



Assam Forest Department



ASSAM PROJECT ON
FOREST & BIODIVERSITY
CONSERVATION



AGENCE FRANÇAISE
DE DÉVELOPPEMENT

DRANGBRA JOINT FOREST MANAGEMENT COMMITTEE (JFMC)

MAIBONG RANGE , EAST HAFLONG FOREST DIVISION

DIMA HASAO FOREST CIRCLE

MICRO-PLAN

(2016-17 to 2025-26)

Prepared by Drangbra Joint Forest Management Committee

**Assisted by
Assam Forest Department**

&

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

July 2016

Approved

**Divisional Forest Officer
Dima Hasao Forest Division (East)
Haflong.**

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

JOINT FOREST MANAGEMENT COMMITTEE

[Livelihood Development Plan]

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1. Introduction

About the Project

The vision of the Assam Project on Forest and Biodiversity Conservation (APFBC) is 'to enable sustainable forest and biodiversity conservation and management in Assam through multi-scale integrative planning and involvement of forest dependent communities in target areas and giving fillip to their livelihood activities through sustainable use of forest and non-forest resources'. The project's objective has been stated as: 'In collaboration with the forest dependent communities, to restore forest eco-systems to enhance the forest dependent community's livelihoods and ensure conservation and sustainable use of biodiversity'.

The above project is being mainly funded by the *Agence France de Développement* (AFD) - i.e. the French Development Agency, with cofunding from the Government of Assam. The Assam Project on Forest and Biodiversity Conservation Society (APFBC Society) has the mandate for planning, implementation, monitoring, coordination and management of all the activities under the above mentioned project.

Micro-Planning & Livelihood Development

In order to promote livelihood activities through market potential based value addition; the present project intends to take up activities like entrepreneurship promotion, product processing value addition and marketing under this project. This has become necessary on account of the pressures on existing forest resources due to the growth of population. There is a need to explore value addition to the existing forest and biodiversity products and services, based on the market potential. In addition, non-forest based livelihoods need to be explored and the capacities of the community members need to be builtup through skills development initiatives.

A consortium comprising of Indian Institute of Entrepreneurship (IIE) Guwahati, Rashtriya Gramin Vikas Nidhi (RGVN) and Centre for Microfinance and Livelihood (CML) has been formed to implement (interalia) the micro-planning and livelihood development under the above project. The above consortium has been titled as 'Consortium for Micro Planning and Enhancing Livelihood Opportunities' - COMPELO in short.

As per project guidelines, this micro-plan includes '**various operations of village and forest development ... livelihood support of forest dependent members and keeping sustainable forest management as the broad objective**'. It includes both forest development and livelihood development.

Micro-Plan for the Drangbra JFMC

This document gives the Micro-Plan for the Drangbra JFMC, which is located in the Dima Hasao district of Assam. The JFMC falls under the jurisdiction of the Dima Hasao (East Haflong) Division of the DHAD Forest Circle. The profile of the community is given in the next section.

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

2. Village Socio-Economic Profile

Location The Drangbra Joint Forest Management Committee (JFMC) has been formed to cover the existing community in Drangbra, a village located on the Maibong Reserve Forest. The area covered by the above JFMC falls within the Dima Hasao district of Assam.

Appendix-1 gives the Village Map.

Key Information

The key information of the JFMC is furnished below. **Table-A:**

Key Information of the JFMC

Name of the JFMC	Drangbra JFMC
Habitation	Maibong
Name of Revenue Village	Drangbra
Name of the Gram Panchayat / VCDC	NA
Revenue Block	ITDP Block
District	Dima Hasao
Forest Division	Dima Hasao (East Haflong)
Forest Range	Maibong
Forest Beat	NA
Year Formed	2016
Description of Boundary of JFMC	As below North: Longlurbra Village South: Nablaidisa Village West: Langting RF East: Wajao Village

Source: JFMC Records & Discussions during PRA Exercise in May 2016

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

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

Brief Details of the Executive Committee & General Body

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

Name of President	Kojin Dibregede
Name of Secretary	Sanjit Langthasa
Name of Treasurer	Muilal Thuosen
No. of Members in Executive Committee	Male: 18 Female: 03
No. of Members in the General Body	All the HH head of the JFMC

Source: JFMC Records

Households & Population Structure

The village has 120 households, of which all the households are BPL (Below Poverty Line) households.

The total population is 644, of which 331 are male and 313 are female members. All the population are belong to ST.

Table C: Age and Sex distribution

Sex/Education	Below14	Between 15-30	Between 31-45	Between 46-60	Above-60
M	40	106	52	92	41
F	27	130	42	85	29

Source: PRA

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

From This, it is inferred that:

1. The Average number of persons in a household is 5.36.
2. The Sex ratio is 945 females per 1000 males in the village.

Education & Skills Development

Over 38.66 % of the population is reported to be illiterate. Most of the community members have received school level education. On the other hand, there is no person who have attend college level education.

Table D: Education Detail of the Villagers

Age/Sex	Illiterate	Up-to IV	V-X	X-XII	Graduate
M	94	204	33	-	-
F	155	139	19	-	-

Source: PRA

Livelihood skills are usually acquired under various settings – formal & informal. In the JFMC area, informal means for skills development is the traditional norm. People have traditional skills in the following areas: (a)

Agriculture

(b) Horticulture

(c) Weaving

Government has been active in promoting formal skills development programmes in the country as well as in the state. However, no such programme has been carried out in the habitation or in nearby areas.

Soil

The soil type of the project area includes:

□ Sandy Loam in hilly area

□ Latrice towards south in hilly area

Both types of soil can support different kinds of crops, as the soil is reported to be fertile on the whole.

Water

The area was drained by the Drang Nala which flows from Drang Hajong village into the project area.

Climate: Temperature & Rainfall

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

The annual **rainfall** is about 3000 mm. About two-thirds of the rainfall usually occurs during the rainy season (June-September). The village has high levels of

humidity (over 90%) during the rainy months and low levels in the winter (Below 30%).

Forest & Biodiversity

The local forests have been classified as subtropical broadleaf forest. The main tree species are Sishoo, Ajar, Khayar, Koros etc. The forests can yield a range of NTFP like leafy vegetables, ferns, medicinal plants, bamboo, thatch etc. Additional details in this regard are given at the 'Forest Development Plan'

Land Use Pattern

Appendix-2 gives the land-use pattern of the village. From the same, it is seen that the land-use in the village is as follows:

Crop Land (Shifting cultivation) : 35%

Tree Cover: 15 %

Habitation: 10 %

Water Bodies: 15 % (incl. water logged

areas) Barren Land: 15 % Other: 10 %.

Land Holdings

The type of households as per land-holding is given at **Table-3** of Record-I. From the same, it is seen that:

- 12.50 % of the households are small farmers (15 HH)
 - 87.50% of the households are marginal farmers (105 HH) □
- None of the households belong to landless and large categories.

Table E: Land Detail of the Villagers

Classification of the Landholding	Total Land Holding (*)				TOTAL
	Landless (household)	Marginal < 2ha	Small 2-10 ha	Large >10 ha	
No. of Households	0	105	15	0	120

Livestock

The local community rears animals like cow, poultry, pigs, Buffalos and goats. The average number of animals reared by the community as per information gathered during the PRA is given in the following table.

Table F: Livestock Rearing in the JFMC

Type of Livestock →	Cow	Buffalos	Goats	Poultry	Pigs
Total Nos.	20	205	182	1200	71

Source: Household Survey undertaken in the habitation in May 2016

Table-4 of Record-I may be referred to for the details in the above connection.

**Village
Infrastructure
&
Communication
Facilities**

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.

From the above table, the following have been noted with regard to village infrastructure:

Physical Infrastructure: The habitation is deprived of basic physical infrastructure like paved roads, electricity, water supply, mobile network etc.

Education & Health Facilities: There are minimal educational and health facilities. Public transport is not available, and the community members have to use bicycles to move around.

Govt. Offices: 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.

Financial Inclusion: Facilities for financial inclusion like bank and post office are located at a considerable distance from the habitation. Hence, the community members do not have bank accounts or postal savings accounts.

**Agricultural
Crops**

The details of the agricultural crops grown in the village is available at **Table-6** of Record-I.

The size of the average land-holding is found to be 1.2 hectares. In the absence of irrigation facilities, the community practices rain fed agriculture during the rainy season (June - September).

Paddy is the main crop. It is planted in nurseries before the onset of the monsoon and transplanted after the first spell of rainfall. The crop is harvested during the winter months of mid-November to mid-December. All 120 households practice the cultivation of rice. Men-folk are involved in the processes, with the women helping out in labour intensive processes like planting and harvesting.

**Crop
Production
Profile**

Table-7 of Record-I may be referred to for the production and yield details of the crops grown in the village.

The average yield is stated to range from 1.5 MT to 2 MT (of rice) per hectare. Each household may be producing about 1-1.1 MT of rice per crop, given its limited land holding. Leaving out harvesting and storage losses of about 1520%, the per capita daily availability of rice per household member is estimated to be about 550-600 grams, which is just adequate for a rural person as per the nutritional guidelines of the Indian Council of Medical Research (ICMR).

Hence, it is inferred that such farming is mainly at the sustenance level, and there is little (if any) marketable surplus. Income generation from the cultivation of paddy is thus limited. The average household income may be about Rs 2,000-2,500 per annum from the sale of paddy.

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> <ul style="list-style-type: none"> (a) Crop residue (b) Trees fodder (c) Grazing in forest (d) Green Fodder (e) Grasses
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> <ul style="list-style-type: none"> (a) Grocery / PDS: within the JFMC (b) Weekly / Bi-weekly Market: : Wajao at 5 km away from the JFMC (c) Major Market: : Maibong at 41 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> <ul style="list-style-type: none"> (a) Langting Nala (Water Availability: Perennial / Seasonal) (b) Stream 3 Nos. (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> <ul style="list-style-type: none"> (a) 120 Households Depending on Firewood. Source: Forest
Socio-economic status	<p>Social set-up: The village is inhabited by tribal. They have a caste system. The society is not marked by deep social divisions. The observed position of women is satisfactory</p> <p>Economic Condition: The economic position is not satisfactory. The main livelihoods are Agriculture and Horticulture Most households earn Rs. 12000 to Rs. 22000 per year.</p> <p>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	<p>Team from IIE Guwahati carried out PRA exercise in Drangbra JFMC as follows:</p> <p>Date: 27th May, 2016 Location: Drangbra Village Numbers Present: 28</p>
	<p>In Presence of: JFMC office bearers, Village Headman, community members, Forest Department personnel, etc.</p>
Objective of PRA	<p>The objective was to study the existing household conditions and obtain other primary data about the community for developing the livelihood options and the forest development plan.</p>
Tools Used & Outcomes of the PRA	<p>Different tools were used and outcomes obtained. These include:</p> <p>Social Mapping Wealth Ranking Venn Diagram</p> <p>Appendix-3 furnishes detailed information of the above.</p>
	<p>Framework of livelihood Opportunity Analysis has been done with the help of the following criteria:</p> <ul style="list-style-type: none"> A) Livelihood assets B) Livelihood context C) Priority ranking on potential livelihood
	<p>The livelihood situation of Drangbra JFMC has been analysed during the PRA exercise using sustainable livelihood framework of DFDI (Department of Funding for International Development). The existing livelihood situation of JFMC is outlined in terms of –</p> <ul style="list-style-type: none"> • Natural Capital • Physical Capital • Social Capital • Human Capital • Financial Capital
	<ul style="list-style-type: none"> • NATURAL CAPITAL: The major natural capital of Drangbra JFMC is Maibong Reserve Forest. Majority of the people are dependent on the forest for firewood, green fodder, timber etc. For farming purpose and for livestock rearing, the villagers use the river water. (Refer table 10, 11, table 3 of FDP for further details)
	<ul style="list-style-type: none"> • PHYSICAL CAPITAL: Majority of the households in the Drangbra JFMC are involved in farming activities and are marginal farmers with farming land of less than 2 ha. Detailed land holding pattern is described in the table 3/annexure 6. All the houses of the village are kuccha. Among the various sources of energy consumption such as Biomass, kerosene, electricity, LPG and candle, villagers depend

only on firewood for household and other uses. No households have LPG connection. (refer to table 10,11)

There is only LP school present within the JFMC area. No other education institution is present. (refer to table 5)

In case of water sources, cent percent of the households are depends on the Ring wells (2 Nos.) and Water reservoir (2 Nos.)

- **SOCIAL CAPITAL:**

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

There is no formal SHGs are present in the village. Generally the social meeting are held inside the church locality.

- **HUMAN CAPITAL:**

61.34% per cent of total population of the JFMC are educated and 38.66 % of them are illiterate.

- **FINANCIAL CAPITAL:**

There is no government bank or lending institution available in the JFMC area or in the nearby areas. However, villagers lend from informal lending groups, relatives etc.

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

- **LIVELIHOOD CONTEXT:**

Livelihood activities of the Drangbra JFMC are identifies on the basis of following criteria:

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

Ranking

Ranking exercise has been done for the following:

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

Appendix-3 elaborates the above. From the same, it is stated that:
(Ranking of Livelihoods & Skills Development)

1. Agriculture
2. Livestock

Table G: Ranking of EPA

Rank	Village EPA as ranked	Details (Appendix-3 has additional particulars)	Probable source of funding/deptt.
1	Electricity	Providing electricity to 80% HH	RGGVY (Rajiv Gandhi Vidyutikaran Yojana)
2.	Sanitation	Providing HHL (House Hold Latrine)- Low cost ,septic and sanitary type.	Swach Bharart Mission/ PHE
3.	Road Connectivity	Black Topping of road From Maibong to the village	PMGSY/PWD
4.	Drinking Water	At least 50 ring well	EPA APFBC/ NRDWP
5.	School	Upper Primary School	SSA/ Elementary Education Deptt.

Source: PRA

Livelihood opportunities Livelihood Opportunities were identified as follows:

Agriculture & Horticulture
Livestock
NTFP

Additional discussion about the above has been given below.

Forest Development Opportunities

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

Horticulture

The main constraints are:

- 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 etc.

The opportunities are:

- Application of proper and controlled pesticides and insecticides.
- Introduction of new and advance technology

- (c) Well-structured training programme. The villagers are inherited with the skill of cultivation. All they need is improvisation of their skill level.

The suggested programmes are:

- Tractor operation training
- Agri-skill development programme.
- Training on insecticides, pesticides, hybrid cultivation etc.

Livestock

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

The main constraints are:

- (a) Unable to buy fodder from market due to poor financial condition.
- (b) Trees fodder n 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

The opportunities are:

- (a) Higher income from livestock rearing.
- (b) A huge demanded market for milk is available as Dima Hasao district.

The suggested programme is:

- (a) Buffalo
- (b) Cow
- (c) Piggery
- (d) Poultry

NTFP

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

The main constraints are:

- (a) Less collection of NWFP
- (b) No processing units

The opportunities is:

- (a) There is a huge demand for NWFP. To mitigate the demand with availability of fertile fallow land, more plantation can be done.

The suggested programme are:

- (a) Plantation of Food plants,
- (b) Medicinal Plant etc
- (c) Processing of NTFP Products

Specialized Skills	<p>For skills development, the opportunities are tabulated at Table-15 under Record-2</p> <p>The main constraints are:</p> <ul style="list-style-type: none"> (a) Low skill profile (b) Lack of product diversification (c) Lack of research on product quality (d) Lack of TQM techniques <p>The opportunities are:</p> <ul style="list-style-type: none"> (a) Providing good communication facility (b) Training of the skill for capacity building (c) Financial assistance from govt. <p>The suggested programme are:</p> <ul style="list-style-type: none"> • Training on Modern Tools and Equipment • Providing modern technology to the villagers • Skill Up gradation & Training on New Product Development and Product Diversification • Setting up a raw material bank • Providing a bulk buy arrangement of the finished product with institutional buyers. • Market linkage for final product.
Credit Facility	<p>Table-16 under Record-2 discusses this aspect.</p> <p>The main constraints with the reasons are:</p> <ul style="list-style-type: none"> (a) Financial exclusion (b) Higher rate charged by the private money lender. <p>The opportunities are:</p> <ul style="list-style-type: none"> (a) Setting up financial institution extension centre (b) Adequate awareness. <p>The suggested programme is:</p> <ul style="list-style-type: none"> (a) Setting extension centers in the nearby areas.
Strategic Interventions	<p>Summarizing the suggested programmes at above as strategic interventions for the Livelihood Development Plan:</p> <ul style="list-style-type: none"> a) Agriculture & Horticulture: Tractor operation training, Agri-skill development programme, Training on insecticides, pesticides, hybrid cultivation, Organic farming b) Livestock: Buffalo, Piggery, Poultry, Cow, c) NWFP : Plantation of Food plants, Medicinal Plant etc. d) Specialized Skills: Training on Modern Tools and Equipment, Providing modern technology to the villagers, Skill Up gradation & Training on New Product Development and Product Diversification, Setting up a raw material bank, providing a bulk buy arrangement of the finished product with institutional buyers. e) Credit facility: Setting up modern financial institution in the nearby areas

4. Livelihood Development Plan

Income Generating Activities The main income generating activities as planned at the village are:

Farm Sector:

1. Poultry and Piggery
2. Lac Cultivation
3. Horticulture
4. NTFP

Non-Farm sector:

1. Handloom/ Weaving
2. Handicraft

Source: Table-32 of Record-4

SHG Activities SHGs of the village can plan the following activities:

1. To organise and form Joint liability group for
2. To involve the villagers in Livelihood Activities collectively.

Source: Table-33 of Record-4

Exposure Trips The following exposure trips are planned:

1. Visit to Veterinary Department

Source: Table-34 of Record-4

Summary of As attached in next page.

Action Plan

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

- (a) National Rural Employment Guarantee Scheme - for rural employment
- (b) Rashtriya Krishi Vikas Yojana (RKVY) - for agricultural and allied development
- (c) Rashtriya Krishi Sinchay Yojana (RKSYP) - for irrigation, including watershed development
- (d) National Rural Livelihoods Mission
- (e) Skills Development schemes
- (f) Other schemes for rural development and livelihoods as found appropriate.

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

5. Forest Development Plan

This Forest Development Plan has been prepared after a detailed PRA exercise at the village level as a part of the Micro-Plan of Drangbra 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 Drangbra 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 Drangbra JFMC have been summarized below.

Table-1: Conditions of the Forests of Drangbra JFMC

Identification	Area of JFMC Forest (Ha)	Distance from Village (Km)	Condition of Forest [Good - Forest with crown density of 40% of more Else 'Degraded']	Frequency of Use by Community [2-3 m / 3-6 m / 6-9 m / Over 9 m]
(A) Assigned Forest				
RF / PF Name: Drangbra RF, Maibong Range, East Haflong Division	100 Ha	1.5 Km	Good Area: - 70Ha Degraded Area: 30 Ha	2-3 m
(B) Other Planted Area				
Location: Type of Forest: Deciduous Moist VF / Other _____			Good Area: - Nil Degraded Area: Nil	
TOTAL	100 Ha		Good Area: - 70Ha Degraded Area: 30 Ha	

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

It is seen that the Drangbra JFMC has 100 Ha under its forests, of which 70 Ha is '**Good**' and 30 Ha is '**Degraded**'.

1.2. Forest Soil Type

The forests of Drangbra JFMC are located in loamy type(s) of soil. Some salient points of the forest soil type have been given in the following table.

Table-2: Forest Soil Type in JFMC

Parameter	Status in Assigned Forests	Status in Other Planted Areas
Fertility Level	2.3 to 2.94% organic. The available N, P205 and K20 content of the Soil is comparatively less.	-
Soil Erosion Status	-	-
Presence of:		
(a) Silt	24%	-
(b) Mud-flat	31%	-
(c) Newly accreted land	Low	-
(d) Sand dune	45%	-

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

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

1. Entisol (30.3%)
2. Inceptisol (51.3%)
3. Alfisols (11.3%)
4. Ultisols (7.1%)

1.3. Existing Composition of Flora

In the forests of the Drangbra JFMC, 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 in the Drangbra JFMC

Parameter	Local Name(s)	Biological Name(s)
Major Forest Species	Teak	<i>Tectona grandis Linn</i>
Associates	Gamari	<i>Gmelina Arborea</i>
Shrubs	Dhekia	<i>Ferns</i>
	Bhot jalakia	<i>Capsicum chinense</i>
Medicinal Plants	Arjun,	<i>Terminalia arjuna</i>
	Hilikha	<i>Terminalia Chebula</i>
	Neem	<i>Azadirachta indica</i>
	Amlakhi	<i>Phyllanthus emblica</i>
Produces		
	Jori bet	<i>Calamus erectus</i>
	Jati bet	<i>Calamus tenuis</i>
	Raidang bet	<i>Calamus rotang</i>

Others, if any	Chuli bet	<i>Calamus flagellum</i>
	Lejai bet	<i>Calamus floribundus</i>
	Kako Bah	<i>D. hamiltonii</i>
	Pahari Jati Bah	<i>Oxytennera parvifolia</i>
	Dulu Bah	<i>Schizostachyum dulloa</i>
	Amlakhi	<i>Emblica officinalis</i>
	Halakh	<i>Terminalia myriocarpa</i>
	Hollong	<i>Dipterocarpus macrocarpus</i>
	Arjun	<i>Terminalia arjuna</i>
	Agar	<i>Aquillaria agallocha</i>

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

2. Other Inputs for the Forest Development Plan

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

2.1. Past Protection Measures of the JFMC

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

- (a) Number of households involved: 120
- (b) Number of people involved: 120 (1 Person Per House hold)
- (c) Summary of the measures: Not available
- (d) Any formal mechanism: Not available

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

2.2. Domestic Requirements of Forest Produce

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

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

Name of Forest Produce	Average Household Requirement		How met at Present	Source
	Frequency of Requirement	Approx. Qty		
Firewood	Frequent	60-70 kg		Forest
Timber for House	Once in a year	2 nos.		Forest
Small timber for Implements	-	-		-
Pole / Bamboo	Once in a month	2-3 bamboo / per month		Forest
Fodder from Forest	Frequent	4-5 kg per day		Forest
NTFP	Frequent	2-3 kg per day		Forest
Other _____	-	-		-

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

There are 120 households in the Drangbra JFMC. From the above table and this number of households, it is inferred that the total annual requirements of the Drangbra village for forest products for own use is as follows:

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

Name of Forest Produce	Community Requirement (Kg per annum) (*)	Remarks
Firewood	120300	Throughout the year
Timber for House	120 nos.	Dec - Jan
Small Timber for Implements	-	-
Pole / Bamboo	750 bamboo	Dec - Jan
Fodder from Forest	120300	Throughout the year
NTFP	131400	Throughout the year
Other _____		

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

(*) = Approx. Qty. of Average Household Requirement (from Table-4 (A) x 120 Households

2.3. Collection & Marketing of Forest Produce by Villagers

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

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

Name of Forest Produce	Collection for Marketing			Location of Collection
	Season / Months	No of Households Collecting	Average Qty. Collected (Kg)	
Firewood	Throughout the year	120	1320	Forest
Timber for House	Dec - Jan	120	4 nos.	Forest
Small timber for Implements	-	-	-	-
Bamboo	Dec - Jan	120	14 nos.	Forest
Pole	-			
Fodder from Forest	Throughout the year	120	7 kg per day	Forest
NTFP	Throughout the year	120	9-11 kg per day	Forest
Other	-	-	-	-

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

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

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

Name of Forest Produce	Surplus Marketed (Kg)	How marketed	Average Income per HH from sale of Forest Produce
Firewood	110000 kg/year	Maibong market	1400-2000/month
Timber for House	-	-	-
Small timber for Implements	-	-	-
Bamboo	25-40 pc/ month	Maibong market	500-1050/month
Pole	-	-	-
Fodder from Forest	1600 kg /year	Maibong market	1000-1600/month
NTFP	-	-	-
Other	-	-	-

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

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

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

Refer to: 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 Drangbra JFMC have been summarized below.

Table-7: Protection Problems of the Drangbra JFMC

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

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

3.2. Reasons for Degradation of the Forest

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

- (a) No Scientific Plan
- (b) Traditional Cultivation of Tribal People
- (c) Extremist problem in hill sides

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

4. Components of the Forest Development Plan

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

Table-8: Protection Plan of the Drangbra JFMC

Protection Work [to be filled from Table 3.7 of Proforma-3 as applicable]	Location in Forest Area	Quantification of the Measures [Length, Area, Size etc.]	Timing	Priority [High / Medium / Low]
1. Engagement of Watcher	R.F.	3 km	6pm-6am	High
2. Informers award	R.F.	3km	Anytime	High
3. Fire Protection	R.F.	3km	Anytime	High

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

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

- (a) Fencing
- (b) Fire protection

4.2. Types of Operations Proposed

The types of operations proposed for the treatment of degraded areas of the JFMC Forest of Drangbra JFMC are given here under.

Table-9: Types of Operations Proposed in the Drangbra 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	June - July	300 Ha
Protection to Cut Stumps of Trees	Yes	Yes	All the Year	300 Ha
Watershed Treatment	Yes	Yes	All the Year	5 Ha
Water Reservoirs	Yes	Yes	All the Year	5 Ha

Treatment	Required (Yes/ No)	Responsibility of JFMC (Yes / No)	Month / Year when can be done	Extent of Area proposed for Treatment (Ha)
Grass and Silvi Pastoral activities	Yes	Yes	All the Year	-
Bamboo culture and earth piling	Yes	Yes	All the Year	R.F
Seed Sowing	Yes	Yes	All the Year	-
Root & Shoot Cutting & Plantation	Yes	Yes	All the Year	-
Cut Back & Coppice Treatment	Yes	Yes	All the Year	-
Stone wall fencing/live Hedge fencing	Yes	Yes	All the Year	100 Ha
Social Fencing	Yes	Yes	All the Year	100 Ha
Other Activities(Protection of Elephants)	Yes	Yes	All the Year	R.F

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

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

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

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 Drangbra JFMC

Treatment	Area in Ha under Plantation Module	Priority for Block Plantation	Species	Spacing (metre x metre)
Assisted Natural Regeneration (with plantation in gap)	35 Ha ANR by APFBC	-	Non Sal NTFP	2/2
Block Planting	-	-	-	-
Sowing of Neem, Amla, Mahua, Bahera (Medicinal Plants)	10	-	Medicinal Plants	-
Enrichment Plantation/ Sowing	-	-	-	-
Direct Plantation	-	-	-	-

Treatment	Area in Ha under Plantation Module	Priority for Block Plantation	Species	Spacing (metre x metre)
Other	-	-	-	-
Total Area (in Ha.)	45 Ha	-	-	-

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

4.4. Forest Improvement - Annual Targets

5. Table-10 (A) and (B): Annual Targets of Forest Improvement in Drangbra JFMC (Year-1 to Year-5) and (Year-6 to Year-10)

The annual targets in the above connection are given below for a ten year period.

Name of Plantation	: Block Plantation of Saal Mixed with Associates
Plantation Period	: 2016-17 to 2025-26 (10 Years)
Plantation Area	: 100 ha
Spacing	: 3m X 3 m-1100 plants per ha
No. of Plants to be Raised	: 110000 (11000 approx. annually)
Number Blocks	: 10 Numbers(10 ha each)
Species	: Saal ; Associates-Gamari, Sissoo, Titasopa, etc.
Rates	: As Approved by APFBCS(to be increased by 20% every two years)

Action Plan for Creation of Plantation		
Financial Year	Activities	Amount
2016-17	Identification of suitable site for regeneration-examine possibilities of natural seed fall-determine intensity and nature of biotic interference-Area Not Less than 100 ha, Demarcation of land during the month of December-January, Partition of land in 4 blocks, Land development, Soil Working @ Rs 1000/ha	100000
2017-18*	Block Plantation 3m x 3m, 1111 plants/ha-during the season of April-June ; GPS marking of the area	497000
2018-19*	Block Plantation 3m x 3m, 1111 plants/ha-during the season of April-June ; GPS marking of the area	497000
	1st Weeding; Replacement of dead/struggling saplings raised in the previous year	61600
2019-20*	Block Plantation 3m x 3m, 1111 plants/ha-during the season of April-June ; GPS marking of the area	596400
	2nd Weeding; Replacement of dead/struggling saplings raised in the previous year	73920
2020-21*	Block Plantation 3m x 3m, 1111 plants/ha-during the season of April-June ; GPS marking of the area	596400
	3rd Weeding	147840
2021-22*	4th Weeding; Replacement of dead/struggling saplings raised in the previous year	266112
2022-13*	5th Weeding; Replacement of dead/struggling saplings raised in the previous year	354816

2023-24*	6th Weeding; Replacement of dead/struggling saplings raised in the previous year	266112
2024-25*	7th Weeding	266112
2025-26*	8th Weeding	266112
Total Budgetary Requirement		3989424

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

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

Name of Plantation	: Block Plantation of Teak Mixed with Associates, Firewood and Bamboo
Plantation Period	: 2016-17 to 2025-26 (10 Years)
Plantation Area	: 100 ha
Spacing	: 2m X 2 m-2500 plants per ha
No. of Plants to be Raised	: 110000 (11000 approx. annually)
Number Blocks	: 10 Numbers(10 ha each)
Species	: Teak; Associates-Ajar, Khoroi, Khayer, Sissoo, Jia, Arjun, Ghora Neem, Bamboo(Jaati, Kako, Bholoka, Bijili), etc

Action Plan for Creation of Plantation		
Financial Year	Activities	Amount
2016-17	Identification of suitable site for regeneration-examine possibilities of natural seed fall-determine intensity and nature of biotic interference-Area Not Less than 100 ha, Demarcation of land during the month of December-January, Partition of land in 4 blocks, Land development, Soil Working @ Rs 1000/ha	100000
2017-18*	Block Plantation 2m x 2m, 2500 plants/ha-during the season of April-June ; GPS marking of the area	262500
2018-19*	Block Plantation 2m x 2m, 2500 plants/ha-during the season of April-June; GPS marking of the area	262500
	1st Weeding; Replacement of dead/struggling saplings raised in the previous year	26950
2019-20*	Block Plantation 2m x 2m, 2500 plants/ha-during the season of April-June; GPS marking of the area	315000
	2nd Weeding; Replacement of dead/struggling saplings raised in the previous year	32340
2020-21*	Block Plantation 2m x 2m, 2500 plants/ha-during the season of April-June; GPS marking of the area	315000
	3rd Weeding	64680
2021-22*	4th Weeding; Replacement of dead/struggling saplings raised in the previous year	266112
2022-13*	5th Weeding; Replacement of dead/struggling saplings raised in the previous year	155232
2023-24*	6th Weeding; Replacement of dead/struggling saplings raised in the previous year	116424
2024-25*	7th Weeding	116424
2025-26*	8th Weeding	116424
Total Budgetary Requirement		2149586

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

5.1. Nursery Development Plan

The Nursery Development Plan for the Drangbra JFMC depends on the following types of Nurseries:

(a) JFMC Nurseries (incl. Departmental Nursery)

(b) Other Nurseries - SHG & Private.

The details are given below.

JFMC Nurseries

The following table gives the details of the nurseries of the Drangbra JFMC. This includes the Departmental Nursery involved in JFMC works.

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

Location of Nursery	Species	Year of Development	Number of Seedlings	Remarks
Drangbra JFMC	Varieties	2016	8,28,000	Proposed

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

Other Nurseries

The following table gives the details of other nurseries near the Drangbra JFMC.

Table-11 (B): Other Nurseries near the Drangbra JFMC

Name of Nursery	Species	Year of Development	Number of Seedlings	Remarks
Drangbra JFMC	Varieties	2016	8,28,000	Proposed

Source: Proforma-3, Table-3.12 / Discussions with Forest Department personnel & Community members

5.2. Maintenance Plan - 10 Years

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

(A) Timber Species Sal , Gamera, Tik

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

Year(s)	Treatment
1 st Year	Periodic weeding and removal of creepers Ring formation
2 nd Year	Removing of all dominating weeds affecting supply of sunlight Gap filling Training the plants for straight pole formation
3 rd Year	Removal of side branches
4 th Year	Pruning the nearby trees
5 th Year	Pruning the nearby trees
6 th Year	Gap plantation
7 th Year	Gap plantation

Year(s)	Treatment
8 th Year	Gap plantation
9 th Year	Gap plantation
10 th Year	Removal of alternative row of teak

Source: Discussions with Forest Department personnel & Community members

(B) Bamboo

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

Year(s)	Treatment
1 st Year	Weeding and removal of dominating other weeds Ring formation around the buses
2 nd Year	Weeding and removal of dominating other weeds Ring formation around the buses
3 rd Year	Removal of culms
4 th Year	Removal of culms
5 th Year	Removal of culms and trimming of criss-cross culms
6 th Year	Removal of culms and trimming of criss-cross culms Light pruning to improve adequate sunlight and aeration
7 th Year	Removal of culms and trimming of criss-cross culms Light pruning to improve adequate sunlight and aeration
8 th Year	Removal of culms and trimming of criss-cross culms Light pruning to improve adequate sunlight and aeration
9 th Year	Removal of culms and trimming of criss-cross culms Light pruning to improve adequate sunlight and aeration
10 th Year	Removal of culms and trimming of criss-cross culms Light pruning to improve adequate sunlight and aeration

Source: Discussions with Forest Department personnel & Community members

(C) Fuel wood Plantation

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

Year(s)	Treatment
1 st Year	Weeding around the fuel wood seedlings Ring formation around the seedlings
2 nd Year	Weeding around the fuel wood seedlings Ring formation around the seedlings
3 rd Year	Cutting of side branches, Removal of criss-crossing
4 th Year	Cutting of side branches, Removal of criss-crossing
5 th Year	Rows of plantation
6 th Year	Remove Stumps
7 th Year	Prune trees (This would create a 15 years pruning cycle)

Year(s)	Treatment
8 th Year	Cutting of side branches and weeding
9 th Year	Cutting of side branches and weeding
10 th Year	Cutting of side branches and weeding

Source: Discussions with Forest Department personnel & Community members.

(D) NTFP / Medicinal Plantation

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

Year(s)	Treatment
1 st Year	Weeding around the seedlings Ring formation Nipping of terminal Disbudding to delay the fruit set to next season
2 nd Year	Weeding around the seedlings Ring formation Nipping of terminal Disbudding to delay the fruit set to next season
3 rd Year	Collection of fruits, Seeds and minimal pruning to remove dead
4 th Year	Collection of fruits Minimal pruning for removal of criss-crossing, overcrowding branches
5 th Year	Collection of fruits Minimal pruning for removal of criss-crossing, overcrowding branches
6 th Year	Collection of fruits Minimal pruning for removal of criss-crossing, overcrowding branches
7 th Year	Collection of fruits Minimal pruning for removal of criss-crossing, overcrowding branches
8 th Year	Collection of fruits Minimal pruning for removal of criss-crossing, overcrowding branches
9 th Year	Collection of fruits Minimal pruning for removal of criss-crossing, overcrowding branches
10 th Year	Collection of fruits Minimal pruning for removal of criss-crossing, overcrowding branches

Source: Discussions with Forest Department personnel & Community members

5.3. Miscellaneous Operations Plan

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

Table-13): Miscellaneous Operations in the Drangbra JFMC

Operation	Required (Yes / No)	Responsibility	Month / Year	Area (Ha)
(i)Medical/Health care Camp	Yes	VSS	Feb-Mar	JFMC
(ii)Centre For Non-Formal education	Yes	VSS	Feb-Mar	JFMC
(iii)Promotion of Fuel Saving Devices	Yes	VSS	Feb-Mar	JFMC
(iv)Cattle improvement/health improvements	Yes	VSS	Feb-Mar	JFMC

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

Marketing Operations

For produce from the Drangbra JFMC, the planned marketing operations are:

- (a) Linkage will be established with traders inside and outside the district
- (b) Selling to the Ban Bazar
- (c) Participation in Exhibition

Expected Benefits

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

5.4. Expected Benefits Related to Wood & Grass

The above has been tabulated below for the Drangbra 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 Drangbra JFMC

Item	Month	Year (Indicative)	Quantity
Firewood	12 month		60-65 Kg/month
Timber for House	-	-	-
Small timber for Implements	-	-	-
Bamboo	12 month	30-47 pc/ month	700 -1050 Kg/month
Pole	-	-	-
Fodder from Forest Trees & Grass	12 month	-	1500-2000 Kg/month
NTFP	3-4 month	-	20-30 Kg/Year

Wages	12 month	250 -300 Rupees/Day	Forest
Other	-	-	

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

5.5. Sharing Mechanisms

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

Table-15: Sharing Mechanism for Drangbra JFMC

Method	Items
To be shared equally	Collected Individually
To be freely collected by the members	Medicinal Plants, Fodder, Broom Stick
Other Methods	Na

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

Annexure 6 (Record I)

RECORD – 1: VILLAGE SOCIO-ECONOMIC PROFILE

Table 1: Basic data of the village:

Name of the JFMC	Date of establishment	No. of members in executive	Name of the president	Name of the secretary	Money in VDF	Contribution per family /per person	Social fencing used Yes / No	Remarks on special attainment	Grading %of success by RFO
Drangbra JFMC	2015	21	Kojin Dibregede	Sanjit Langthasa	No	Nil	No		

TABLE-2: VILLAGE WISE POPULATION DATA

No. of House hold	SC		ST		OBC		General		Total- all category
	Male	Female	Male	female	Male	Female	Male	Female	
120	NA	NA	331	313	NA	NA	NA	NA	644

TABLE-3: FARMERS CATEGORY ON THE BASIS OF LAND HOLDING

Type of Farmers according to land holding				Total
Large Farmer > 10ha.	Small Farmer 2 – 10 ha.	Marginal Farmer <2 ha.	Land Less	
Nil	15	105	Nil	120

TABLE-4: CATTLE POPULATION

No. of cattle's or Type of animals							Total
Cows (Milching)	Buffaloes (Milching)	Goats	Sheep	Bulls/ Oxeing	Pig	Poultry	
20	205	182	Nil	Nil	71	1200	1678

TABLE-5: JFMC INFRASTRUCTURE

S.No	Infrastructure	Location	Distance from village, if in another location (in Kilometers)	Condition and status of present use
1	Main Road	Drangbra	--	Poor
2	Electricity	Nil	Nil	Nil
3	Gas connection	Nil	NIL	NIL
4	Transport	Nil	--	Nil
5	Primary Health Centre	Hajadisa	4.5 km	Poor
6	School (LP)	Drangbra	--	Poor
7	Post Office	Hajadisa	4.5 km	Poor
8	Bank	Maibong	41 km	Poor
9	Phone	Maibong	41 km	Poor
10	Anganwadi Centre	Maibong	22 km	Poor
11	Gram Panchayat Office	Nil	Nil	Nil
12	Revenue Office	Haflong	86 km	Good
13	Police Office	Maibong	22 km	Poor
14	Forest Office (Beat)	Khepro	13 km	Poor
15	Post Office	Hajadisa	4.5 km	Poor
16	Bus facility	K.K Road	1 km	Poor
17	Railway Station	Maibong	41 km	Poor
18	Drinking Water	Langting	2 km	Poor
19	JFMC assets community hall petromax loudspeaker utensils etc.	Nil	--	--
20	District Head Quarter	Haflong	86 km	Poor

TABLE-6: AGRICULTURAL CROPS

	Rain fed		Irrigation	
	Name of Crop	Area in ha.	Name of Crop	Area in ha.
Kharif	Paddy	30	NA	
Rabi	vegetables	15	NA	
Others	Fruits	9	NA	

TABLE-7: CROP PRODUCTION PROFILE OF THE VILLAGE

Type of crop	Total production (approx.)	Number of households growing
Paddy	140-145 q	120
Vegetables	20-25 q	60
Fruit orchards	40-50 q	80

TABLE-8: FODDER AVAILABILITY

Types	1 – 3 months	3 – 6 months	> 6 months
Crop residue	--	--	YES
Trees fodder	--	YES	--
Grasses	--	--	YES
Green fodder	--	YES	--
Grazing in forest	--	--	YES

TABLE-9: FODDER AVAILABILITY

For purchase	Location	Distance from village if in other village kilometer
Grocery Shop/PDS center	Wajao	5 km
Weekly Market	Wajao	5 km
Major Market	Maibong	41 km
Forest corporation sale depo.	NA	
Tendu Patta PHAD	NA	
Fish Market	Wajao	5 km
Medicinal Plant Collection Center	NA	
Forest Corporation Medicinal	NA	
Plant Collection Center	NA	
Other Specify	NA	

TABLE-10: WATER RESOURCES FACILITIES

Water Source	Number	Water Availability (Adequacy, seasonality)	Uses (drinking, irrigation, livestock bathing)
Water Harvesting Structure	--	--	--
Check dam	--	--	--
Tube well	--	--	--
River/Nala	Langting Nala(1)	Adequate	Drinking, Irrigation
Spring	3 NOS	Adequate	Drinking, Irrigation, Livestock
Canal	--	--	--
Water Reservoir	--	--	--
Other, pl specify	--	--	--

TABLE 11: ENERGY CONSUMPTION

Type of fuel	Number of household depending	Number of months dependent	Source (local village, forest, other source)	Major/Secondary
Fuel wood	120	Whole year	Forest	Major
Kerosene stove	NIL			
Gobar/Bio Gas	NIL	--	--	--
Cow dung cake	NIL	--	--	--
LPG	NIL	--	--	--
Electric Heater	NIL	--	--	--
Other, pl specify	NIL	--	--	--

RECORD 2 - LIVELIHOOD OPPORTUNITY ANALYSIS

Table 12: showing the agricultural and horticultural status

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

Table 13: Livestock Status

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 are available only for 3-6 months. Green fodder is also not available for the whole year. 	<ul style="list-style-type: none"> • Higher income from livestock rearing. • The villagers can make it as an alternative livelihood opportunity if they have the easy access of livestock fodder. 	Linkage with veterinary department for better opportunities in livestock sector
Veterinary care facility	<ul style="list-style-type: none"> • No veterinary care clinic • Lack of knowledge about the proper rearing of live stock 	<ul style="list-style-type: none"> • Disease control • Increases the life span of cattle. • It will also help to aware the villagers and will encourage them for livestock rearing. 	
Production of milk	<ul style="list-style-type: none"> • Less availability of fodder • No scientific knowledge on cattle rearing to increase the milk production. 	<ul style="list-style-type: none"> • Training on the milk production can enhance the skill of milk production. • Availability of supplements like cattle “Milk Booster, Milk Plus” etc. can increase the production of milk in the area. 	
Milk market	<ul style="list-style-type: none"> • Less contact with the direct market for milk • Unaware of the market demand of different milk made products. 	<ul style="list-style-type: none"> • A huge demanded market for milk is available as Kokrajhar district head quarter and West Bengal state is too far from the JFMC. 	

Table: 14 NWFP

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

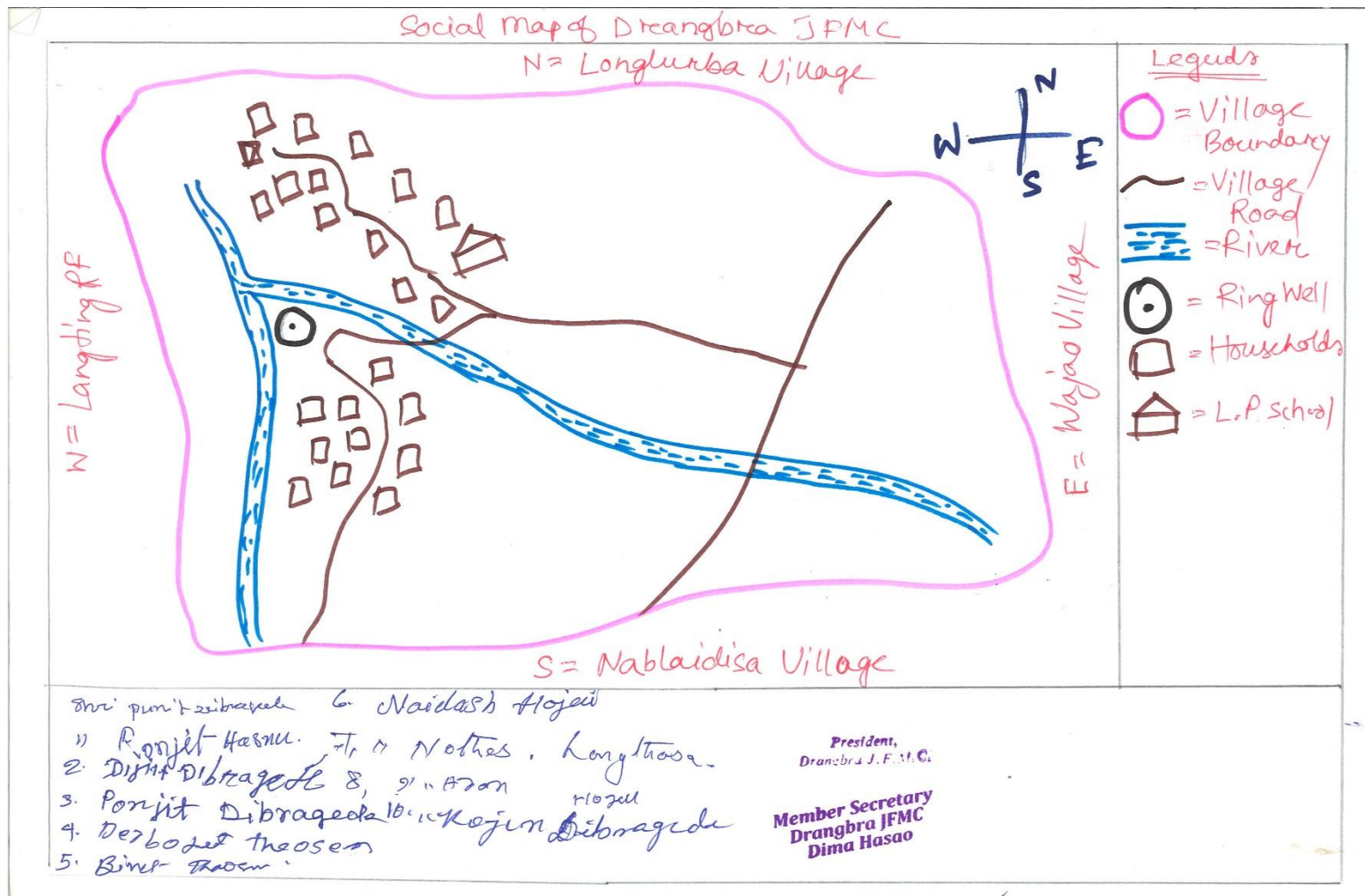
Table 15: Specialised skills: Handloom

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 standardised 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
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 Upgradation & Training on New Product Development and Product Diversification

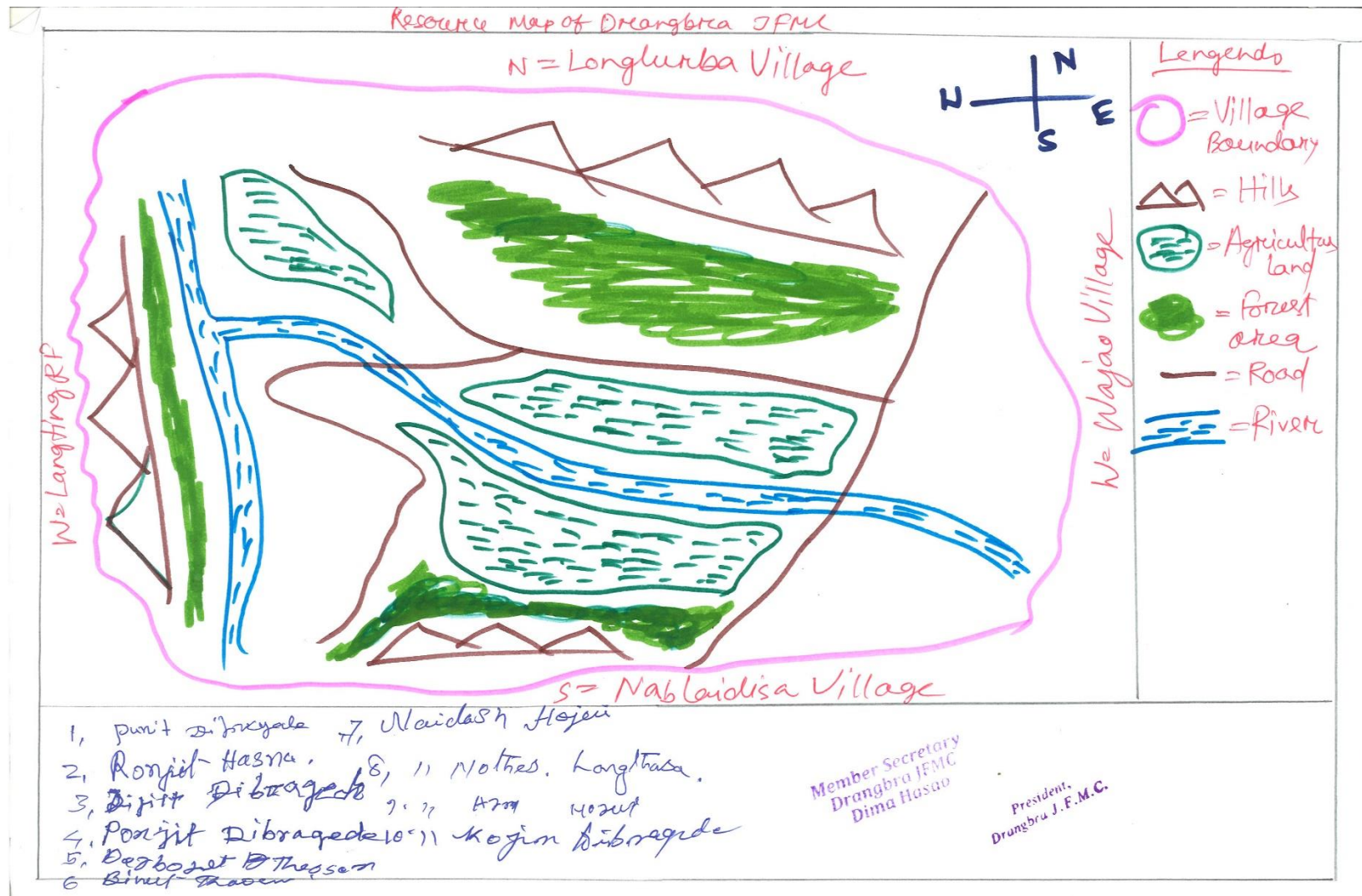
Table 16 Credit facility

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

Annexure 5 (photographs)

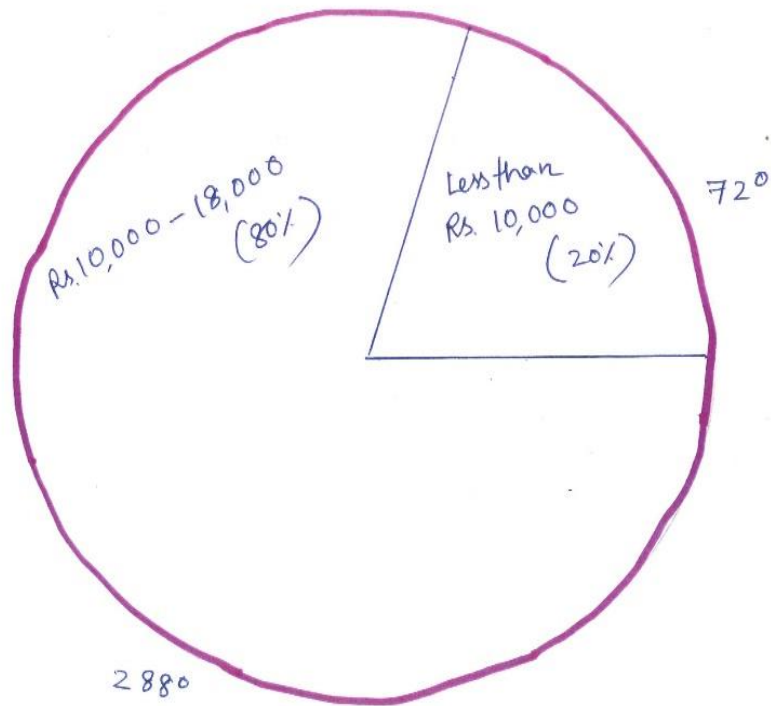


Social Map of Drangbra JFMC



Resource map of Drangbra JFMC

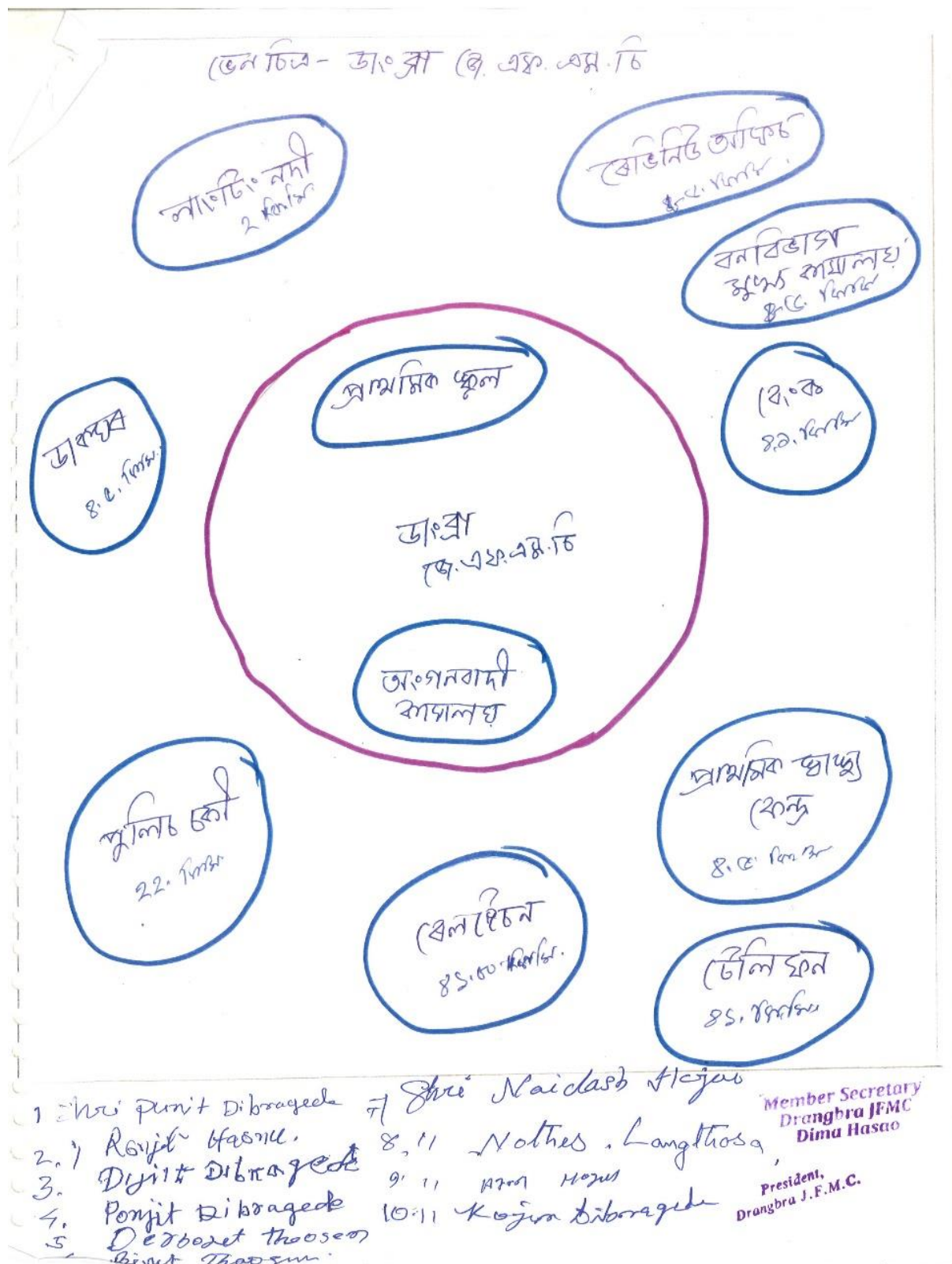
Pie chart (Wealth Ranking) - Drangbra JFMC



Member Secretary
Drangbra JFMC
Dima Hasao

President,
Drangbra J.F.M.C.

Wealth ranking pie diagram representation of Drangbra JFMC



Ven Diagram of Drangbra JFMC

2

Drangbra JFMC

	Road	Drinking water	Electricity	Hospital	Veterinary	Community hall	Irrigation	Sanitation	Education	Marked shed	Handloom	Mark scoring	Position
	A	B	C	D	E	F	G	H	I	J	K		
Road	A	x	A	A	A	F	A	H	I	A	A	7	3rd
Drinking water	B		x	B	B	B	B	B	B	B	B	9	1st
Electricity	C			x	C	C	C	C	C	C	C	8	2nd
Hospital	D				x	D	D	H	I	D	D	5	4th
Veterinary	E					x	F	G	H	I	E	2	5th
Community hall	F						x	F	H	I	F	5	4th
Irrigation	G							x	H	I	J	2	5th
Sanitation	H								x	I	H	7	3rd
Education	I									x	I	8	2nd
Marked shed	J										x	2	5th
Handloom	K											x	6th

* LPH is demanded by all the HH in the JFMC. *Don't Libraged*

1. Drinking water.

6. Hospital.

2. Ronjit Hasnu.

2. Electricity

7. Community hall

3. Diji Dibragede

3. Education.

8. Veterinary.

9. Ponjit Dibragede

4. Road.

9. Irrigation

5. Deabojit Thoson

5. Sanitation.

10. Market.

6. Binet Phoson

11. Handloom

7. Naichash Hoyer

8. Nothos Longtosa

9. Hoon Hoon

10. P. K. Kojima

Member Secretary
Drangbra JFMC
Dima Hasao

President
Drangbra J.F.M.C.

EPA Ranking of Drangbra JFMC

Drangbra JFMC.

	Dev. Of Degraded Forest	Forest protection	Plantation (medicinal, NTFB etc)	Plantation bamboo	Plantation teak	Natural regeneration	Plantation of firewood	Raising of Nursery	Fodder cultivation	Demarcation of boundary	Mark scoring	Position
	A	B	C	D	E	F	G	H	I	J		
Dev of degraded Forest	A	x	A	C	D	E	A	G	H	A	J.	3 5th
Forest protection	B		^	C	D	E	B	G	H	B	J	2 6th
Plantation on (Medicinal, NTFB etc)	C			^	C	C	C	C	C	C	C	9 1st.
Plantation bamboo	D				^	D	D	G	H	D	J	5 4th
Plantation teak	E					^	E	E	E	E	E	7 2nd
Natural regeneration	F						^	G	H	F	J	2 3th
Plantation of firewood	G							^	G	G	G	7 2nd.
Raising of nursery	H								^	H	J	5 4th
Fodder cultivation	I									^	J	0 8th
Demarcation of boundary	J										^	6 3rd.

1. Plantation on Medicinal Plant & NTFB.
2. Plantation of Fire.
3. Plantation of firewood.
4. Demarcation of boundary.
5. Plantation of bamboo
6. Raising of nursery.
7. Dev. of degraded forest
8. Forest Protection.
9. Natural regeneration
10. Fodder cultivation.

Member Secretary
Drangbra JFMC
Dina Hasao
President,
J.F.M.C.

Livelihood Ranking of Drangbra JFMC



Fuel wood Plantation at Drangbra JFMC

