

**LANKASHI PURBANCHAL JOINT FOREST MANAGEMENT COMMITTEE
(JFMC)**

DIGBOI FOREST DIVISION

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

**Prepared by
Lankashi Purbanchal 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

Acronym	Full Form
APFBC	Assam Project on Forest and Biodiversity Conservation
AFD	<i>Agence France de Développement</i>
BPL	Below Poverty Line
COMPELO	Consortium for Micro Planning and Enhancing Livelihood Opportunities
CML	Centre for Microfinance and Livelihood
EPA	Entry Point Activities
GIS	Geographical Information System
Ha	Hectare
IIE	Indian Institute of Entrepreneurship
JFMC	Joint Forest Management Committee
Kg	Kilogram
Km	Kilometer
MT	Metric Ton
NGO	Non-Governmental Organization
NTFP	Non Timber Forest Product
NWFP	Non Wood Forest Product
PDS	Public Distribution System
PRA	Participatory Rural Appraisal
RGVN	Rashtriya Gramin Vikas Nidhi
Rs.	Indian Rupees
SHG	Self Help Group
VCDC	Village Council Development Committee

**LANKASHI PURBANCHAL JOINT FOREST MANAGEMENT COMMITTEE
DIGBOI Forest Division**

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

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1. Introduction	
About the Project	<p>The vision of the Assam Project on Forest and Biodiversity Conservation (APFBC) is ‘to enable sustainable forest and biodiversity conservation and management in Assam through multi-scale integrative planning and involvement of forest dependent communities in target areas and giving fillip to their livelihood activities through sustainable use of forest and non-forest resources’. The project’s objective has been stated as: ‘In collaboration with the forest dependent communities, to restore forest eco-systems to enhance the forest dependent community’s livelihoods and ensure conservation and sustainable use of biodiversity’.</p> <p>The above project is being mainly funded by the <i>Agence France de Développement</i> (AFD) - i.e. the French Development Agency, with 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>
Micro-Planning & Livelihood Development	<p>In order to promote livelihood activities through market potential based value addition; the present project intends to take up activities like entrepreneurship promotion, product processing value addition and marketing under this project. This has become necessary on account of the pressures on existing forest resources due to the growth of population. There is a need to explore value addition to the existing forest and biodiversity products and services, based on the market potential. In addition, non-forest based livelihoods need to be explored and the capacities of the community members need to be built-up through skills development initiatives.</p> <p>A consortium comprising of Indian Institute of Entrepreneurship (IIE) Guwahati and <i>Rashtriya Gramin Vikas Nidhi</i> (RGVN) has been formed to implement (<i>interalia</i>) the micro-planning and livelihood development under the above project.</p> <p>The above consortium has been titled as ‘Consortium for Micro Planning and Enhancing Livelihood Opportunities’ - COMPELO in short.</p> <p>As per project guidelines, this micro-plan includes ‘various operations of village and forest development ... livelihood support of forest dependent members and keeping sustainable forest management as the broad objective’. It includes both forest development and livelihood development.</p>
Micro-Plan for the Lankashi Purbanchal JFMC	<p>This document gives the Micro-Plan for the Lankashi Purbanchal JFMC, which is located in the South Western part of Upper Dihing R.F under Digboi Forest Division in Tinsukia District of Assam. The Upper Dihing R.F falls under the jurisdiction of Khetu Beat office under Lakhpathar Range of Digboi Forest Divison. The JFMC is The profile of the community is given in the next section.</p> <p>The present micro-plan has been prepared by members of the community, including both male and female members. This document has emerged as an outcome of a Participatory Rural Appraisal (PRA) process undertaken by the community and personnel of Indian Institute of Entrepreneurship (IIE) Guwahati on 24th of April, 2017. The micro-plan has been compiled by IIE based on the project guidelines. The document has been discussed and finalized for adoption of Micro plan for Lankashi Purbanchal.</p>

2. Village Socio-Economic Profile

Location	The Lankashi Purbanchal Joint Forest Management Committee (JFMC) has been formed to cover the existing community dwelling in Lankashi, a village located on the fringe of the Upper Dihing RF under Lakhpathar range of Digboi Forest Division. The area covered by the above JFMC falls within the Itakhuli Development Block of Tinsukia District. Appendix-1 gives the Village Map.																						
Key Information	<p>The key information of the JFMC is furnished below.</p> <p style="text-align: center;">Table-A: Key Information of the JFMC</p> <table border="1" data-bbox="443 600 1345 1205"> <tr> <td>Name of the JFMC</td> <td>Lankashi Purbanchal</td> </tr> <tr> <td>Habitation</td> <td></td> </tr> <tr> <td>Name of Revenue Village</td> <td></td> </tr> <tr> <td>Name of the Gram Panchayat / VCDC</td> <td>Lankashi Gaon Panchayat</td> </tr> <tr> <td>Revenue Circle</td> <td>Tinsukia</td> </tr> <tr> <td>District</td> <td>Tinsukia</td> </tr> <tr> <td>Forest Division</td> <td>Digboi</td> </tr> <tr> <td>Forest Range</td> <td>Lakhpathar</td> </tr> <tr> <td>Forest Beat</td> <td>Khetu</td> </tr> <tr> <td>Year Formed</td> <td>2015</td> </tr> <tr> <td>Description of Boundary of JFMC</td> <td>As below North: Lankashi Tea Estate South: Mothala Tea Estate West : Bojaloni Tea Estate East: Upper Dihing Reserve Forest</td> </tr> </table> <p>Source: JFMC Records & Discussions during PRA Exercise in 24th April 2017</p> <p>Additional details are given at Table-1 of Record-I. (Given at Annexure)</p>	Name of the JFMC	Lankashi Purbanchal	Habitation		Name of Revenue Village		Name of the Gram Panchayat / VCDC	Lankashi Gaon Panchayat	Revenue Circle	Tinsukia	District	Tinsukia	Forest Division	Digboi	Forest Range	Lakhpathar	Forest Beat	Khetu	Year Formed	2015	Description of Boundary of JFMC	As below North: Lankashi Tea Estate South: Mothala Tea Estate West : Bojaloni Tea Estate East: Upper Dihing Reserve Forest
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Brief Details of the Executive Committee & General Body	<p>The brief details of Executive Committee & General Body of the JFMC are contained in the table, which is given below.</p> <p style="text-align: center;">Table-B: Brief Details of Executive Committee & general Body</p> <table border="1" data-bbox="443 1440 1345 1697"> <tr> <td>Name of President</td> <td>Chiraj Kamal Gogoi</td> </tr> <tr> <td>Name of Secretary</td> <td>Swapnanil Hazarika</td> </tr> <tr> <td>No. of Members in Executive Committee</td> <td>Male: 9 Female: 2 Total -11</td> </tr> <tr> <td>No. of Members in the General Body</td> <td>540 (represented by the head of the households)</td> </tr> </table> <p>Source: JFMC Records</p>	Name of President	Chiraj Kamal Gogoi	Name of Secretary	Swapnanil Hazarika	No. of Members in Executive Committee	Male: 9 Female: 2 Total -11	No. of Members in the General Body	540 (represented by the head of the households)														
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Households & Population Structure	<p>The village has 540 households, of which 536 households are BPL (Below Poverty Line) households.</p> <p>The total population is 2,700, of which 1150 are males and 1550 are female members. Majority of the village population belongs to OBC community and few households belong to ST community.</p> <p>Table-2 of Record-I may be referred for further details in the above regard.</p> <p>From this, it is inferred that:</p>																						

	<p>(1) The average number of persons in a household is 5</p> <p>(2)The sex ratio is 1278 females per 1000 males in the village.</p>
Education & Skills Development	<p>Over 100 % of the population is reported to be literate. Most of the community members have received school level education. On the other hand, relatively fewer households have college and university educated members.</p> <p>Livelihood skills are usually acquired under various settings – formal & informal. In the JFMC area, informal means for skills development is the traditional norm. People have traditional skills in the following areas:</p> <p>a) Weaving</p> <p>b) Livestock rearing</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>
Soil	<p>The soil type of the project area includes:</p> <p>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.</p>
Water	<p>The area is drained by River Ketu.</p>
Climate: Temperature & Rainfall	<p>The average temperature 22.9° C. With an average of 27.5 °C, August is the warmest month. In January, the average temperature is 15.9 °C. It is the lowest average temperature of the whole year.</p> <p>The average rainfall is about 2499 mm. About two-thirds of the rainfall usually occurs during the rainy season (June-August). The village has high levels of humidity (over 90%) during the rainy months and low levels in the winter (Below 30%).</p>
Forest & Biodiversity	<p>The local forests have been broadly classified as Alluvial Plain Sal Forest and Eastern Terrain Sal Forests. The main tree species are Hollong, Guijan, Mekai, Kurta, Nahor and Sia-nahor, Khagori or Khag, Nal, Ekra or Ikora, Ulu kher, Meghela or Bhutang, Kohuaor Kash. Sal, Teak, Ghora Neem, Bohera, Koros, Jia and Arjun. 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>

Land Use Pattern	<p>Appendix-2 gives the land-use pattern of the village. From the same, it is seen that the land-use in the village is as follows:</p> <p>Crop Land: Tree Cover: Habitation: Water Bodies: (incl. water logged areas) Barren/Fallow Land: Other</p>
Land Holdings	<p>The type of households as per land-holding is given at Table-3 of Record-I. From the same, it is seen that:</p> <ul style="list-style-type: none"> • 1.86 % of the households are landless; • 98.14 % of the households are marginal farmers (less than 2 Ha); and
Livestock	<p>The total number of livestock in the village is 1405. The main types of livestock possessed by the households include:</p> <p>Cows: 160 Goats: 50</p> <p>Table-4 of Record-I may be referred to for the details in the above connection.</p>
Village Infrastructure & Communication Facilities	<p>In any community; the availability of basic infrastructure enables the development of sustainable livelihood options. The present condition of infrastructure in the village is not satisfactory. This is borne out by Table-5 of Record-I, which gives the present status of the village infrastructure.</p> <p>From the above table, the following have been noted with regard to village infrastructure:</p> <p>Physical Infrastructure: The habitation is not deprived of basic physical infrastructure like paved roads, electricity, water supply, mobile network etc.</p> <p>Education & Health Facilities: There are minimal educational is available. Health and Public transport is available within 10-12km. The community members have to use bicycles to move around.</p> <p>Govt. Offices: The government offices (such as Police station, Gram Panchayat office, Revenue office, Forest Beat office etc.) are located within 6-8 Km, which gets amplified as the villagers do not have access to regular public transport from either the habitation or from nearby areas.</p> <p>Financial Inclusion: Facilities for financial inclusion like bank and post office are located at 10-12km distance from the habitation. Hence, the community members do not have bank accounts or postal savings accounts.</p>
Agricultural Crops	<p>The details of the agricultural crops grown in the village is available at Table6 of Record-I.</p> <p>The above shows that the following are the main crops grown in the village.</p> <ol style="list-style-type: none"> a) Kharif Crops: Paddy-Sali; b) Rabi Crops: Seasonal Vegetables-Potato, Raddish, Brinjal, etc. c) Other Tea Leaf <p>Therefore all the crops are depended on rainfall</p>
Crop Production Profile	<p>Table-7 of Record-I may be referred to for the production and yield details of the crops grown in the village.</p> <p>The all households are involved in growing crops. The production and yield of these crops is given as follows:</p> <p>(a) Paddy: Production 194.4 MT Yield 2.91 MT /ha</p>

	<p>(b) Tea Leaf: Production 2.8 MT Yield .009 MT /ha (c) Seasonal Vegetables: Production 54 MT Yield 2.7 MT/ha</p>
Fodder Availability	<p>The matter of fodder availability in the village is dealt with at Table-8 of Record-I. The above shows that the main sources of fodder in the village are as follows:</p> <ol style="list-style-type: none"> Paddy Waste Household Kitchen Waste Surplus Vegetables Grazing Land Forest
Markets	<p>Table-9 of Record-I shows the location of the different markets from the village. The main markets used by the community are as follows:</p> <ol style="list-style-type: none"> Grocery / PDS: Within the Village Weekly / Bi-weekly Market: : Makum at 12 km away Major Market: : Makum at 12 km away
Water Resources	<p>The water resources are tabulated at Table-10 of Record-I. The main water resources with the water availability is as follows:</p> <ol style="list-style-type: none"> River Water (Water Availability: Perennial / Seasonal) Tube well (Water Availability: Perennial / Seasonal) Stream (Water Availability: Perennial / Seasonal) Ring Well (Water Availability: Perennial / Seasonal)
Energy Consumption	<p>Table-11 of Record-I shows the major sources of energy in the village. The same have been listed below.</p> <ol style="list-style-type: none"> Fuel Wood- Households Depending: 81 Nos. Source: Forest Plantation Kerosene LPG
Socio-economic status	<p>Social set-up: The village is inhabited by tribal and Non tribal community and is comprised of OBC and Schedule Caste. The society is not marked by deep social divisions. The observed position of women is satisfactory.</p> <p>Economic Condition: The economic position is / is not satisfactory. The main livelihood is tea plantation and Rice Cultivation. The household earn from a minimum of Rs. 48,000 to a maximum of Rs. 2, 00,000 per year. There is no large-scale migration of the youth and others for livelihoods. Additional details are available at the next section.</p>
Maps	<p>Appendix-1 gives the following maps, based on PRA exercise:</p> <ul style="list-style-type: none"> • Village Map • Village Social Map (with the names and particulars of members in PRA) • Village Resource Map

3. Livelihood Opportunity Analysis

PRA Exercise	Team from IIE Guwahati carried out PRA exercise in Laina village as follows: Date: 24 th of April, 2017 Location: Community Hall, Laina Village, Numbers Present: 50 In Presence of: JFMC office bearers, Village Headman, community members, Forest Department personnel, etc.																																		
Objective of PRA	The objective was to study the existing household conditions and obtain other primary data about the community for developing the livelihood options and the forest development plan.																																		
Tools Used & Outcomes of the PRA	Different tools were used and outcomes obtained. These include: Social Mapping Wealth Ranking Time Line review Seasonality of Livelihoods Venn Diagram Appendix-3 furnishes detailed information of the above.																																		
Ranking	Ranking exercise has been done for the following: <ul style="list-style-type: none"> • Livelihoods & Skills Development • Entry Point Activities (EPA) Appendix-3 elaborates the above. From the same, it is stated that: Ranking of Livelihoods & Skills Development <ol style="list-style-type: none"> 1. Weaving/Handloom in Modern Tools 2. Tailoring 3. Welding 4. Poultry Rearing 5. Electrician Training 6. Piggery Ranking of EPA <table border="1"> <thead> <tr> <th></th> <th>Village EPA as ranked</th> <th>Details (Appendix-3 has additional particulars)</th> <th>Probable source of funding/dept.</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>Community Hall along with Office room with attached bathroom</td> <td>Construction of Community Hall along with office room</td> <td>APFBC</td> </tr> <tr> <td>2</td> <td>Drinking Water</td> <td>50 numbers of tube well to 50 numbers of BPL families</td> <td>APFBC</td> </tr> <tr> <td>3.</td> <td>LPG connection with cylinder</td> <td>To 50 BPL families</td> <td>APFBC / UJJWALA</td> </tr> <tr> <td>4.</td> <td>Solar Light</td> <td>At least 50 Solar light should be installed within the JFMC</td> <td>APFBC / MNRE/NBARD</td> </tr> <tr> <td>5.</td> <td>Library With accessories</td> <td>Installation of Almirah and Books</td> <td>APFBC/Other agencies</td> </tr> <tr> <td>6.</td> <td>School Boundary</td> <td>Construction of Brick wall at Dimoruhula School Boundary</td> <td>SSA/Other agencies</td> </tr> <tr> <td>7.</td> <td>Culvert</td> <td>Construction of 5 Culvert in</td> <td>APFBC</td> </tr> </tbody> </table>				Village EPA as ranked	Details (Appendix-3 has additional particulars)	Probable source of funding/dept.	1.	Community Hall along with Office room with attached bathroom	Construction of Community Hall along with office room	APFBC	2	Drinking Water	50 numbers of tube well to 50 numbers of BPL families	APFBC	3.	LPG connection with cylinder	To 50 BPL families	APFBC / UJJWALA	4.	Solar Light	At least 50 Solar light should be installed within the JFMC	APFBC / MNRE/NBARD	5.	Library With accessories	Installation of Almirah and Books	APFBC/Other agencies	6.	School Boundary	Construction of Brick wall at Dimoruhula School Boundary	SSA/Other agencies	7.	Culvert	Construction of 5 Culvert in	APFBC
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		village road	
	8.	Tent House	A tent house along with Chairs and Utensils APFBC
	9.	Sanitation	Providing HHL (House Hold Latrine) – Low cost, septic and sanitary type. Swach Bharart Mission/ PHED
	10.	Store Room	One Store room should be set within the Namghar of Lina Village APFBC/Other agencies
Livelihood opportunities	<p>Livelihood Opportunities were identified as follows:</p> <ul style="list-style-type: none"> • Skills Development • Livestock • Agriculture & Horticulture • NTFP • Credit Facility <p>Additional discussion about the above has been given below.</p>		
Agriculture & Horticulture	<p>Table-12 under Record-2 may be seen in this connection for opportunities in the areas of agriculture and horticulture.</p> <p>The main constraints are:</p> <ol style="list-style-type: none"> a) Low Production b) Storage & processing c) Marketing <p>The opportunities are:</p> <ol style="list-style-type: none"> a) Increase annual crop cycle b) Collection Unit, Packaging c) Institutional linkage for marketable outputs <p>The suggested programme is:</p> <ul style="list-style-type: none"> • Agri-skill development programme. • Training on insecticides, pesticides, hybrid cultivation etc. • Irrigation • Credit facilities. 		
Livestock	<p>Table-13 furnishes additional information about opportunities for livestock rearing.</p> <p>The main constraints are:</p> <ol style="list-style-type: none"> (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>The opportunities are:</p> <ol style="list-style-type: none"> (a) Higher income from livestock rearing. (b) A huge demand for livestock products like pork, chicken, eggs, etc in the nearby markets. <p>The suggested programme is:</p> <ol style="list-style-type: none"> (a) High Yielding Variety Pig Rearing (b) High Yielding Variety Poultry Rearing 		

	<p>(c) Dairy (d) Fisheries</p>
NTFP	<p>The opportunities for NTFP are tabulated at Table-14 under Record-2 The main constraints are: (a) Less availability of NWFP (b) No technical know-how (c) No processing units The opportunities is: (a) Availability of fertile fallow land (b) Generation of Livelihood from collection The suggested programme are: (a) Plantation of Food plants, Fodder, Etc (b) Medicinal Plants and aromatic plants (c) Herbal plants</p>
Specialized Skills	<p>For skills development, the opportunities are tabulated at Table-15 under Record-2 The main constraints are: (a) Lack of product diversification (b) Lack of product quality The opportunities are: (a) Know-how of Traditional Skills, viz-sericulture, weaving (b) Availability of Work-Centre (c) Availability of Man-power The suggested programme is: (a) Training on Modern Tools and Equipment (b) Providing modern technology to the villagers (c) Skill Up gradation & Training on New Product Development and Product Diversification (d) Setting up a raw material bank (e) Providing a bulk buy arrangement of the finished product with institutional buyers.</p>
Credit Facility	<p>Table-16 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>

Strategic Interventions	<p>Summarizing the suggested programme at above as strategic interventions for the Livelihood Development Plan:</p> <ol style="list-style-type: none"> 1. Agriculture & Horticulture: Tractor operation training, Agri-skill development programme, Training on insecticides, pesticides, hybrid cultivation 2. Livestock: Piggery, Poultry 3. NWFP : Plantation of Food plants, Medicinal Plant etc 4. Specialized Skills: Training on Modern Tools and Equipment, Providing modern technology to the villagers, Skill Up gradation & Training on New Product Development and Product Diversification, Setting up a raw material bank, Market Linkage with institutional buyers. 5. Credit facility: Setting up modern financial institution in the nearby areas
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4. Livelihood Development Plan

Income Generating Activities	<p>The main income generating activities as planned at the village are:</p> <p>Farm Sector :</p> <ol style="list-style-type: none"> 1. Dairy 2. Poultry and Piggery 3. Agriculture 4. Horticulture 5. Pisciculture 6. Sericulture <p>Non-Farm sector:</p> <ol style="list-style-type: none"> 1. Handloom/ Weaving 2. Heavy Motor Driving 3. Electrician <p>Source: Table-32 of Record-4</p>
SHG Activities	<p>SHGs of the village can plan the following activities:</p> <ol style="list-style-type: none"> 1. To generate entrepreneurial awareness 2. To organize and form Joint Liability Groups(JLG) 3. To involve the villagers in Livelihood Activities collectively. <p>Source: Table-33 of Record-4</p>
Exposure Trips	<p>The following exposure trips are planned: At least two exposure trips to successful JFMC outside Assam.</p> <p>Source: Table-34 of Record-4</p>
Summary of Action Plan	<p>As attached in next page.</p>

Convergence	<p>The planned initiatives may be converged with the following schemes of the Government of India:</p> <p>(a) National Rural Employment Guarantee Scheme - for rural employment (b) Rashtriya Krishi Vikas Yojana (RKVY) - for agricultural and allied development (c) Rashtriya Krishi Sinchay Yojana (RKSYS) - for irrigation, including watershed development (d) National Rural Livelihoods Mission (e) Skills Development Programme (f) Help from departments of education, Sericulture, Veterinary, Irrigation, Industrial and Fishery. (g) Other schemes for rural development and livelihoods as found appropriate.</p> <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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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 Lankashi Purbanchal 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 Lankashi Purbanchal 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 Lankashi Purbanchal JFMC have been summarized below.

Table-1: Conditions of the Forests of Lankashi Purbanchal JFMC

Identification	Area of JFMC Forest (Ha)	Distance from Village (Km)	Condition of Forest [Good - Forest with crown density of 40% of more Else 'Degraded']	Frequency of Use by Community [2-3 m / 3-6 m / 6-9 m / Over 9 m]
(A) Assigned Forest				
RF / PRF Name:	20 (APFBC)	.5	Good Area: Nil Ha Degraded Area: 20 Ha	-

(B) Other Planted Area				
	25 (NARMIL)	.5	Good Area: 25 Ha Degraded Area: Nil	3-6 m
TOTAL	45		Good Area: 25 Ha Degraded Area: 20 Ha	

Source:Discussions with Forest Department personnel & Community members

It is seen that the Lankashi Purbanchal JFMC has 45 Ha under its forests, of which 25 Ha (62.5 %) is 'Good' (Crown density >40%) and the rest is 'Degraded'.

1.2. Forest Soil Type

The forests of Lankashi Purbanchal JFMC are located in Red Soil. Some salient points of the forest soil type have been given in the following table.

Table-2: Forest Soil Type in Lankashi Purbanchal JFMC

Parameter	Status in Assigned Forests	Status in Other Planted Areas
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 Lankashi Purbanchal 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 Lankashi Purbanchal 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 Wet Tropical Evergreen Forests.

Table-3: Existing Composition of Flora in the Lankashi Purbanchal JFMC

Parameter	Local Name(s)	Botanical Name(s)
Major Forest Species	Hollong	<i>Dipterocarpus macrocarpus</i>
Associates	Hollock	<i>Terminalia myriocarpa</i>
	Ajar	<i>Lagrslroomia Speciosa</i>
	Arjun	<i>Terminalia arjuna</i>
	Udal	<i>Sterculia Villosa</i>
	Simul	<i>Bombax ceiba</i>
	Bakul	<i>Mimusops elengi</i>
	Siris	<i>Albizia lebbeck</i>
	Dhuna	<i>Canarium bengalenses</i>
	Sam	<i>Artocarpus chapasha</i>
	Nahar	<i>Mesua ferrca</i>
	Sassi	<i>Aqeilatia agallecha</i>
Shrubs	Betibah	<i>Bambusa mastersii</i>
	Bhekuri	<i>Solanum indicum</i>
	Bajal bah	<i>Pseudostachyum polymorphum</i>
	Bor-manmani	<i>Centella asiatica</i>
	Ekra, bata	<i>Sclerostachya fusca</i> (Syn:- <i>Saccharum</i>)
Medicinal Plants	Hilikha	<i>Terminalia chebula</i>
	Bhomora, Bahera	<i>Terminalia belerica</i>
	Thutmala	<i>Garuga pinnata</i>
	Dalchini	<i>Cinnamomum zeylanicum</i>
Produces	Bamboo- Jati bah Kakobah	<i>Bambusa</i> <i>Dendrocalamus hamiltonii</i> <i>Tulda</i>
	Bet- Jati bet Lejai bet	<i>Rangi bet Calamus floribundus</i> <i>Calamus floribundus</i>
Others, if any	-	-

Source: 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 Lankashi Purbanchal JFMC.

2.1. Past Protection Measures of the JFMC

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

- (a) Number of households involved: 540
- (b) Number of people involved: 2700
- (c) Summary of the measures: There is 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 Lankashi Purbanchal JFMC

Name of Forest Produce	Average Household Requirement		How met at Present	Source
	Frequency of Requirement	Approx. Qty		
Firewood	Regularly	6-7 kg daily	Cutting Branches	Forest
Timber for House	-	-	-	-
Small timber for Implements	-	-	-	-
Pole / Bamboo	Frequently	2-3 Monthly	-	Market, Forest
Fodder from Forest	Not Available	-	-	-
NTFP	Not Available	-	-	-
Other	-	-	-	-

Source: Discussions with Forest Department personnel & Community members

There are 540 households in the Lankashi Purbanchal JFMC. From the above table and this number of households, it is inferred that the total annual requirements of the Lankashi Purbanchal JFMC for forest produce for own use is as follows:

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

Name of Forest Produce	Community Requirement (Kg per annum) (*)	Remarks
Firewood	More than 100000	Usage of Firewood Branches
Timber for House	30-40 large tree trunks	
Small Timber for Implements	50 small trunks, big branches	
Pole / Bamboo	500 bamboo	Fencing

Fodder from Forest	Not Available in large scale	-
NTFP	Not Available in large scale	-
Other	Not Available	-

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 Lankashi Purbanchal JFMC is given in the following table.

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

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

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	-	-	-

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

The total requirements of forest produce by the community members of the Lankashi Purbanchal 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 Lankashi Purbanchal 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 Lankashi Purbanchal JFMC have been summarized below.

Table-7: Protection Problems of the Lankashi Purbanchal 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	Yes
Smuggling of Timber	Yes	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 Animals
- (b) Illegal Deforestation

3.2. Reasons for Degradation of the Forest

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

- (a) Illegal Deforestation

4. Components of the Forest Development Plan

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

Table-8: Protection Plan of the Lankashi Purbanchal JFMC

Protection Work [to be filled from Table 3.7 of Proforma-3 as applicable]	Location in Forest Area	Quantification of the Measures [Length, Area, Size etc.]	Timing	Priority [High / Medium / Low]
Social Fencing	UDRF (WB), GPS Co-ordinates	Length= Breath= Area=	Grazing Season	High
Fire Protection	Nil	Nil	Nil	Nil

Source: Discussions with Forest Department personnel & Community members

Thus, it is seen that the significant protection measures planned to be undertaken in the Lankashi Purbanchal 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 Lankashi Purbanchal JFMC are given hereunder.

Table-9: Types of Operations Proposed in the Lankashi Purbanchal JFMC

Treatment	Required (Yes/ No)	Responsibility of JFMC (Yes / No)	Month / Year when can be done	Extent of Area proposed for Treatment (Ha)
Restoration of Degraded Forests	Yes	Yes	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 Lankashi Purbanchal 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 Lankashi Purbanchal JFMC

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, Azar etc	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
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			
TOTAL AREA (in Ha)	60 Ha / year			

Source: Discussions with Forest Department personnel & Community members

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 Lankashi Purbanchal JFMC

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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			
TOTAL AREA (in Ha)	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 Lankashi Purbanchal JFMC are taken as follows with due consultation of the Committee and Forest Department Personnel.

SL	Particulars	Location	Area	Remarks
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 Lankashi Purbanchal 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	0	0	0
	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.)	0	17,68,015.00	0	0	0
	Maint. (60% of Cr.)	0	0	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 Lankashi Purbanchal, 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 Lankashi Purbanchal 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 Lankashi Purbanchal 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: Proforma-3, Table-3.14 / Discussions with Forest Department personnel & Community members

2.2. Sharing Mechanisms

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

Table-15: Sharing Mechanism for Lankashi Purbanchal JFMC

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

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

6. List of Appendices

Appendix No	Heading
1	Maps Village Map Village Social Map Village Resources Map
2	Land Use Map of Village (GIS)
3	PRA Exercise Social Mapping Wealth Ranking Time Line review Seasonality of Livelihoods Venn Diagram Chapatti Diagram Priority Ranking- Potential Livelihoods and EPA
4	Photographs
5	List of JFMC Members
6	Filled Up Tables (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:

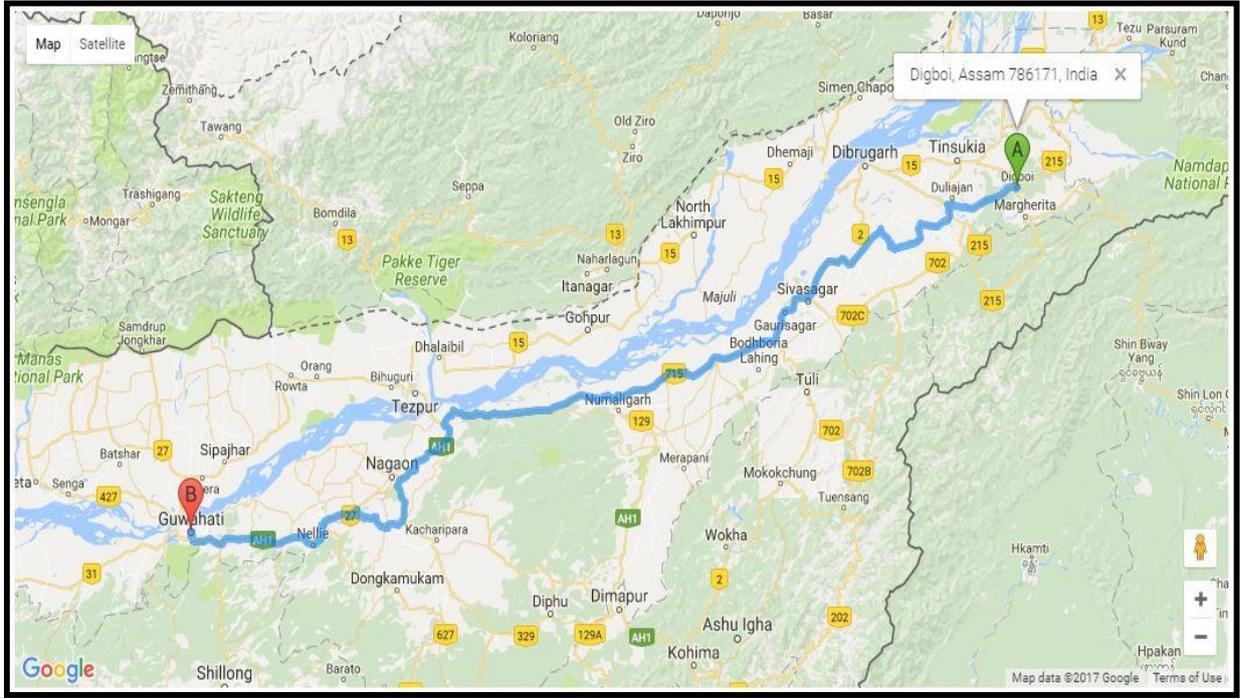
Bus timings from Digboi to Guwahati is around 6.77 hours when bus maintains an average speed of 60 KM per hour over the course of journey. The estimated travel time from Digboi to Guwahati by bus may vary or it will take more time than the above mentioned time due to the road condition and different travel route.

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

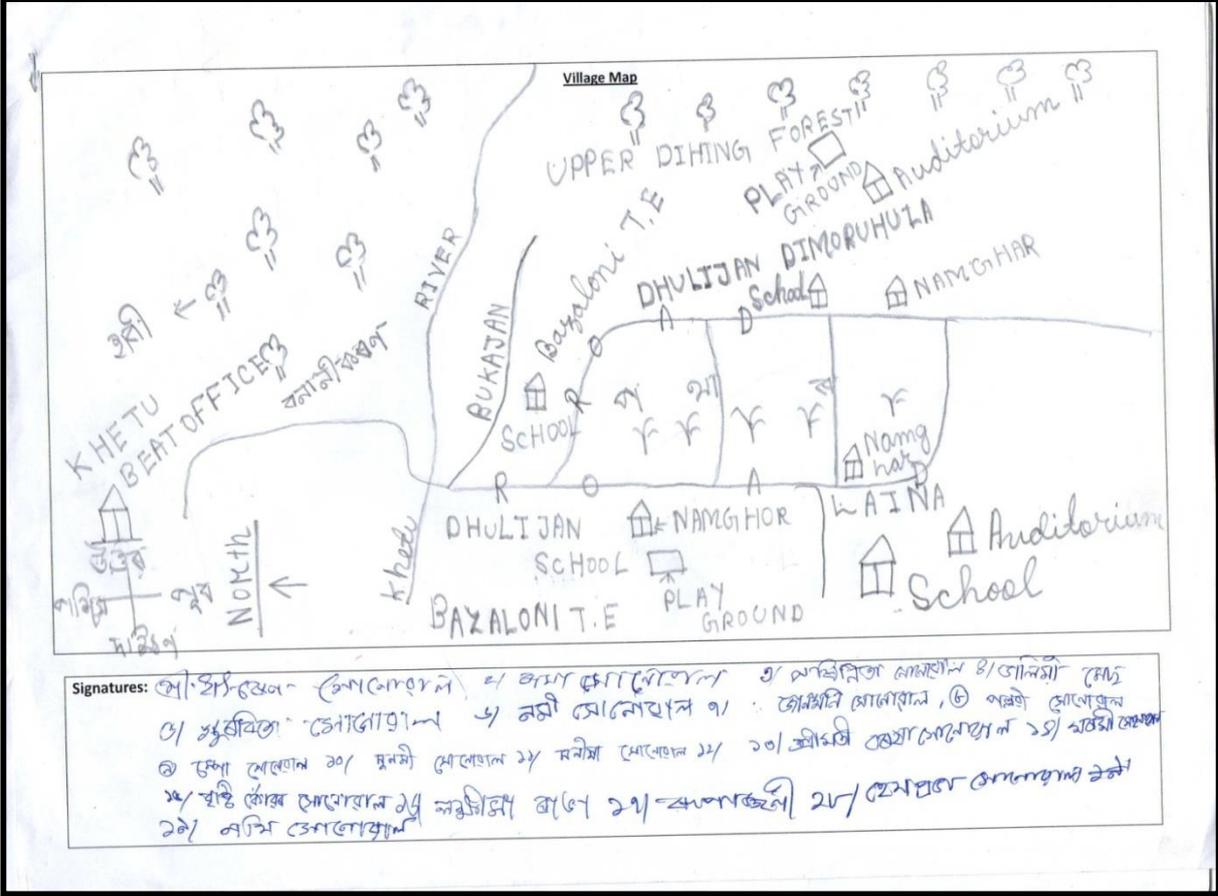
Digboi to Guwahati Road Map:

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.

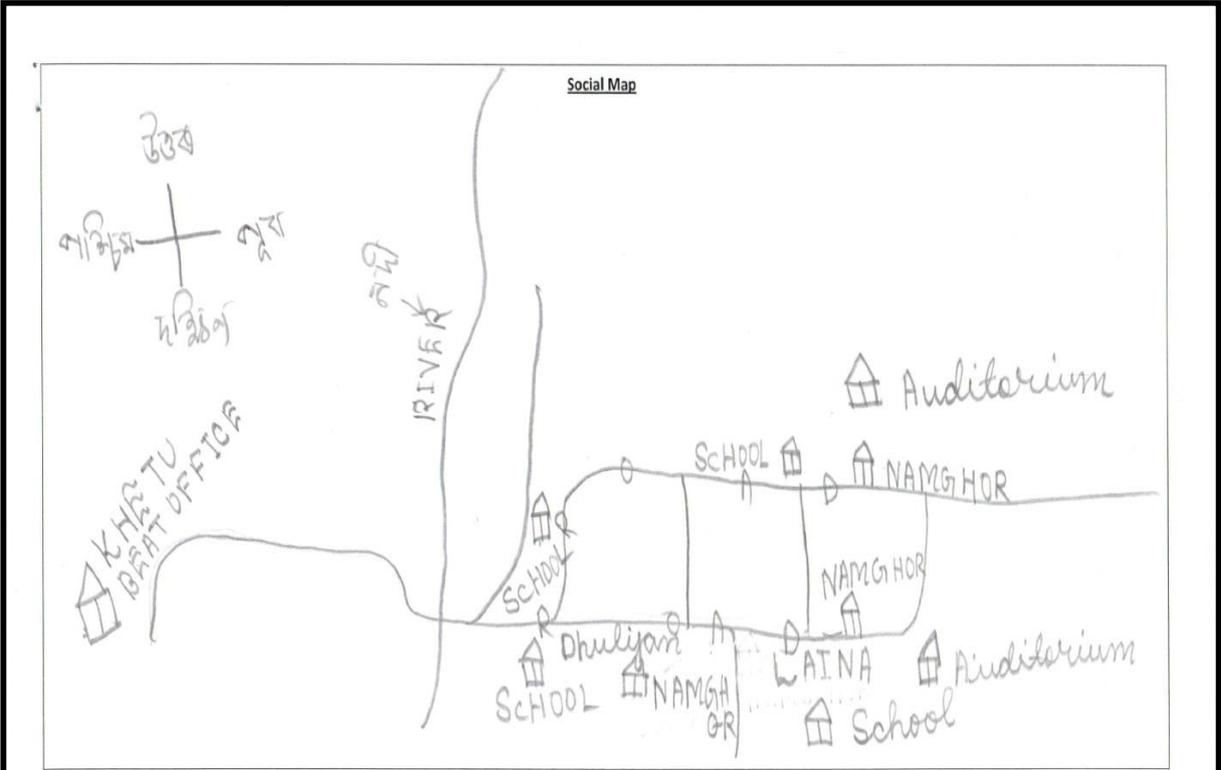
The given Google map shows the travel road map of Digboi to Guwahati



Village Map



Village Social Map



Signatures: ১/ শ্ৰীমতী বনেন্দ্ৰা দেৱী জোনাকৈ (২) শ্ৰীমতী অমলিনী জোনাকৈ (৩) শ্ৰীমতী সন্ধ্যা দেৱী (৪) শ্ৰীমতী বীৰা দেৱী (৫) শ্ৰীমতী বীণা দেৱী (৬) শ্ৰীমতী শ্ৰীমতী দেৱী (৭) শ্ৰীমতী সন্ধ্যা দেৱী (৮) শ্ৰীমতী অমলিনী জোনাকৈ (৯) শ্ৰীমতী জীবন দেৱী (১০) শ্ৰীমতী সন্ধ্যা দেৱী (১১) শ্ৰীমতী অমলিনী জোনাকৈ (১২) শ্ৰীমতী বীণা দেৱী (১৩) শ্ৰীমতী সন্ধ্যা দেৱী (১৪) শ্ৰীমতী অমলিনী জোনাকৈ (১৫) শ্ৰীমতী বীণা দেৱী

Appendix 2

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

Appendix 3

PRA ACTIVITY

Location and Timing of Participatory Rural Appraisal:

Numbers of participants :	50
Time :	11:00 am, 24 th April, 2017
Venue :	Community Hall (Laina Village)

Table – 3.1 Brief about the villages under LANKASHI PURBANACHAL JFMC

Sl. No.	Name of Village	Households (No.)	Population (No.)			Avg. HH size
			Total	Male	Female	
1.	Laina Gaon	170	865	415	450	5.08
2.	Dimorunula	180	885	403	482	4.91
3.	Bukajan	80	417	167	250	5.21
4.	Dhulijan	110	533	200	333	4.84
	Total	540	2700	1185	1515	5.00

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 Lankashi Purbanchal 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 IAY and thatch house.

Table 3.2: Information about the Lankashi Purbanchal JFMC

Social Information	Details	Numbers
	Total population	2700
	Male	1185
	Female	1515
	Total households	540
	Pucca House(Nos.)	135
	Semi-Pucca House(Nos.)	65
	IAY House(Nos.)	97
	Tin Roof Kutcha House (Nos.)	243
Landmarks	Bridges(Nos.)	1
	Stream(Nos.)	1
	River(Nos.)	0
	PHE(Nos.)	0
	Community hall(Nos.)	2
	Community Wells(Nos.)	0
	Play Ground cum Grazing filed (Nos.)	2

Findings of social map:

- The participants of social mapping have identified all 540 households out of which 135 households have pucca house; 65 households have semi pucca house; 97 households have IAY house and 243 households have Kutcha house with Tin Roof.
- Other than the class based division of the households, important places like community hall, schools, and playground, stream, hand pump and bridges are mapped.
- Main sources of water for the villagers are the hand pumps. The water from the hand-pumps are used for day to day purposes. Though the agricultural land of the village is rain-fed though the water from the river and the wetland are used by the villagers for farming purposes.
- The primary education facility is available in the village which includes a L.P. School and an Anganwadi Centre.
- The village has two community halls (incomplete).
- All of the people belong to the Kachari, Moran community and are of other backward caste and schedule tribe caste. The religion of all the villagers is Hindu.

Learnings:

- Electricity is available in 378 homes of the Lankashi Purbanchal JFMC. There is LPG gas connections in 100 homes. The 440 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 primary health centre, bank, post office, high schools college is located at Makum (12 km); The villagers have to cover a long distance for their health check-up.
- There are also two community hall in the village. Both are used by the villagers, where various meetings are held. The community hall is open, which does have any store or platforms.
- 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 Lankashi Purbanchal 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 Lankashi purbanchal JFMC have to go Makum, a distance covered with 12 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 analyzing the different wealth groups in a community. It enables evaluators to learn about the socioeconomic stratification of project beneficiaries and local people's definitions and indicators of wealth/well-being. Wealth ranking was done with the help of the following criteria:

- a) Land holding
- b) Occupation
- c) BPL Card Holding
- d) Dwelling Status

About 6.66 per cent people in the village are categorized as rich (about 2ha of agricultural land, Pucca House, Non BPL Category, Govt. Occupation); 55.55 per cent of the households belong to middle class (about 1ha of agricultural land, Semi Pucca House, BPL Category, Occupation-Agriculture) and about 37.77 per cent (negligible agricultural land, Kutcha House, BPL Category, Occupation-Wage Earning) are categorized to be poor.

Figure 3.1: Wealth Ranking



3.3 Timeline Review

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

Table 3.3: Timeline review

Year	Event	Type
1956	Establishment of the LP School	Construction
1967	First Metric Pass	Education
1990	Army Operation in Village	Security
1995	Severe Encephalitis Disease	Health
1997	Cyclone	Natural Calamity
1998	First Community hall	Construction
2002	First MA Pass	Achievement
2016	Cyclone	Natural Calamity

The Village Establish in the year 1950 after the Massive Earth quake occurred in Assam. The village people mostly migrated from the Baghjan Dimoruhula. The villagers had access to primary education after the period of independence. The village has faced few disorders in form of illness, environmental effects, during 1990.

The establishment of the JFMC in the year 2015 has a major impact in regeneration of the degraded for under the Nayegaon PRF.

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, labor 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 rice, Tea leaf, Betel nut, Orange, Cabbage, and Cauliflower etc. The FGD conducted revealed that other major livelihood options available in the JFMC are Livestock rearing (Cow, Goat), shop-keeping, weaving, daily wage laborers which are not seasonal in nature but is showed in the seasonal mapping.

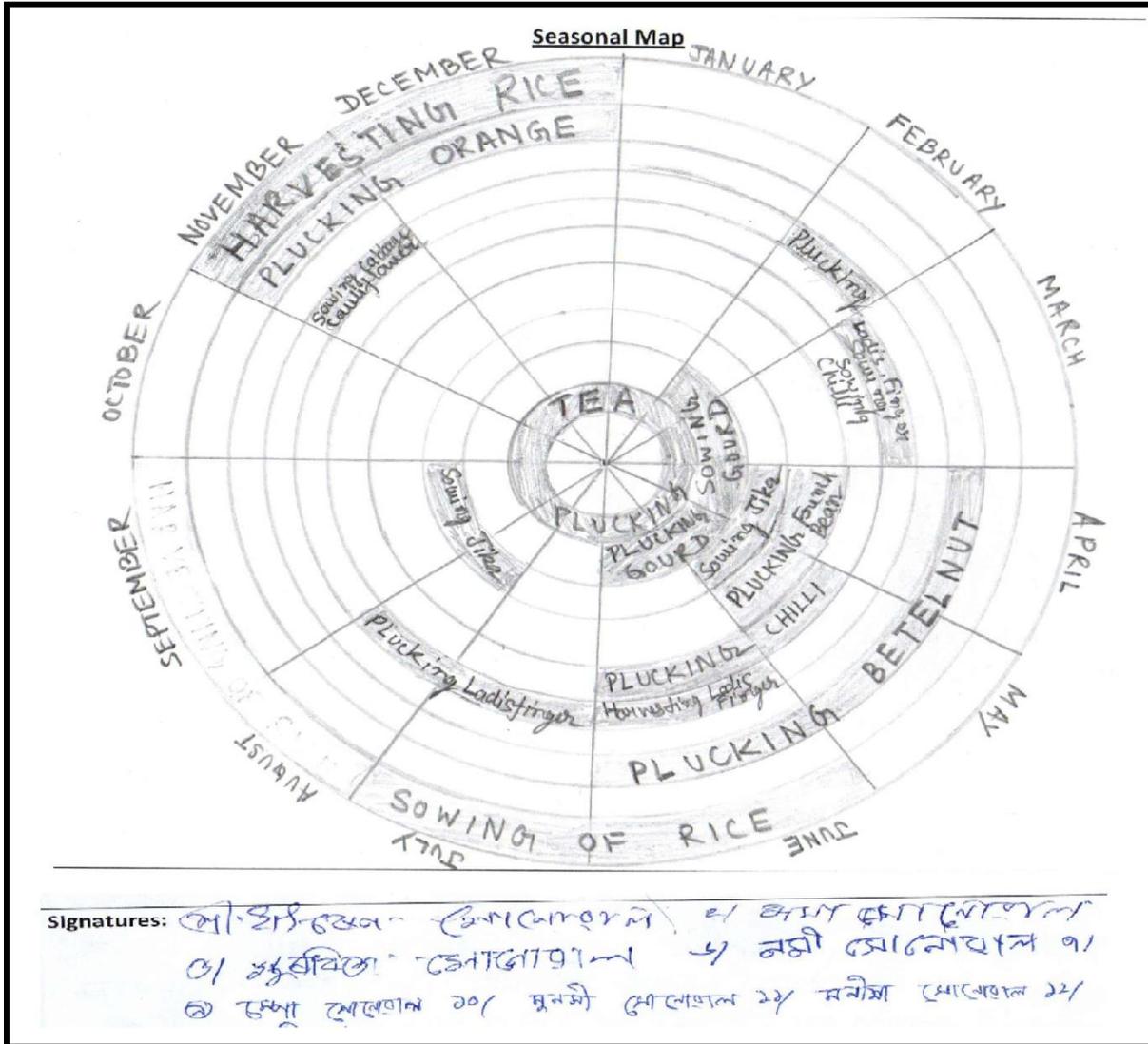
Table 3.4 Seasonal cropping pattern of the JFMC

Categories	Time of Activity			
		Sowing	Harvesting	Plucking
Farming	Rice	June-July	Nov-Dec	
	Tea Leaf	Throughout the Year		
	Betel-Nut	May-June	Jan-Feb	July-Dec
	Orange			Nov-Dec
	Cabbage	Oct-Nov		Feb-Mar
	Cauliflower	Oct-Nov		Feb-Mar
	Chili	Mar		May-June
	Ladyfinger	Apr-May	June	July-Aug
	French Bin	Dec-Jan		Apr-May
	Cucumber	Mar-Apr		May-June
	Gourd	Feb-Mar		Apr-June
	Non- farming	Weaving	Throughout the year	
Livestock Rearing				
Daily Wage Earning				
Shop-keeper Masonry				

Learning's:

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

Seasonal Diagram



Appendix 4

Photographs



PRA Activity



Group Photographs with Villagers

Appendix 5 : List of JFMC Members

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
	Lankashi Purbanchal	2015	11	Chiraj Kr Gogoi	Swapnanil Hazarika					

Table 2: Village wise population data:

Table -2.1: Demographic status of the project villages

Sl. No.	Name of village	Households (No.)	ST			Sex ratio (per 1000 male)	Avg. HH size
			Total	Male	Female		
1	Laina Gaon	170	865	415	450	1084	5.08
2	Dimorunula	180	885	403	482	1196	4.91
3	Bukajan	80	417	167	250	1497	5.21
4	Dhulijan	110	533	200	333	1665	4.84

Source: - Field survey report.

Age Profile: The younger generation of Lankashi Purbanchal Village outnumbers the other generations. More than 30%, of the entire population of the Lankashi Purbanchal Village are adults, of which only 3% of the village is Senior Citizens.

Table -2.2: Age Profile of the population

Age Classification	<5	>5 and <18	>18 and < 45	>45 and <60	>60
Male	270	406	365	342	135
Female	198	419	405	371	122

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

Sl no	Name of the village	Type of farmer according to land holding				
		Large farmer >10 ha.	small farmer 2-10 ha.	Marginal farmer (household) <2ha.	Land less (household)	Total
1	Laina Gaon	-		167	3	170
2	Dimorunula			178	2	180
3	Bukajan			78	2	80
4	Dhulijan			107	3	110

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

Sl No	Name Of The Village	Village Wise No Of Cattles Or Type Of Animal								
		Cows	Buffaloes	Goat	Sheep	Bulls	Camels	Pig	Poultry	Total
1	Laina Gaon	41		12						53
2	Dimorunula	48		15						63
3	Bukajan	33		9						42
4	Dhulijan	38		14						52

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

Sl No	Infrastructure	Location	Distance from village
1.	Electricity	Makum	12km
2.	Gas connection	Makum	12km
3.	Transport	Makum	12km
4.	PHE	Makum	12km
5.	LP school	Within the Village	
6.	High school	Makum	12km
7.	Bank	Makum	12km
8.	Anganawadi centre	Within the Village	-
9.	Revenue Office	Nauhatia	12km
10.	Police station	Bordobi	12km
11.	Forest Office	Lakhipathar	25km
12.	Post office	Makum	12km
13.	Bus facility	Makum	12km
14.	Railway Station	Makum	12km
15.	District head quarter	Tinsukia	22km

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)
Kharif	Rice (Sali)	66.67	-	-
Rabi			-	-
			-	-
Others	Tea Leaf	28.8	-	-
	Vegetable	20	-	-

Table 7: Crop production profile:*Table 7 Crop production profile of Lankashi Purbanchal JFMC*

Type of crop	Total Production (approx) in Metric Ton	No of household growing	Average production (Metric Ton / hac) approx	Area under crop (hac) approx
Paddy	194.4	540	2.91	66.67
Tea Leaf	2.8	108	0.09	28.8
Vegetable	54	540	2.7	20

Table 7: Fodder Availability

Table 8: fodder availability of the JFMC

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

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 (in km)
Grocery shop	Makum	12km
Weekly Market	Makum	12 km
Major Market	Makum	12 km

Forest Corporation Sale Depot.	NA	-
Tendu Patta PHAD	NA	-
Fish Market	Makum	12 km
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

Water source	Number	Availability of water	uses
Check dam			
Wetland			
Tube well	540	Perennial	Domestic use
River	1	Seasonal	All type of use
Community ring well			

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	440	12	Forest	Major
Kerosene stove	NA			
Gobar/Bio gas	NA	-	-	-
LPG	100	-	Market	Secondary

Table 11 (A): Education Status

SI No	Categories	Percentage
1	Up to ME	47.11%
2	Class VIII to class X	34.11%
3	Class X to XII	9.25%
4	Graduate	1.29%
5	Master	0.11%
6	Children	4.4%
7	Illiterate	3.70%

Record II : LIVELIHOOD OPPORTUNITY ANALYSIS**Table 12: Agriculture and Horticulture:***Table 12: showing the agricultural and horticultural status*

	Reason	Opportunities	Programme
Low Production	<ul style="list-style-type: none"> • Traditional way of cultivation. • Only one crop undertaken annually • Very negligible use of fertilizers and pesticides, insecticides. Lack of irrigation facilities. • Lack of agricultural infrastructure, modern tools and equipment's viz, power tillers, tractors etc. Non usages of high yielding seeds. 	<ul style="list-style-type: none"> • Application of proper and controlled pesticides and insecticides. • Introduction of new and advance technology. • Well-structured training programme. The villagers are inherited with the skill of cultivation. But an improvisation of skills is the need of the hour. • Usage of high yielding seed programme. 	<ul style="list-style-type: none"> • Tractor operation training • Agri-skill development programme. • Training on insecticides, pesticides, hybrid cultivation
Storage and Processing	<ul style="list-style-type: none"> • Lack of common storing place • Lack of cold storage facility due to non-availability of electricity 	<ul style="list-style-type: none"> • Helpful in preserving unsold products for a longer period of time. • They can store their product and sell it when there is a higher demand. 	<ul style="list-style-type: none"> • Packaging • Transportation and distribution.
Marketing	<ul style="list-style-type: none"> • Lack of transporting facilities for carrying products • Less contact with the direct market; much dependency upon middle man • No knowledge on marketing know-how, dependence on traditional system of selling. 	<ul style="list-style-type: none"> • Smooth transportation facility will help the farmers to carry their products to the nearby markets. • Generate highest market price by removing middle men. • More knowledge about the current market situation as well as the current value of their products. 	<ul style="list-style-type: none"> • Buyers sellers meet

Table 13: Livestock*Table 13 Livestock*

Constraints	Reasons	Opportunities	Programme
Less grazing land	<ul style="list-style-type: none"> • Not Applicable 	-	-
Availability of fodder	<ul style="list-style-type: none"> • Unable to buy fodder from market due to poor financial condition • Trees fodder n crop residue is available only for 3-6 months. Green fodder is also not available for the whole year. 	<p>Higher income from livestock rearing.</p> <p>The villagers can make it as an alternative livelihood opportunity if they have the easy access of livestock fodder.</p>	HYV Cattle Rearing
Veterinary care facility	<ul style="list-style-type: none"> • No veterinary care clinic • Lack of knowledge about the proper rearing of live stock 	<p>Disease control</p> <p>Increases the life span of cattle.</p> <p>It will also help to aware the villagers and will encourage them for livestock rearing.</p>	Linkage with veterinary dept.
Production of milk	<ul style="list-style-type: none"> • Less availability of fodder • No scientific knowledge on cattle rearing to increase the milk production. 	<p>Training on the milk production can enhance the skill of milk production.</p> <p>Availability of supplements like cattle “Milk Booster, Milk Plus” etc. can increase the production of milk in the area.</p>	HYV Cattle Rearing
Milk market	<ul style="list-style-type: none"> • Less contact with the direct market for milk • Unaware of the market demand of different milk made products. 	<ul style="list-style-type: none"> • A huge demanded market for milk is available 	-

Table 14: NWFP**Table 14 NWFP**

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

Table 15: Specialized skill**Table 15: Specialized Skills: Handloom**

Constraints	Reasons	Opportunities	Programme
Raw Material Availability	<ul style="list-style-type: none"> • Non-Availability of Raw Materials within reachable location (market 7km away) • No Storage 	<ul style="list-style-type: none"> • Common place for setting a raw material storage 	<ul style="list-style-type: none"> • Setting up a raw material bank
Product quality	<ul style="list-style-type: none"> • Shortage of High Quality Materials • Use of Traditional machineries 	<ul style="list-style-type: none"> • Developing Quality Products for new market exploration. 	<ul style="list-style-type: none"> • Training on Modern Tools and Equipment. • Providing modern technology to the villagers
Marketing Potential	<ul style="list-style-type: none"> • No standardized market • No pricing policy • No linkage with the institutional buyers • No Product Diversification or New Product Development. 	<ul style="list-style-type: none"> • Exploring new markets with diversified products 	<ul style="list-style-type: none"> • Providing a bulk buy arrangement of the finished product with institutional buyers.
Credit Facilities	<ul style="list-style-type: none"> • No linkage with the banks or post office saving banks. • Unaware of the development schemes of banks and government 	<ul style="list-style-type: none"> • Financial assistance by the Govt. • Providing easy access to credit. 	<ul style="list-style-type: none"> • Microfinance, Term Loans, Working Capital Arrangement

LankashiPurbanchal Joint Forest Management Committee (JFMC), Digboi Forest Division

Product Diversification	<ul style="list-style-type: none"> No Product Diversification or New Product Development. Lack of concept for product diversification. 	<ul style="list-style-type: none"> Developing Demand Based Products, as per the needs of the modern day market. 	<ul style="list-style-type: none"> Skill Up gradation & Training on New Product Development and Product Diversification
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Table 16: Credit facility

Table 16 Credit facility

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



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