa district of Assam. The EDC falls under the jurisdiction of the Field Director, Manas Tiger Project and Bansbari Forest Range. 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)</p>

	process undertaken by the community and personnel of Indian Institute of Entrepreneurship (IIE) Guwahati in July 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.
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## 2. Village Socio-Economic Profile

<b>Location</b>	<p>The Madlijhar Eco Development Committee (EDC) has been formed to cover the existing community dwelling in Madlijhar village. The area covered by the above EDC falls within the Madlijhar VCDC, BAKSA district of Assam.</p> <p><b>Appendix-1</b> gives the Village Map.</p>																						
<b>Key Information</b>	<p>The key information of the EDC is furnished below.</p> <p style="text-align: center;"><b>Table-A: Key Information of the EDC</b></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;"><b>Name of the EDC</b></td> <td>Madlijhar</td> </tr> <tr> <td><b>Habitation</b></td> <td>Madlijhar</td> </tr> <tr> <td><b>Name of Revenue Village</b></td> <td>Palsibari</td> </tr> <tr> <td><b>Name of the Gram Panchayat / VCDC</b></td> <td>Madlijhar</td> </tr> <tr> <td><b>Revenue Circle</b></td> <td>Jalah</td> </tr> <tr> <td><b>District</b></td> <td>Baksa</td> </tr> <tr> <td><b>Forest Division</b></td> <td>Field Director, Manas Tiger Project</td> </tr> <tr> <td><b>Forest Range</b></td> <td>Bansbari</td> </tr> <tr> <td><b>Forest Beat</b></td> <td>Kahibari</td> </tr> <tr> <td><b>Year Formed</b></td> <td>2015</td> </tr> <tr> <td><b>Description of Boundary of EDC</b></td> <td>           GPS Coordinates(Centre Point)  <b>N 26°39'31.6'</b>  <b>E 91°01'43.1'</b>  <b>North:</b> Manas National Park  <b>South:</b> Bahbari village  <b>West:</b> Barengabari village  <b>East:</b> Kahibari village         </td> </tr> </table> <p><b>Source:</b> EDC Records &amp; Discussions during PRA Exercise in June 2016</p> <p>Additional details are given at <b>Table-1</b> of Record-I. (Given at Annexure)</p>	<b>Name of the EDC</b>	Madlijhar	<b>Habitation</b>	Madlijhar	<b>Name of Revenue Village</b>	Palsibari	<b>Name of the Gram Panchayat / VCDC</b>	Madlijhar	<b>Revenue Circle</b>	Jalah	<b>District</b>	Baksa	<b>Forest Division</b>	Field Director, Manas Tiger Project	<b>Forest Range</b>	Bansbari	<b>Forest Beat</b>	Kahibari	<b>Year Formed</b>	2015	<b>Description of Boundary of EDC</b>	GPS Coordinates(Centre Point) <b>N 26°39'31.6'</b> <b>E 91°01'43.1'</b> <b>North:</b> Manas National Park <b>South:</b> Bahbari village <b>West:</b> Barengabari village <b>East:</b> Kahibari village
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<b>Brief Details of the Executive</b>	<p>The brief details of Executive Committee &amp; General Body of the EDC 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>																						

<b>Committee &amp; General Body</b>	<b>Name of President</b>	Boloram Boro
	<b>Name of Secretary</b>	Haripad Medhi, Fr-I
	<b>Name of Treasurer</b>	
	<b>Registration Number</b>	MTP/EDC/02, Dated 10 <sup>th</sup> April, 2016
	<b>No. of Members in Executive Committee</b>	Male: 06 Female: 04
	<b>No. of Members in the General Body</b>	One member from each household
<b>Source:</b> EDC Records		
<b>Households &amp; Population Structure</b>	<p>The village has 57 households. The number of female headed households is nil. The total population is 325 of which 170 are male and the rest 155 are female members. Out of 57 HH all 10 belong to the SC, 41 HH ethnically belonging to Bodo community and the rest 6 HH are Adivasi (Tea Tribe) belonging to OBC.</p> <p><b>Table-2</b> of Record-I may be referred for further details in the above regard.</p> <p>From this, it is inferred that: The sex ratio is 846 females per 1000 males in the village.</p>	
<b>Education &amp; Skills Development</b>	<p>Over 44% of the total 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 and graduated members.</p> <p>Livelihood skills are usually acquired under various settings – formal &amp; informal. In the EDC area, informal means for skills development is the traditional norm. People have traditional skills in the following areas:</p> <ul style="list-style-type: none"> <li>(a) Horticulture</li> <li>(b) Farming</li> <li>(c) Livestock rearing</li> <li>(d) Handloom</li> </ul> <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>	
<b>Soil</b>	<p>The soil is deep alluvial Himalayan wash. This type of soil can support different kinds of crops, as the soil is reported to be fertile on the whole.</p> <p>The fast flowing Manas river on entering the plains from the steep hills loses its speed and as a result deposits enormous quantities of boulders, stones, sand, silt and other debris that are carried down by the water</p>	

	and this leads to the formation of alluvial terraces, comprising deep layers of rocks and sands deposits.
<b>Water</b>	<p>The Manas River flows through the west of the Park, where it splits into two separate rivers, the Beki and Bholkaduba, to join the River Brahmaputra some 64 km further south. These and five small rivers running through the Reserve carry enormous amounts of silt and rock from the foothills as a result of heavy rainfall, steep gradients and friable bedrock upstream.</p> <p>Over the limestone and sandstone bedrock, boulders and gravels of the Bhabar savanna area to the north, flood waters have formed shifting channels and swamps and a soil of porous alluvial river terraces of coarse detritus under layers of sandy loam and humus where the water table is very low. The Terai grasslands in the south consist of deep deposits of fine alluvium with underlying pans where the water table lies very near the surface, making it potentially useful farmland. The Manas basin in the west of the Park is frequently flooded during the monsoon but never for very long due to the sloping relief. Drowning of wildlife is negligible as animals are able to take refuge on islands of high ground.</p>
<b>Climate: Temperature &amp; Rainfall</b>	<p>The climate of the EDC is moist tropical with an annual rainfall between 3000 mm to 4000 mm.</p> <p>Winter (December-February): It is characterized by cool weather and fog. The temperature remains 20°C + 5°C. January is the coldest month. Average total rainfall is 114 mm with relative humidity of 77% + 5.</p> <p>Pre-monsoon (March-May): It is a transitional period between relatively dry winter and hot summer and is characterized by a rapid rise in temperature. As the season advances, the amount and frequency of rainfall increases due to frequent thundershowers with hailstorms. Average total rainfall during the season is 518.70 mm. The season is marked progressively by a greater number of cloudy days. Average temperature and humidity in this season are 23 °C + 5°C and 70% + 5 respectively.</p> <p>Monsoon (June-September): It is the characteristic major rainy season of the year. The average monthly rainfall is 2860 mm. The average temperature during this season is 27.17°C with an average diurnal range of over 6°C. The humidity increases to 82% + 5. August is the hottest month.</p> <p>Retreating monsoon (October-November): Towards the end of September, the monsoon weaken with an abrupt retreat followed by fair weather. With the advancing of the season the temperature falls and moving mist and fog appears. The average temperature is 27°C + 2. The average monthly rainfall is 1400 mm and the rainy days become fewer. Relative humidity is 82% + 5.</p>
<b>Forest &amp; Bio- diversity</b>	The main tree species are Sida, Ajar, Khokan, Gamari, Titasapa, etc found in Manas National Park. Lemon trees are grown in abundant in

	<p>this EDC village. Some other species such as Arecanut Tree, Jack Fruit, Mango, Bamboo, etc. are also grown in the village.</p>
<b>Land Use Pattern</b>	<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:</p> <p>Crop Land: 31.28 %  Habitation: 28.17 %  Tea estate: 9.06%  Cultivable wasteland: 3.10 %.</p>
<b>Land Holdings</b>	<p>The type of households as per land-holding is given at <b>Table-3</b> of Record-I. From the same, it is seen that:</p> <ul style="list-style-type: none"> <li>• 100 % of the households are marginal farmers (less than 2 Ha)</li> </ul>
<b>Livestock</b>	<p>The total number of livestock in the village is 871. The main types of livestock possessed by the households include:</p> <p>Cows: 158  Goats: 15  Duck : 180  Hens : 495  Pigs: 23</p> <p><b>Table-4</b> of Record-I may be referred to for the details in the above connection.</p>
<b>Village Infrastructure &amp; Communication Facilities</b>	<p>In any community; the availability of basic infrastructure enables the development of sustainable livelihood options. The present condition of infrastructure in the village is not satisfactory. This is borne out by <b>Table-5</b> of Record-I, which gives the present status of the village infrastructure.</p> <p>From the above table, the following have been noted with regard to village infrastructure:</p> <p><b>Physical Infrastructure:</b> The habitation is deprived of basic physical infrastructure like paved roads, electricity, water supply, mobile network etc.</p> <p><b>Education &amp; Health Facilities:</b> There are minimal educational and health facilities. Public transport is not available, and the community members have to use bicycles to move around.</p> <p><b>Govt. Offices:</b> The government offices (such as Police station, Gram Panchayat office, Revenue office, Forest Beat office etc.) are located at a considerable distance, which gets amplified as the villagers do not have access to regular public transport from either the habitation or from nearby areas.</p> <p><b>Financial Inclusion:</b> Facilities for financial inclusion like bank and post office are located at a considerable distance from the habitation.</p>



	Hence, the community members do not have bank accounts or postal savings accounts.
<b>Agricultural Crops</b>	<p>The details of the agricultural crops grown in the village is available at <b>Table-6</b> of Record-I.</p> <p>The above shows that the following are the main crops grown in the village.  Kharif Crops: Sali, Yum  Rabi Crops: Mustard, pulses  Others: Lemon, Betel-nuts, Mango, Jackfruits, Pomelo</p> <p>Most crops are rain-fed</p>
<b>Crop Production Profile</b>	<p><b>Table-7</b> of Record-I may be referred to for the production and yield details of the crops grown in the village.</p> <p>The production and yield of these crops is given as follows:</p> <p>(a) Paddy : Production 725 Quintal Yield 18-19 Quintal /ha  (b) Oil seeds: Production 5 Quintals Yield 1 q/ha</p>
<b>Fodder Availability</b>	<p>The matter of fodder availability in the village is dealt with at <b>Table-8</b> of Record-I. The table shows that the main sources of fodder in the village are as follows:</p> <p>(a) Crop residue  (b) Household wastage</p>
<b>Markets</b>	<p><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:</p> <p>(a) Grocery / PDS: Inside the village  (b) Weekly / Bi-weekly Market: : Bansbari at 4 km away  (c) Major Market: : Bansbari at 4 km away</p>
<b>Water Resources</b>	<p>The water resources are tabulated at <b>Table-10</b> of Record-I. The main water resources with the water availability is as follows:</p> <p>(a) River (Water Availability: <del>Perennial</del> / Seasonal)  (b) Stream (Water Availability: <del>Perennial</del> / Seasonal)  (a) Ring Wells (Water Availability: Perennial / <del>Seasonal</del>)  (b) Tube Wells (Water Availability: Perennial / <del>Seasonal</del>)</p>
<b>Energy Consumption</b>	<p><b>Table-11</b> 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: 50 Nos. Source: <i>Purchase from local market outside forest area</i>  (b) Kerosene: Households Depending: 46 Nos. Source: <i>Open Market</i></p> <p>(b)(c) LPG: Households Depending 11 Nos</p>

<b>Socio-economic status</b>	<p><b>Social set-up:</b> The village is inhabited by Assamese, Bodo, Bengali and Tea tribe (Adivashi) community and they are from General, OBC, ST and SC caste and belong to Hindu and Christian religion.</p> <p>The society is not marked by deep social divisions. The observed position of women is satisfactory.</p> <p><b>Economic Condition:</b> The economic position is not satisfactory. The main livelihoods are Daily wages, Horticulture, Livestock rearing etc. Most households earn Rs. 18,000 to Rs. 35,000 per year.</p> <p>There is some migration of the youth and others for livelihoods. Additional details are available at the next section.</p>
<b>Impact of wild life area</b>	<p>Positive impacts</p> <ul style="list-style-type: none"> <li>• Soil and water conservation</li> <li>• Economic benefits from tourism</li> <li>• Environmental improvement</li> </ul> <p>Negative impacts</p> <ul style="list-style-type: none"> <li>• Human wild life conflict</li> <li>• Cattle/crop residue</li> <li>• Damage of property by wild animals</li> </ul>
<b>Maps</b>	<p><b>Appendix-1</b> gives the following maps, based on PRA exercise:</p> <ul style="list-style-type: none"> <li>• Village Map</li> <li>• Village Social Map (with the names and particulars of members in PRA)</li> </ul> <p>Village Resource Map</p>

### 3. Livelihood Opportunity Analysis

<b>PRA Exercise</b>	<p>Team from IIE Guwahati carried out PRA exercise in MADLIJHAR village as follows:</p> <p><b>Date:</b> 7<sup>th</sup> <b>July Location:</b> Community Hall, Madlijhar</p> <p><b>Numbers Present: 25</b></p> <p><b>In Presence of:</b> Village Headman, community members, Forest Department personnel, etc.</p>
<b>Objective of PRA</b>	<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>
<b>Tools Used &amp; Outcomes of the PRA</b>	<p>Different tools were used and outcomes obtained. These include:</p> <p>Social Mapping Wealth Ranking Time Line review Seasonality of Livelihoods</p>

	<p>Venn Diagram</p> <p><b>Appendix-3</b> furnishes detailed information of the above.</p>																								
<b>Ranking</b>	<p>Ranking exercise has been done for the following:</p> <ul style="list-style-type: none"> <li>• <b>Livelihoods &amp; Skills Development (discussed in the Chapter 4)</b></li> <li>• <b>Entry Point Activities (EPA)</b></li> </ul> <p>Ranking of EPA</p> <table border="1"> <thead> <tr> <th>Rank</th> <th>Village EPA as ranked</th> <th>Details (Appendix-3 has additional particulars)</th> <th>Probable source of funding/deptt.</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>Community Hall</td> <td>Community meetings can be organised properly.</td> <td>Panchayat &amp; Rural Development.</td> </tr> <tr> <td>2.</td> <td>Electricity</td> <td>Solar light facility to each HH</td> <td>APFBC</td> </tr> <tr> <td>3.</td> <td>Sanitation</td> <td>Providing HHL(House Hold Latrine) Low cost, septic and sanitary type</td> <td>Swach Bharat Mission/PHE</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>Road Connectivity</td> <td>Black Topping of road From Bansbari to the village (~4 KM)</td> <td>PMGSY/PWD</td> </tr> </tbody> </table> <p>.</p>	Rank	Village EPA as ranked	Details (Appendix-3 has additional particulars)	Probable source of funding/deptt.	1.	Community Hall	Community meetings can be organised properly.	Panchayat & Rural Development.	2.	Electricity	Solar light facility to each HH	APFBC	3.	Sanitation	Providing HHL(House Hold Latrine) Low cost, septic and sanitary type	Swach Bharat Mission/PHE	4.	School	Upper Primary School	SSA/ Elementary Education Deptt.	5.	Road Connectivity	Black Topping of road From Bansbari to the village (~4 KM)	PMGSY/PWD
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<b>Livelihood opportunities</b>	<p>Livelihood Opportunities were identified as follows:</p> <p>Agriculture &amp; Horticulture  Livestock  Eco-tourism  Skills Development  Credit Facility</p> <p>Additional discussion about the above has been given below.</p>																								
<b>Agriculture &amp; Horticulture</b>	<p><b>Table-12</b> 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> <ol style="list-style-type: none"> <li>Lack of barrier for wild animals.</li> <li>Lack of irrigation facilities</li> <li>Lack of agricultural infrastructure, modern tools and equipment's</li> <li>Non usage of high yielding seeds etc.</li> </ol>																								

	<p>The opportunities are:</p> <ul style="list-style-type: none"> <li>(a) Application of HYV seeds</li> <li>(b) Provide irrigation facilities</li> <li>(c) Organic farming increases productivity</li> </ul> <p>The suggested programmes are:</p> <ul style="list-style-type: none"> <li>(a) Tractor operation training</li> <li>(b) Organic farming training</li> <li>(c) Development of Fencing and solar lights.</li> </ul>
<b>Livestock</b>	<p><b>Table-13</b> Furnishes additional information about opportunities for livestock rearing.</p> <p>The main constraints are:</p> <ul style="list-style-type: none"> <li>(a) Unable to buy fodder from market due to poor financial condition.</li> <li>(b) Threat from wild animals which destroys most of the livestock.</li> <li>(c) Lack of knowledge about the proper rearing of livestock.</li> </ul> <p>The opportunities are:</p> <ul style="list-style-type: none"> <li>(a) Higher income from livestock rearing.</li> <li>(b) Disease control</li> <li>(c) Increase the life span of cattle</li> <li>(d) Higher income from milk and milk products</li> </ul> <p>The suggested programme is:</p> <ul style="list-style-type: none"> <li>(a) Training on making different milk products</li> </ul>
<b>NTFP</b>	<p>All village is located adjacent to protected area, there is no scope for collecting NTFP</p>
<b>Specialized Skills</b>	<p>For skills development, the opportunities are tabulated at <b>Table-15</b> under Record-2</p> <p>The main constraints are:</p> <ul style="list-style-type: none"> <li>(a) Lack of product diversification</li> <li>(b) Lack of research on product quality</li> <li>(c) Non availability of raw material</li> <li>(d) Use of traditional machineries</li> </ul> <p>The opportunities are:</p> <ul style="list-style-type: none"> <li>(a) Exploring new markets</li> <li>(b) Developing demand based products as per the needs</li> </ul> <p>The suggested programme are:</p> <ul style="list-style-type: none"> <li>(a) Training on Modern Tools and Equipment</li> <li>(b) Providing modern technology to the villagers</li> </ul>

	<ul style="list-style-type: none"> <li>(c) Skill Up gradation &amp; Training on New Product Development and Product Diversification</li> <li>(d) Setting up a raw material bank</li> <li>(e) Providing a bulk buy arrangement of the finished product with institutional buyers.</li> </ul>
<b>Credit Facility</b>	<p><b>Table-16</b> under Record-2 discusses this aspect.</p> <p>The main constraints are:</p> <ul style="list-style-type: none"> <li>(a) Financial exclusion</li> <li>(b) Higher rate charged by the private money lender.</li> </ul> <p>The opportunities are:</p> <ul style="list-style-type: none"> <li>(a) Setting up modern financial institution</li> <li>(b) Adequate awareness.</li> <li>(c) Credit at low rate of interest</li> </ul> <p>The suggested programme is:</p> <p>(a) Setting up modern financial institution in the nearby areas.</p>
<b>Eco- tourism</b>	<p>The main constraints are</p> <ul style="list-style-type: none"> <li>(a) Infrastructure</li> <li>(b) Marketing</li> <li>(c) Lack of trained guide</li> </ul> <p>The opportunities are</p> <ul style="list-style-type: none"> <li>(a) Location near Manas NP</li> <li>(b) Increase in eco-tourism</li> </ul> <p>Suggested programmes are</p> <ul style="list-style-type: none"> <li>(a) Training in eco-tourism</li> </ul>
<b>Strategic Interventions</b>	<ol style="list-style-type: none"> <li>1. Agriculture &amp; Horticulture: Organic farming, Tractor operation training, Agri-skill development programme, Training on HYV application, bio fencing</li> <li>2. Livestock: Piggery, Poultry</li> <li>3. Specialized Skills: Training on Modern Tools and Equipment, Providing modern technology to the villagers, Skill Up gradation &amp; 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.</li> <li>4. Credit facility: Setting up modern financial institution in the nearby areas.</li> </ol>

#### 4. Livelihood Development Plan

<p><b>Livelihood opportunity Analysis</b></p>	<p>Framework of livelihood Opportunity Analysis has been done with the help of the following criteria:</p> <p>A) Livelihood assets B) Livelihood context C) Priority ranking on potential livelihood</p> <p>The livelihood situation of MADLIJHAR EDC has been analyzed during the PRA exercise using sustainable livelihood framework of DFDI (Department of Funding for International Development). The existing livelihood situation of EDC is outlined in terms of –</p> <ul style="list-style-type: none"> <li>• Natural Capital</li> <li>• Physical Capital</li> <li>• Social Capital</li> <li>• Human Capital</li> <li>• Financial Capital</li> </ul>
<p><b>Natural Capital</b></p>	<p>The present EDC is under the jurisdiction of Field director, Manas Tiger Project and the major river flows near the EDC is Beki River with two adjoining streams named Kasindoha and Madlijhora.</p> <p>For farming purpose and for livestock rearing, the villagers use the stream water. Villagers use the ring well and hand pump for drinking water.</p> <p>They collect leafy vegetables from the forest along with some seasonal fruits.</p> <p>(Refer table 10, 11 of annexure 6, table 3 of FDP for further details)</p>
<p><b>Physical Capital</b></p>	<p>Majority of the households in the MADLIJHAR EDC are involved in farming of lemon and Betel-nuts and are categorised as marginal farmers.</p> <p>(Detailed land holding pattern is described in the table 3/annexure 6.)</p> <p>All the houses of the EDC are made of thatch. Among the various sources of energy consumption such as Biomass, kerosene, electricity, LPG and candle, villagers depend on the firewood and kerosene for household and other uses. (refer to table 10,11 of annexure 6 )</p> <p>There is only LP school present within the EDC area along with 4 numbers of anganbadi center. No other education institutions are present.</p> <p>(refer to table 5 of annexure 6)</p> <p>In case of water sources, there are 18 ring wells and the streams in the EDC area which is connected to the Beki River.</p>
<p><b>Social Capital</b></p>	<p>The villagers are not fully involved in the EDCs functioning due to lack of awareness on their roles, functions, and specific benefits they are going to receive.</p> <p>Four numbers of unregistered Mahila Samiti are there in the EDC.</p> <p>The village has no youth club and no community hall inside the EDC.</p>
<p><b>Human Capital</b></p>	<p>41 per cent of total population of the EDC are reported to be literate.</p>

	Most of the people (about 28 per cent) have crossed the upper primary level education. However, people are less interested to continue their education post HSLC. Graduate people is nil till now (refer to table i/annexure 6)
<b>Financial Capital</b>	There is no government bank or lending institution available in the EDC area or in the nearby areas. However, villagers lend from informal lending groups, relatives etc.  More than 70 per cent have bank account in commercial banks, but they are not aware of the benefits of financial inclusion
<b>Livelihood Context</b>	Livelihood activities of the MADLIJHAR EDC are identifies on the basis of following criteria: a) Contribution of particular livelihood activity in the total income of the EDC b) Percentage involvement of income group in a particular livelihood activities. c) Priority ranking of the potential livelihood activities
<b>Contribution of livelihood activity in the total income of the EDC</b>	(a) Lemon and betel nuts farming, farming of paddy (b) Daily wage earning (c) Livestock rearing (d) Service (refer to table ii/annexure 6)
<b>Involvement of income group in a particular livelihood activity</b>	As observed from the household survey and PRA activity that all the households are involved in the above mentioned activities in some or other parts of the year. Primary livelihood : Lemon and betel nuts farming, farming of paddy Secondary livelihood: Daily wage labour, livestock rearing Some service sector employee are also there
<b>Priority ranking of the potential livelihood activities</b>	Priority ranking of Livelihoods & Skills Development  1. Horticulture 2. Livestock rearing 3. Handloom 4. Tourist Guide

## 5. Forest Development Plan of MADLIJHAR EDC

This Forest Development Plan has been prepared after a detailed PRA exercise at the village level as a part of the Micro-Plan of MADLIJHAR EDC. 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 EDC; while meeting the consumption and livelihood needs of the community in a sustainable manner.

<b>Convergence</b>	<p>The planned initiatives may be converged with the following schemes of the Government of India:</p> <ul style="list-style-type: none"> <li>(a) National Rural Employment Guarantee Scheme - for rural employment</li> <li>(b) Rashtriya Krishi Vikas Yojana (RKVY) - for agricultural and allied development</li> <li>(c) Rashtriya Krishi Sinchay Yojana (RKSY) - for irrigation, including watershed development</li> <li>(d) National Rural Livelihoods Mission</li> <li>(e) Skills Development schemes</li> <li>(f) Other schemes for rural development and livelihoods as found appropriate.</li> </ul> <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>
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## 1. Status of the EDC Forests

The micro-plan takes into consideration the following categories of the EDC Forests of the MADLIJHAR EDC

For the MADLIJHAR EDC, the salient points of the forest soil type are summarized below:

- (a) Alluvial deposit
- (b) Fertile
- (c) Clay loam mixed with silt

### 1.1 Forest Soil Type

The forests of Madlijhar EDC 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 Madlijhar EDC**

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



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

### 1.2 Existing Composition of Flora

In the forests of the MADLIJHAR EDC, the existing composition of the flora has been given as follows. It may be noted that the local forests are classified as deciduous moist Forests.

**Table-3: Existing Composition of Flora**

Parameter	Local Name(s)	Biological Name(s)
Major Forest Species		
Associates	Gamari	<i>Gmelina Arborea</i>
	Arjun	<i>Terminalia arjuna</i>
	Acacia	<i>Racosperma</i>
	Tora	<i>Angiosperm</i>
	Sonaru	<i>Cassia fistula</i>
Shrubs	Dhekia	<i>Ferns</i>
Medicinal Plants	Arjun	<i>Terminalia arjuna</i>
	Hilikha	<i>Terminalia Chebula</i>
	Neem	<i>Azadirachta indica</i>
	Amlakhi	<i>Phyllanthus emblica</i>
Others, if any	Jati Bah	<i>Bambusa Tulda</i>
	Bhuluka Bah	<i>Bambusa Balcooa</i>
	Amlakhi	<i>Emblica officinalis</i>
	Bijuli Bah	<i>Bambusa Pallida</i>
	Arjun	<i>Terminalia arjuna</i>
	Sachi	<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 MADLIJHAR EDC.

### 2.1. Past Protection Measures of the EDC

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

(a) Number of households involved: 200

(b) Number of people involved:200 (1 Person Per House hold)

(c) Summary of the measures: Not available

(d) Any formal mechanism: Not available

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

## 2.2. Domestic Requirements of Forest Produce

The dependency of the local community on forest produce for household requirements is very low as the village is located near the protected area.

**Table-4 (A): Domestic Requirement of Forest Produce per Household of the MADLIJHAR EDC**

Name of Forest Produce	Average Household Requirement		How met at Present	Source
	Frequency of Requirement	Approx. Qty		
Firewood	Less Frequent	20-25 kg		Market, Forest
Timber for House	Once in a year	2-3 nos.		Market
Small timber for Implements	-	-		-
Pole / Bamboo	Once in a month	2-3 bamboo / per month		Market
Fodder from Forest	-	-		-
NTFP	-	-		-
Other _____	-	-		-

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

There are 200 households in the MADLIJHAR EDC. From the above table and this number of households, it is inferred that the total annual requirements of the village for forest products for own use is as follows:

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

Name of Forest Produce	Community Requirement (Kg per annum) (*)	Remarks
Firewood	1,08,299	Throughout the year
Timber for House	270 nos.	Dec – Jan
Small Timber for Implements	-	-

Pole / Bamboo	650 bamboo	Dec – Jan
Fodder from Forest	-	-

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

### 2.3. Collection & Marketing of Forest Produce by Villagers

The community is not involved in the marketing of any kind of forest produce.

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

The total requirements of forest produce by the community members of the MADLIJHAR EDC is very low.

**Table-6: Total Requirements of Forest Produce by Villagers**

Name of Forest Produce	Community Requirement (Kg per annum) From Table-4(B)	Surplus Marketed (Kg) From Table-5(B)	Total Requirements (Kg)
Firewood	1,08,299	-	1,08,299
Timber for House	270 nos.	-	270 nos.
Small timber for Implements	-	-	-
Bamboo	650 bamboo	-	650 bamboo

**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 MADLIJHAR EDC have been summarized below.

**Table-7: Protection Problems of the MADLIJHAR EDC**

Type of Problem	Relevant (Yes/No)	Significant (Yes/No)
Grazing - Local Animals	Yes	Yes
Grazing - Animals from Other Area	Yes	Yes
Illicit Felling of Timber	Yes	Yes
Smuggling of Timber	Yes	Yes
Accidental Fires	Yes	Yes
Encroachment of Forest Lands	Yes	Yes
Incident of Snake bites/life threats/risks while protecting forest	Yes	Yes
Theft of Medicinal Plants	Yes	Yes

**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 EDC are:

- (a) Grazing - Local Animals
- (b) Grazing - Animals from Other Area

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

In the MADLIJHAR EDC, the reasons for degradation of forest are as follows:

- (a) No Scientific Plan
- (b) Traditional Cultivation

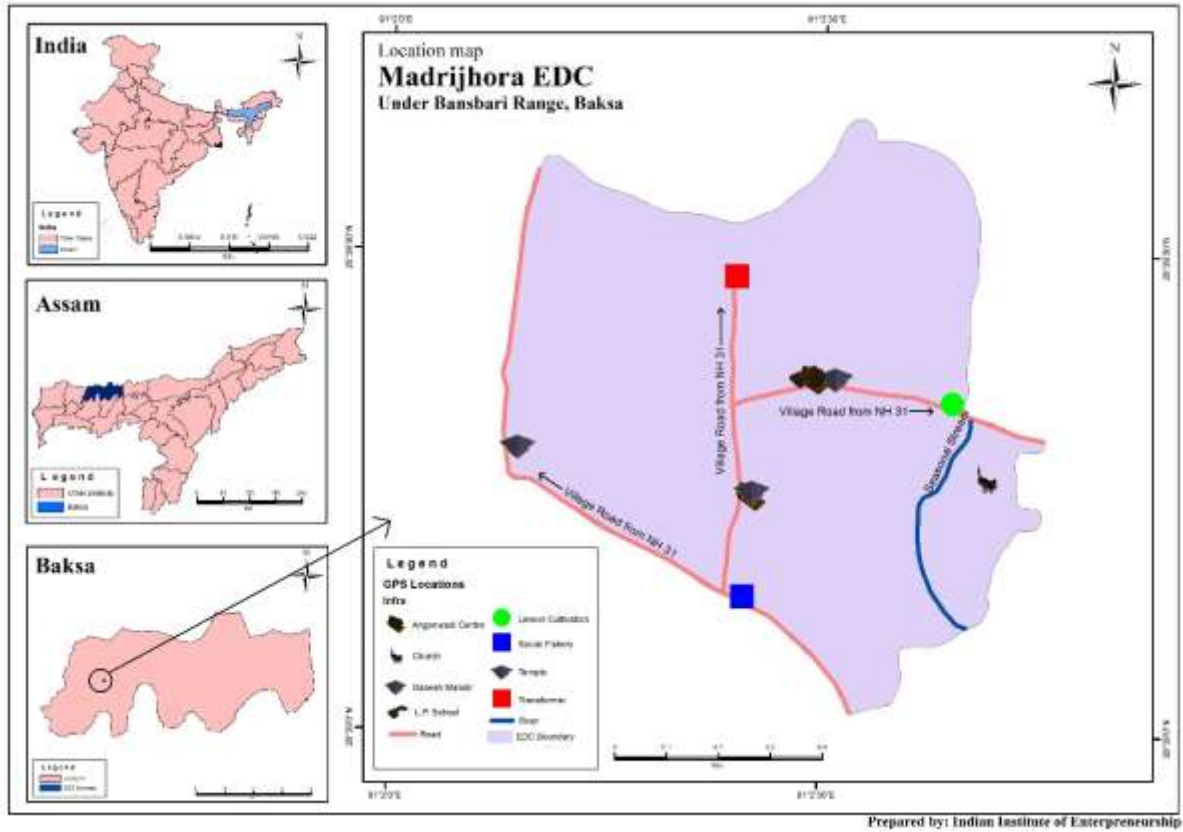
[**Source:** Proforma-3, Table-3.6 / Discussions with Forest Department personnel & Community members]

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	<i>Village Social Map</i>	22
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2	<b>Land Use Map of Village (GIS)</b>	<b>24</b>
3	<b>PRA Exercise</b>	<b>25-33</b>
	<i>Social Mapping</i>	26-27
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# Appendix 1

## 1. Village Map:



3. Social map of Madlijar EDC



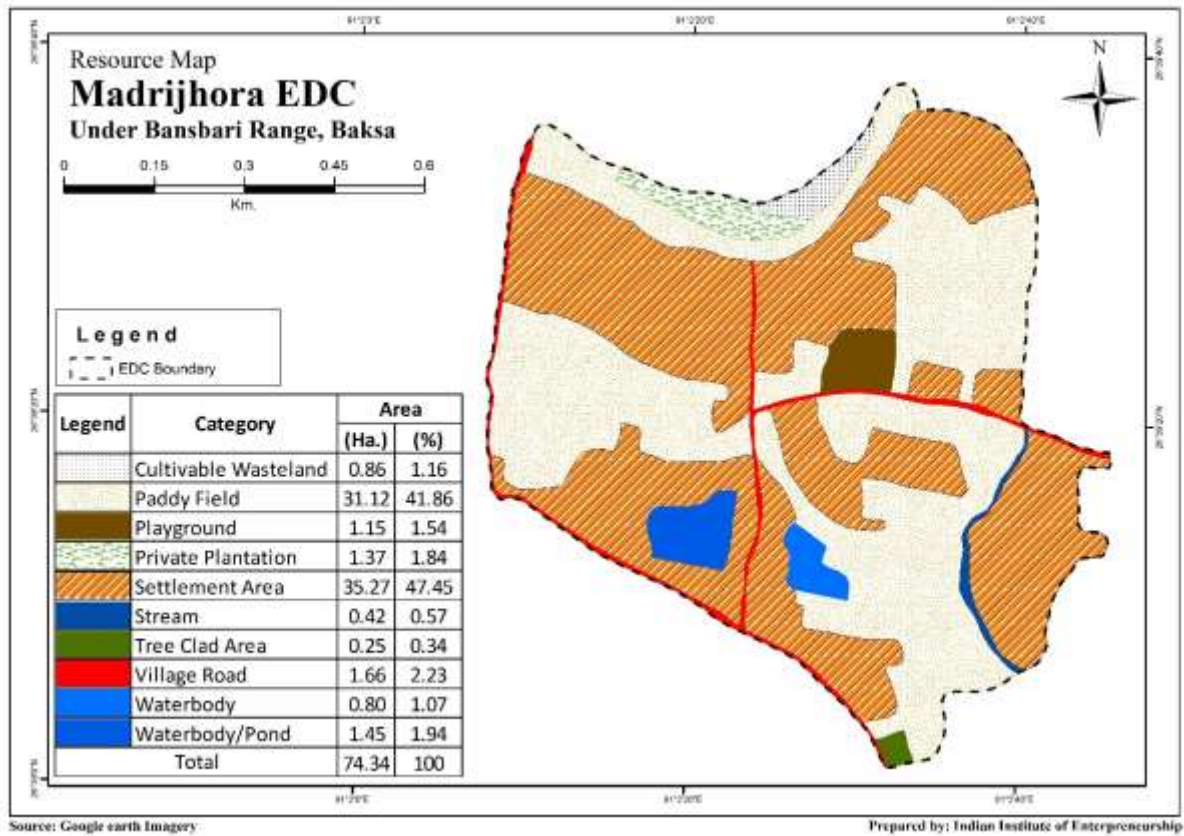
### 3. Resource Map of Madlijhar EDC:





## Appendix 2

### Land Use Map of GIS



### Appendix 3

#### PRA ACTIVITY

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

<b>Numbers of participants :</b>	36
<b>Time :</b>	10.30 am, 4 <sup>th</sup> July 2016
<b>Venue :</b>	Community Hall ( Madlijhar village)

*Table – 3.1 Brief about the villages under MADLIJHAR EDC*

Sl. No.	Name of the Village	No. of households	Population		
			Total	Male	Female
1	Madlijhar	57	325	170	155
	<b>Total</b>	<b>57</b>	<b>325</b>	<b>170</b>	<b>155</b>

Source: Field Survey

*Table – 3.2 Education profile MADLIJHAR EDC*

Illiterate	Primary	Middle School	High School	Higher Secondary	Graduate	Total
130	52	97	32	12	2	325

*Table – 3.3 Income category of MADLIJHAR EDC*

Income Category(in Rs)Yearly	No. of Households
15000-45000	47
45000-60000	9
>60000	1

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

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

### 3.1 Social Mapping:

Social mapping is used to visualise the socio-economic aspects of the Madlijhar EDC where the housing patterns of the households, the numbers of schools, social infrastructure, and religious beliefs among households. Due to time constraint and bad weather we have to skip the transect walk. The villagers were enthusiastic about the mapping process and they actively participated in the process.

At first, the people of villagers were asked to draw the main roads of the village and then asked them to locate their houses and locate the important social places and government offices with help of the PRA team members. Two of them voluntarily came out to draw and they were assisted by other villagers and the team members. All the villagers spotted their households in the map.

**Table 3.2: Information about the villages**

<b>Social Information</b>	<b>Village</b> □	<b>Madlijhar</b>
	Total population	325 nos.
	Male	170 nos.
	Female	155 nos.
	Total households	57 nos.
	Numbers of Pucca Houses	7 nos.
	No of thatch house/Kutch House	44 nos.
	No's of semi pucca house	6 nos.
<b>Land Marks</b>	Bridges	Nil
	Stream	Nil
	River	Nil
	PHE	Nil
	Community hall	1 nos.
	Community Hand pump	4 nos.
	Well	8 nos.
	Embankment	Nil
	Check Dam	Nil
	Play Ground cum Grazing filed	1 nos.

Findings of Social Map:	
<input type="checkbox"/>	The participants of social mapping have identified all 57 households out of which 50 households are thatch house or kutcha house. There is only 7 Pucca. No IAY household though the entire village come under BPL category. This signifies that the IAY scheme of Government has not achieved considerable coverage of poor people residing in rural area yet.
<input type="checkbox"/>	Other than the class based division of the households, important places like community hall, schools, and playground, stream, well, embankment, check dam, hand pump and bridges are mapped.
<input type="checkbox"/>	Main sources of water for the villagers are the community hand pump and few ring wells.
<input type="checkbox"/>	Provision of Education facility is not satisfactory.
<input type="checkbox"/>	Most of the people belong to the Bodo community which are of schedule tribe caste. There are also few Adivasi (tea tribe) communities which belong to the
<b>Learnings:</b> <input type="checkbox"/>	Even though electricity is available inside the villages of the Madlijhar EDC but its presence is negligible due to continuous power failure for more than 19-21 hours per day.
<input type="checkbox"/>	Most of 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 Salbari, which is 4 KM away from the EDC. The villagers have to cover a long distance for their health check-up.

➤ There is also one community hall available beside the L.P school in the EDC where various meetings are held. Major meeting are – Gram panchayat meeting, village head meetings, forest department meetings etc.

➤ 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 EDC 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.

- Agricultural and livestock are mostly damaged by the wild animals that come from the national park where very poor fencing is being constructed throughout the area.
- The villagers of the Madlijhar EDC have to move Bansbari, a distance covered with 4 km, for their weekly marketing activity. Domestic materials, utensils, bangles, cloths and stationeries are sold in different stalls.

### 3.2 Wealth Ranking:

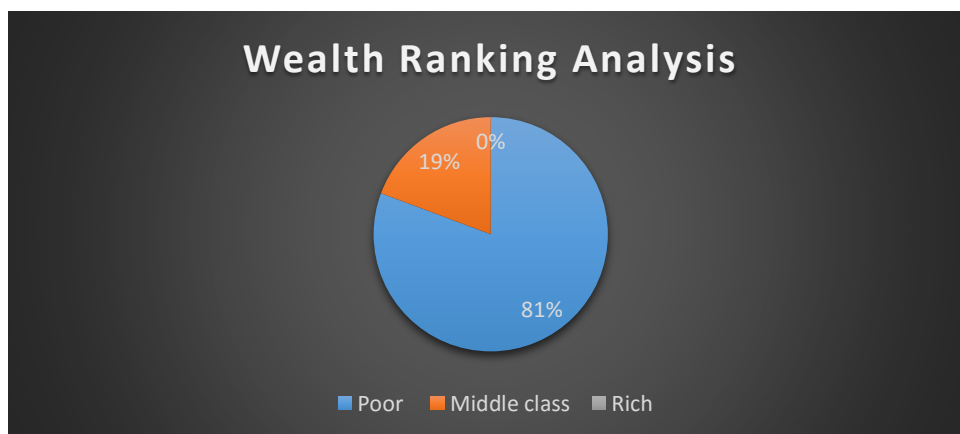
Wealth ranking, or well-being ranking, involves community members identifying and analysing the different wealth groups in a community. It enables evaluators to learn about the socioeconomic stratification of project beneficiaries and local people's definitions and indicators of wealth/wellbeing.

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

- Land holding
- Occupation

As such about 81 per cent people are poor, about 19 per cent are belong to middle class. Poor people are mainly irregular wage earners, sometimes they lease (adhilua) 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**

<b>Year</b>	<b>Event</b>	<b>Type</b>
1972	Primary School established	Construction
1993-1996	There was a community clash in the village between Adivasi community and Bodo community.	Socio political
1996	Severe Flood in the village.	Environmental
2015-16	Construction of road earth filling and sand gravelling	Construction

### **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, etc. The FGD conducted revealed that other major livelihood options available in the EDC are Livestock rearing (Piggery, poultry), shop-keeping, weaving, daily wage laborers, mason, tailoring, carpentry which are not seasonal in nature but is showed in the seasonal mapping.

Figure 3.2: Seasonal Map of Madlijhar EDC

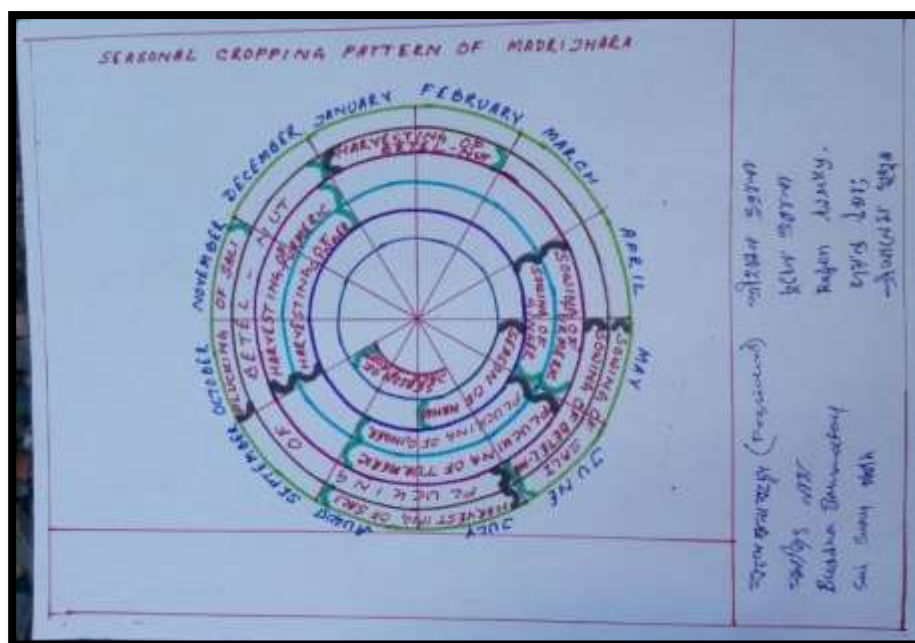
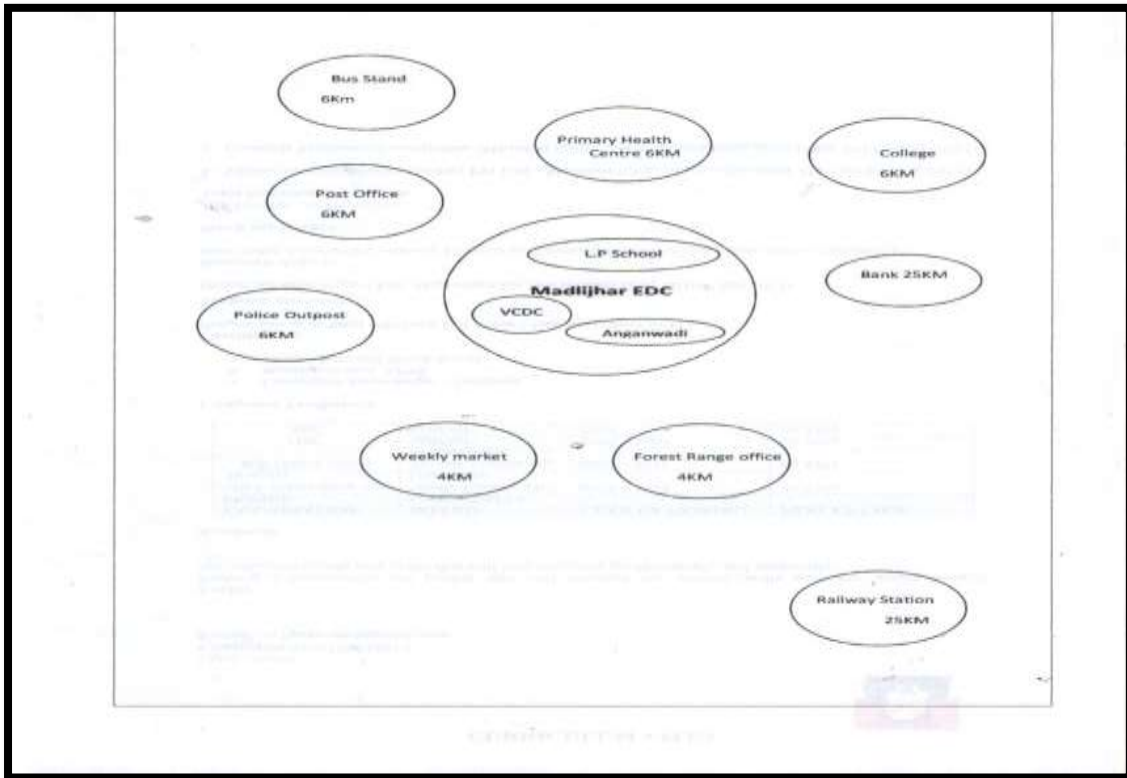


Table 3.4 Seasonal cropping pattern

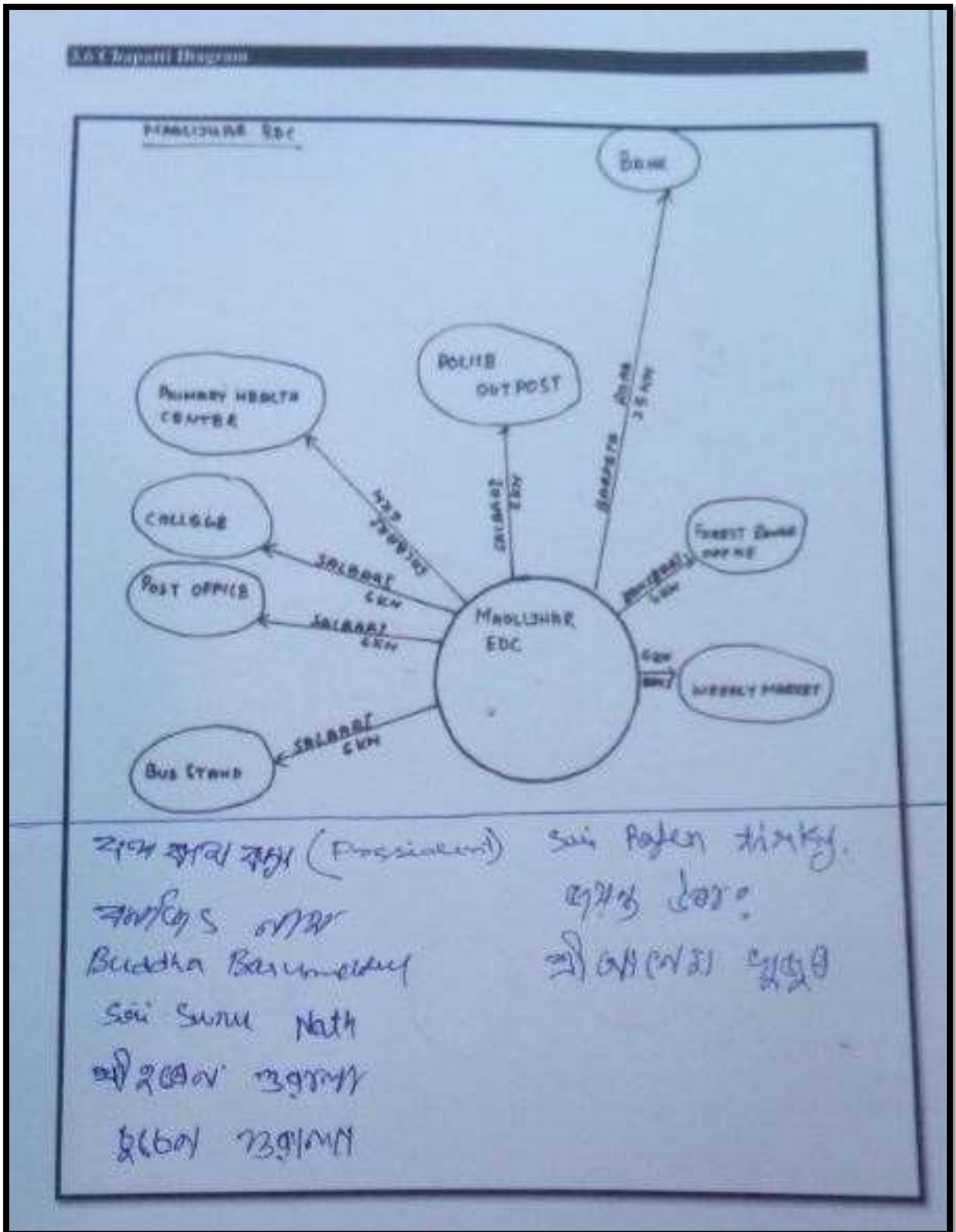
Categories	Time of Activity			
	Sowing	Harvesting	Plucking	
Farming	Sali	May-June	July-Aug	Oct-Nov
	Betel-Nut	May-June	Jan-Feb	July-Dec
	Mustard	Oct-Nov		Jan-Feb
	Turmeric	April-May	Oct-Dec	June-Sep
	Ginger	April-May	Oct-Dec	
	Lemon	Throughout the year		
	Non-Farming	Weaving	Throughout the year	
Livestock Rearing				
Daily Wage Earning				
Shop-keeper				
Electrician				
Masonry				

### 3.5 Venn Diagram





### 3.6 Chapatti Diagram



# Priority Ranking- EPA and Livelihood

Madhigbar

**Priority Ranking- EPA and Livelihood**

Livelihood Activities	Priority Ranking								Marks	Rank
	Horticulture	Tailoring	Handloom	Driving	Livestock	Masonry	Carpentry	Electrician		
	A	B	C	D	E	F	G	H		
Horticulture	X	A	A	A	A	A	A	A	8	1
Tailoring	X	X	C	D	E	B	B	B	4	3
Livestock	X	X	X	D	E	C	C	C	5	4
Driving	X	X	X	X	D	D	D	D	7	2
Handloom	X	X	X	X	X	B	E	E	6	3
Masonry	X	X	X	X	X	X	G	H	1	8
Carpentry	X	X	X	X	X	X	X	G	3	6
Electrician	X	X	X	X	X	X	X	X	2	7

**EPA Activity:**

Entry Point Activities	Priority Ranking								Marks	Rank
	Community Health Centre	Community Hall	Fishery	Electricity	Upper Primary	Drinking Water	JPMC Office	Market Shed		
	A	B	C	D	E	F	G	H		
Community Health Centre	X	A	A	A	A	A	A	A	8	1
Community Hall	X	X	C	D	E	B	B	B	4	3
Fishery	X	X	X	D	E	C	C	C	5	4
Electricity	X	X	X	X	D	D	D	D	7	2
Upper Primary	X	X	X	X	X	E	E	E	6	3
Drinking Water	X	X	X	X	X	X	G	H	1	8
JPMC Office	X	X	X	X	X	X	X	G	3	6
Market Shed	X	X	X	X	X	X	X	X	2	7

సరి సరి కట్టి (President)  
 వరదల వల్ల  
 Bussika Bannamallu  
 Sui Sura Nath  
 వీరవర 398MH  
 గుంట 397MH  
 39/1/2020

Sui Rajen తిక్క  
 కిక్కిరింపు  
 వీరవర (వి) కట్టి



*PRA ACTIVITY*



*COMPLETION OF SOCIAL MAPPING*



*Lemon plantation which also serves as Bio-fence*

**LIST OF EDC EXECUTIVE MEMBERS**

<b>Sl. No.</b>	<b>Name</b>	<b>Designation</b>
1	Mr. Bolaram Boro	President
2	Mr. Haripod Medhi	Member Secretary
3	Banajit Nath	Member
4	Buddha Basumatary	Member
5	Sunu Nath	Member
6	Haren Guwala	Member
7	Susen Guwala	Member
8	Rafen Tirky	Member
9	Jayanta Orang	Member
10	Anem Khujur	Member

# GOVT. OF ASSAM



BODOLAND TERRITORIAL COUNCIL  
OFFICE OF THE FIELD DIRECTOR, MANAS TIGER PROJECT  
Barpeta Road- 781315, Assam.

Registration No. MTP/EDC/02, dated 10<sup>th</sup> April' 2016

*This is to certify that "MADLIHARA ECO-DEVELOPMENT COMMITTEE" under Bansbari Range of Manas Tiger Project, Barpeta Road which was Registered with the Office of the Field Director, Manas Tiger Project, Barpeta Road, Assam on 10<sup>th</sup> April' 2016 has been renewed upto 10<sup>th</sup> April 2017*

*Signed under my hand & seal.*



  
(H.K. Sharma, IFS)  
Field Director, Manas Tiger Project  
Barpeta Road, Assam.

Place: Barpeta Road.

Date: 10/04/2016..

**Annexure 6 (Record I)**

**Table 1: Basic Data of the Village:**

*Table 1: Basic data of the EDC*

Name of the EDC	Date of establishment	No. of members in executive	Name of the president	Name of the secretary	Name of Treasurer	Contribution per family /per	Social fencing used	Yes / No	Remarks on special	Grading %of success by RFO
Madlijhar	2015	10	Mr. Bolaram Boro	Mr. Haripod Medhi, Fr-I	NA	NA	Yes		Na	Na

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

*Table -2: Demographic status of the project villages*

Sl. No.	Name of village	Households (No.)	ST			OBC		SC		Sex ratio (per 1000 male)	Avg. HH size(Approx.)
			Total	Male	Female	Male	Female	Male	Female		
1	Madlijhar	57	325	133	120	15	13	28	16	846	6
	<b>Total</b>	57	325	133	120	15	13	28	16		

Source: - Field survey report.

**Table 3: Village wise farmer category on the basis of landholding:***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	Madlijhar	-	-	57	-	57
	Total	-	-	57	-	57

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

Sl no	Name of the village	village wise no of cattle's or type of animal							
		Cows	Buffaloes	Goat	Duck	Hen	Camels	Pig	Total
1	Madlijhar	158	-	15	180	495	-	23	196
	Total	158	-	15	180	495	-	23	196

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

Sl no	Infrastructure	Location	Distance from village
1	Bus Stand	Salbari	6km
2	Primary Health Centre	Salbari	6km
3	Primary School	Madlijhar	Inside Village
4	Middle School	Kahibari	.5km
5	Post office	Salbari	6km
6	High school	Salbari	6km
7	Bank	Salbari	25km
8	Anganwadi centre	Madlijhar	Inside Village
9	Police Outpost	Salbari	6km
10	Forest Range Office	Bansbari	4km
11	Railway Station	Barpeta Road	25km



12	College	Salbari	6km
13	Police Outpost	Salbari	6km
14	Weekly Market	Bansbari	4km
15	VCDC	Madlijhar	Inside Village

**Table 6: Agricultural crops**

*Table 6 Agriculture Crops*

Particulars	Rain Fed		Irrigation	
	Name of the crop	Area (in ha.)	Name of the crop	Area (in hc)
Kharif	Sali rice	40	NA	NA
Rabi	Mustard	7	NA	NA
Others (Lemon)	Vegetable, Fruits	22	NA	NA

**Table 7: Crop production profile of Madlijhar EDC:**

*Table 7 Crop production profile of BITHORAI EDC*

Type of crop	Total Production (approx.) in quintals	No of household growing	Average production (quintal/ hc) approx.	Area under crop (hc) approx.
Paddy	740	38	19	40
Oil seeds	4	12	1	1
Vegetable	7	50	1	1
Fruits	4	50	1	3

**Table 8: Fodder Availability (animal)**

*Table 8 Fodder availability of the EDC*

types	1-3 month	3-6 month	>6 month
Crop residue	Not Applicable	Due to Protected Area	
Trees fodder	Not Applicable		
Grasses	Not Applicable		

Green Fodder	<b>Not Applicable</b>		
Grazing in Forest	<b>Not Applicable</b>		

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

*Table 9 Location of market from the village*

<b>For Purchase</b>	<b>Location</b>	<b>Distance from village if in other village (in km)</b>
Grocery shop	Madlijhar (1 no.)	0km
Weekly Market	Bansbari	4km
Major Market	Bansbari	4 km
Forest Corporation Sale Depot.	NA	-
Tendu Patta PHAD	NA	-
Fish Market	Bansbari	4km
Medicinal Plant collection Centre	NA	-
Forest Corporation Medicinal plant Collection Centre	NA	-

**Table 10: Water Resources Facility:**

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

<b>Water source</b>	<b>Number</b>	<b>Availability of water</b>	<b>Uses</b>
<b>Stream</b>	1	Seasonal	Irrigation, livestock rearing
<b>Tube well</b>	49	Perennial	Drinking, Domestic uses
<b>Ring Well</b>	8	Perennial	Drinking, Domestic uses

**Table 11: Energy consumption:**

*Table11 showing the Energy Consumption of the EDC*

<b>Type of Fuel</b>	<b>Number of household depending</b>	<b>Number of months dependent</b>	<b>Sources (local, village, forest, other sources)</b>	<b>Major/ Secondary</b>
<b>Fuel wood</b>		12	Outside Market	Major

<b>Kerosene stove</b>	46	12	Market	Secondary
<b>Gobar/Bio gas</b>	NA	-	-	-
<b>LPG</b>	11	-	Local LPG Agency	Major
<b>Electric Heater</b>	NA	-	-	-

## RECORD: II

### LIVELIHOOD OPPORTUNITY ANALYSIS

**Table 12: Agriculture and Horticulture:**

*Table 12: showing the agricultural and horticultural status*

<b>Constraints</b>	<b>Reason</b>	<b>Opportunities</b>	<b>Programme</b>
<b>Low Production</b>	<ul style="list-style-type: none"> <li>• Lack of fencing which is mostly important.</li> <li>• Only one crop undertaken annually (Sali)</li> <li>• Very negligible use of fertilizers and pesticides, insecticides.</li> <li>• Lack of irrigation facilities.</li> <li>• Lack of agricultural infrastructure, modern tools and equipment's viz, power tillers, tractors etc.</li> <li>• Non usages of high yielding seeds.</li> </ul>	<ul style="list-style-type: none"> <li>• Introduction of Bio-Fencing process.</li> <li>• Eco-tourism with guide.</li> <li>• Well-structured training programme. The villagers are inherited with the skill of cultivation. But an improvisation of skills is the need of the hour.</li> <li>• Usage of high yielding seed programme.</li> </ul>	<ul style="list-style-type: none"> <li>• Tractor operation training</li> <li>• Agri-skill development programme.</li> <li>• Training on insecticides, pesticides, hybrid cultivation</li> </ul>
<b>Storage and Production</b>	<ul style="list-style-type: none"> <li>• Lack of common storing place</li> <li>• Lack of cold storage facility due to non-availability of electricity.</li> </ul>	<ul style="list-style-type: none"> <li>• Helpful in preserving unsold products for a longer period of time.</li> <li>• They can store their product and sell it when there is a higher demand.</li> </ul>	<ul style="list-style-type: none"> <li>• Packaging</li> <li>• Transportation and distribution.</li> </ul>
<b>Marketing</b>	<ul style="list-style-type: none"> <li>• Lack of transporting facilities for carrying</li> </ul>	<ul style="list-style-type: none"> <li>• Smooth transportation facility will help the</li> </ul>	<ul style="list-style-type: none"> <li>• Buyers sellers meet</li> </ul>

**Table 13: Livestock***Table 13 Livestock*

Constraints	Reasons	Opportunities	Programme
Less grazing land	<ul style="list-style-type: none"> <li>• Not Applicable</li> </ul>		
Availability of fodder	<ul style="list-style-type: none"> <li>• Unable to buy fodder from market due to poor financial condition</li> <li>• . 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>	
Veterinary care facility	<ul style="list-style-type: none"> <li>• No veterinary care clinic</li> <li>• Lack of knowledge about the proper rearing of live stock</li> </ul>	<ul style="list-style-type: none"> <li>• Disease control</li> <li>• Increases the life span of cattle.</li> <li>• It will also help to aware the villagers and will encourage them for livestock rearing.</li> </ul>	
Production of milk and Dairy Products.	<ul style="list-style-type: none"> <li>• No scientific knowledge on cattle rearing to increase the milk production.</li> </ul>	<ul style="list-style-type: none"> <li>• Training on the milk production can enhance the skill of milk production.</li> <li>• Availability of supplements like cattle “Milk Booster, Milk Plus” etc. can increase the production of milk in the area.</li> </ul>	
Milk market	<ul style="list-style-type: none"> <li>• Less contact with the direct market for milk</li> <li>• Unaware of the market demand of different milk made products.</li> </ul>	<ul style="list-style-type: none"> <li>• A huge demanded market for milk</li> </ul>	

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

Constraints	Reasons	Opportunities	Programme
Less collection	<ul style="list-style-type: none"> <li>• Not Applicable</li> </ul>	<ul style="list-style-type: none"> <li>• Not Applicable</li> </ul>	<ul style="list-style-type: none"> <li>• Not Applicable</li> </ul>

<b>Unsustainable extraction</b>	<ul style="list-style-type: none"> <li>• Not Applicable</li> </ul>	<ul style="list-style-type: none"> <li>• Not Applicable</li> </ul>	<ul style="list-style-type: none"> <li>• Not Applicable</li> </ul>
<b>Low rates</b>	<ul style="list-style-type: none"> <li>• Not Applicable</li> </ul>	<ul style="list-style-type: none"> <li>• Not Applicable</li> </ul>	<ul style="list-style-type: none"> <li>• Not Applicable</li> </ul>
<b>Value addition</b>	<ul style="list-style-type: none"> <li>• Not Applicable</li> </ul>	<ul style="list-style-type: none"> <li>• Not Applicable</li> </ul>	<ul style="list-style-type: none"> <li>• Not Applicable</li> </ul>

**Table 15: Specialised skill**

*Table 15: Specialised skills: Handloom*

<b>Constraints</b>	<b>Reasons</b>	<b>Opportunities</b>	<b>Programme</b>
<b>Raw material availability</b>	<ul style="list-style-type: none"> <li>• Non-Availability of Raw Materials within reachable location (market 7km away)</li> <li>• No Storage</li> </ul>	<ul style="list-style-type: none"> <li>• Common place for setting a raw material storage</li> </ul>	<ul style="list-style-type: none"> <li>• Setting up a raw material bank</li> </ul>
<b>Product quality</b>	<ul style="list-style-type: none"> <li>• Shortage of High Quality Materials</li> <li>• Use of Traditional machineries</li> </ul>	<ul style="list-style-type: none"> <li>• Developing Quality Products for new market exploration.</li> </ul>	<ul style="list-style-type: none"> <li>• Training on Modern Tools and Equipment.</li> <li>• Providing modern technology to the villagers</li> </ul>
<b>Marketing potential</b>	<ul style="list-style-type: none"> <li>• No standardised market</li> <li>• No pricing policy</li> <li>• No linkage with the institutional buyers</li> <li>• No Product Diversification or New Product Development.</li> </ul>	<ul style="list-style-type: none"> <li>• Exploring new markets with diversified products</li> </ul>	<ul style="list-style-type: none"> <li>• Providing a bulk buy arrangement of the finished product with institutional buyers.</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>	<ul style="list-style-type: none"> <li>• Microfinance, Term Loans, Working Capital Arrangement</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>	<ul style="list-style-type: none"> <li>• Skill Up gradation &amp; Training on New Product Development and Product Diversification</li> </ul>

**Table 16: Credit facility***Table 16 Credit facility*

<b>Constraints</b>	<b>Reason</b>	<b>Opportunities</b>
<b>Indebtness</b>	Nil	<ul style="list-style-type: none"><li>• Setting up modern financial institution in the nearby areas.</li></ul>
<b>Rate of interest</b>	<ul style="list-style-type: none"><li>• Higher lending rates charged by the private money lender</li></ul>	<ul style="list-style-type: none"><li>• Subsidised credit arrangement</li></ul>
<b>Availability of loan</b>	<ul style="list-style-type: none"><li>• Fear of risk taking</li><li>• No knowledge of documentation</li></ul>	<ul style="list-style-type: none"><li>• Start-ups entrepreneurial venture</li></ul>
<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>