





NHIRAGURI JOINT FOREST MANAGEMENT COMMITTEE

SOCIAL FORESTRY DIVISION, KOKRAJHAR

BODOLAND TERRITORIAL COUNCIL FOREST CIRCLE

MICRO-PLAN

(2016-17 to 2025-26)

Prepared by NIJIRAGURI JFMC

Assisted by

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

July 2016

List of Acronyms

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

NIJIRAGURI JOINT FOREST MANAGEMENT COMMITTEE

Kokrajhar Social Forestry Division, Forest Circle Forest Division, Bodoland Territorial Council Forest

Micro-Plan for 10 Years [Livelihood Development Plan & Forest 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 co-funding from the Government of Assam. The Assam Project on Forest and Biodiversity Conservation Society (APFBC Society) has the mandate for planning, implementation, monitoring, coordination and management of all the activities under the above mentioned project.

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 built-up 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 (*inter-alia*) the microplanning 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 Nijiraguri JFMC

This document gives the Micro-Plan for the Nijiraguri JFMC, which is located in the Kokrajhar district of Assam. The JFMC falls under the jurisdiction of the Social Forestry Division of the BTAD 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 Nijiraguri Joint Forest Management Committee (JFMC) has been formed to cover the existing community dwelling in Nijiraguri and Didanpuri, two villages located on the fringe of the Kokrajhar Social Forest. The area covered by the above JFMC falls within the Jharbari VCDC, Kokrajhar Revenue Circle of Kokrajhar District of Assam.		
	Annexure-1 gives the Village Map.		
Key Information	The key information of the JFM Table-A: Key Information of		
		,	
	Name of the JFMC	Nijiraguri- SFK/2008/5	
	Habitation	Nijiraguri, Didanpuri	
	Name of Revenue Village	nil	
	Name of the Gram	Jharbari	
	Panchayat / VCDC	V. 1. 11	
	Revenue Circle	Kokrajhar	
	District	Kokrajhar	
	Forest Division	Kokrajhar	
	Forest Range	Jharbari	
	Forest Beat	Jharbari	
	Year Formed	2009	
	Description of Boundary of	As below	
	JFMC	North: Bhutan and Ripu RF.	
		South: NH 31-C	
		West: Athiabari Range under Kachugaon Division	
		East: Jharbari Range of Haltugaon Division	
		and Saralbhanga River	
Brief Details of the	Additional details are given at 7	ussions during PRA Exercise in June 2016 Table-1 of Record-I (Given at Annexure) Committee & General Body of the JFMC are	
Executive		· · · · · · · · · · · · · · · · · · ·	
Committee & General Body	contained in the table, which is given below. Table-B: Brief Details of Executive Committee & general Body		
	Name of President	Mr. Hareswar Mushahary	
	Name of Secretary	Mr. Naresh Basumatary	
	Name of Treasurer	1vii. ivaiesii Basamatai y	
	No. of Members in	Male:6	
	Executive Committee	Female:4	
	No. of Members in the General Body	46 (Represented by the head of household)	
	Source: JFMC Records		
Households & Population Structure	nil. The total population is 233,	s. The number of female headed households is of which 112 are male and the 121 are female belong to the ST-Plain., ethnically belonging to	

	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 5.1. (2) The sex ratio is 1080 females per 1000 males in the village.
Education & Skills Development	Over 73.08 % of the population is reported to be literate. Most of the community members have received school level education. On the other hand, relatively fewer households have college educated members.
	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) handloom (b) sericulture (c) livestock rearing (d) farming
	Government has been active in promoting formal skills development programmes in the country as well as in the state. The village has not reported receipt of benefits of any such programme has been carried out in the habitation or in nearby areas.
Soil	The soil type of the project area includes: • Alluvial soil in low lying (clayey soils) and plain areas (loamy soils). This type of soil can support different kinds of crops, as the soil is reported to be fertile on the whole.
Water	The area is drained by the river Saralbhanga which flows from the adjoining mountains of Bhutan into the project area before joining the River Brahmaputra to the south. This is a perennial river.
	The Brahmaputra Valley is also marked by the presence of wetland, locally called as 'Beels', which are rich in fish and other aquatic resources.
Climate: Temperature &	The maximum temperature during the summer is 38 $^{\circ}$ C. The minimum temperature during the winter is 8 $^{\circ}$ -9 $^{\circ}$ C. and average is 22 $^{\circ}$ -23 $^{\circ}$ C.
Rainfall	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 broadly classified as Brahmaputra valley Semi-Evergreen 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	Annexure-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:
	Cultivated wasteland (low line) 17.82 % Firewood Plantation 25.87%

	Turing'in and 0.510
	Irrigation canal 0.51%
	Paddy field 44.92% Road .54%
	Settlement with tree cover 7.65%
	Stream 2.70%
Land Holdings	The type of households as per land-holding is given at Table-3 of Record-I.
Land Holdings	From the same, it is seen that:
	• 19.6 % of the households are landless (9 HH)
	00.404 0.1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
	 80.4% of the households are marginal farmers (37 HH) None of the households belong to small and large categories.
	None of the households belong to small and large categories.
Livestock	The total number of livestock in the village is 202. The main types of livestock possessed by the households include:
	Cows: 69
	Goats: 66
	Buffaloes: 6
	Bulls: 2
	Pigs:41
	Table-4 of Record-I may be referred to for the details in the above connection.
Village	In any community; the availability of basic infrastructure enables the
Infrastructure &	development of sustainable livelihood options. The present condition of
Communication	infrastructure in the village is not satisfactory. This is borne out by Table-5 of
Facilities	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 no 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. The community members have accounts in faraway places.
Agricultural Crops	The details of the agricultural crops grown in the village is available at Table-6 of Record-I.
	The above shows that the following are the main crops grown in the village. Kharif Crops: Sali Paddy, Yum Rabi Crops: Mustard
	Others: Jute, jack fruit, pomelo etc.
	All the crops are rain fed.
	Table 7 of December 1 may be referred to for the new decider and civil 1 to 1.
	Table-7 of Record-I may be referred to for the production and yield details of

Crop Production	the crops grown in the village.		
Profile	The maximum numbers of households are involved in growing crops like rice and mustard.		
	The production and yield of these crops is given as follows:		
	(a) Paddy: Production 840 Quintals Yield 21 q /ha (b) Oil seeds: Production 6 Quintals Yield 1.5 q/ha		
Fodder Availability	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:		
	(a) Crop residue(b) Grazing in forest(c) Household wastage(d) Green fodder		
Markets	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:		
	(a) Grocery / PDS: Patgaon at 7 km away (in other village) (b) Weekly / Bi-weekly Market: : patgaon at 7 km away (c) Major Market: : Patgaon at 7 km away		
Water Resources	The water resources are tabulated at Table-10 of Record-I. The main water resources with the water availability is as follows:		
	(a) check dam (b) tube well (c) river (d) stream (Water Availability: Perennial / Seasonal)		
Energy Consumption	Table-11 of Record-I shows the major sources of energy in the village. The same have been listed below.		
	(a) FUEL WOOD- Households Depending 46 Nos. Source: Ripu & Chirang RF (b) KEROSENE-Households Depending: 10-15 Nos. Source: Open Market and PDS.		
Socio-economic status	Social set-up: The village is inhabited by tribal community. They do not have a caste system. The society is not marked by deep social divisions. The observed position of women is satisfactory.		
	Economic Condition: The economic position is not satisfactory. The main livelihoods are Farming, Daily wages, Sericulture etc. Most households earn Rs. 10,000 to Rs. 15,000 per year.		
	There is some migration of the youth and others for livelihoods. Additional details are available at the next section.		
Maps	Annexure-1 gives the following maps, based on PRA exercise:		
	 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 Nijiraguri village as follows:			
	Date : 6 th June, 2016 Location: Community Hall, Nijiraguri			
	Numbers Present: 60			
	In Presence of: JFMC office bearers, Village Headman, community members,			
	Forest Department personnel, etc.			
PRA Exercise	Team fro	om IIE Guwahati ca	arried out PRA exercise in Niji	raguri village as follows:
			ion: Community Hall, Nijirag	
		rs Present: 60	, , , ,	
	In Pres	ence of: JFMC of	fice bearers, Village Headma	in, community members,
	Forest D	epartment personne	el, etc.	
Objective of PRA			y the existing household con	
		data about the corevelopment plan.	nmunity for developing the li	velihood options and the
Tools Used & Outcomes of the	Differen	t tools were used a	nd outcomes obtained. These is	nclude:
PRA PRA	Social M			
	Wealth I	0		
		Time Line review Seasonality of Livelihoods		
	Venn Diagram			
	Annexure-3 furnishes detailed information of the above.			
Ranking	Ranking exercise has been done for the following:			
		 Livelihoods & Skills Development Entry Point Activities (EPA) 		
	Annexure-3 elaborates the above. From the same, it is stated that:			
	Ranking of Livelihoods & Skills Development 1. Livestock			
		Horticulture		
		Lac-cultivation		
	4. Driving 5. Masonry			
	Ranking of EPA			
	Rank Village EPA as Details Probable source of			
		ranked	(Annexure-3 has additional particulars)	funding/deptt.
	1.	Sanitation	Providing HHL (House	Swach Bharart
			Hold Latrine)- Low cost ,septic and sanitary type.	Mission/ PHE
	2.	Road	Black Topping of road	PMGSY/PWD
		Connectivity	From Patgaon to the village (~7 KM)	
	3.	Electricity	Solar light facility to each	APFBC

			НН	
	4.	Drinking Water	At least 4 ring well	EPA APFBC/ NRDWP
	5.	School	Upper Primary School	SSA/ Elementary Education Deptt.
	• An	arrangement of wo	rking capital worth Two La	cs should be arranged from
	the	EPA fund for prome	oting livelihood activities.	
		· · · · · · · · · · · · · · · · · · ·		fice to be set up within the
	JFM			nmissioning of Toolkits/
	_	ipments/Machinerie		and form the EDA for 1 form
			ommunity livelihood activity	aged from the EPA fund for y.
Livelihood opportunities	Liveliho	ood Opportunities w	vere identified as follows:	
оррогошинов	_	ture & Horticulture		
	Livesto NTFP	ck		
		evelopment		
	Credit I			
	Additio	nal discussion abou	t the above has been given b	elow.
A aniquituma Pr	Toble 1			
Agriculture & Horticulture		Table-12 under Record-2 may be seen in this connection for opportunities in the areas of agriculture and horticulture.		
		-		
		in constraints are:	ertilizers and pesticides, inse	poticidos
		k of irrigation facili		tellelues.
	(c) Lacl	(c) Lack of agricultural infrastructure, modern tools and equipment's viz, power		
	tillers, tractors etc. (d) Non usages of high yielding seeds etc.			
	(d) Non	usages of high yiel	ding seeds etc.	
	The opp	portunities are:		
	(a) App	lication of proper a	nd controlled pesticides and	insecticides.
			l advance technology	
			g programme. The villagers d is improvisation of their sk	are inherited with the skill ill level.
	_	gested programmes		
		actor operation train gri-skill developmen	_	
			es, pesticides, hybrid cultiva	tion etc.
Livestock	Table-1	3 furnishes addit	ional information about o	opportunities for livestock
	rearing.			11 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
		in constraints are:	1 . 1	
			om market due to poor finan	icial condition. 3-6 months. Green fodder is
		available for the w	· · · · · · · · · · · · · · · · · · ·	5-0 monuis. Ofecii foudel 18
	(c) No v	veterinary care clini	c	
	(d) Lacl	k of knowledge abo	ut the proper rearing of live	stock

	T
	The opportunities are:
	(a) Higher income from livestock rearing.(b) A huge demanded market for milk is available as Kokrajhar district head quarter and West Bengal state is too far from the JFMC.
	The suggested programme is:
	(a)Piggery (b)Poultry
NWFP	(c)Diary The opportunities for NWFP 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
	The suggested programme are: (a)Plantation of Food plants, (b)Medicinal Plant etc
Specialized Skills	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 research on product quality
	The opportunities are:
	(a) Providing good communication facility(b) Training of the skill holder(c) Financial assistance from govt.
	 The suggested programme are: 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
Credit Facility	buyers. Table-16 under Record-2 discusses this aspect.
Creun Facility	The main constraints with the reasons are: (a) Financial exclusion (b) Higher rate charged by the private money lender.

	The opportunities are: (a)setting up modern financial institution (b)Adequate awareness. The suggested programme is:
	(a) Setting up modern financial institution in the nearby areas.
Strategic Interventions	Summarizing the suggested programmes at above as strategic interventions for the Livelihood Development Plan: 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, Providing a bulk buy arrangement of the finished product with institutional buyers. 5. Credit facility: Setting up modern financial institution in the nearby areas

4. Livelihood Development Plan Livelihood Framework of livelihood Opportunity Analysis has been done with the help opportunity of the following criteria: **Analysis** Livelihood assets A) B) Livelihood context Priority ranking on potential livelihood The livelihood situation of Nijiraguri JFMC has been analyzed during the PRA exercise using sustainable livelihood framework of DFDI (Department of Funding for International Development). The existing livelihood situation of JFMC is outlined in terms of – • Natural Capital • Physical Capital • Social Capital • Human Capital • Financial Capital The major natural capital of Nijiraguri JFMC is Ripu reserve forest and the Natural capital major stream namely Nijiraguri. 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) **Physical Capital** Majority of the households in the Nijiraguri JFMC/EDC are involved in farming activities and are marginal farmers with farming land of less than 2

1	
	ha. Detailed land holding pattern is described in the table 3/annexure 6. The village has no pucca house, all the houses are thatch. Among the various sources of energy consumption such as Biomass, kerosene, electricity, LPG and candle, villagers depend on the firewood and kerosene for household and other uses. (refer to table 10,11) There is only LP school present within the JFMC area. And one Middle school is at outside of the boundary of the JFMC. No other education institution is present. (refer to table 5) In case of water sources, there are 6 community hand pump and 1 community well in the JFMC.
Social Capital	The villagers are not fully involved in the JFMCs functioning due to lack of
	awareness on their roles, functions, and specific benefits they are going to
	receive.
	The village has no youth club and no community hall inside the JFMC
Human Capital	73.08 per cent of total population of the JFMC are educated. (refer to
	additional table i, ii.)
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.
	All of the people have bank account in commercial banks, but they are not
	aware of the benefits of financial inclusion
Livelihood Context	Livelihood activities of the Nijiraguri 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
Income Generating	The main income generating activities as planned at the village are:
Activities	Farm Sector :
	1.poultry, diary and piggery
	2. lac cultivation
	3.Horticulture
	Non-Farm sector:
	1.Handloom/ Weaving
	2.Driving
	3. Electrician4. Sericulture
	5. Small business
SHG Activities	SHGs of the village can plan the following activities:
	1. To create awareness.
	1. 10 010000 011010001
	2. To organise and form group
Exposure Trips	2. To organise and form group3. To involve the villagers in Livelihood Activities collectively.
Exposure Trips	2. To organise and form group

	Source: Table-34 of Record-4
Summary of Action Plan	As attached in next page.
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 (RKSY) - 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. (g) MGNREGA 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 of NJIRAGURI JFMC

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

Table-1: Conditions of the Forests of Nijiraguri JFMC

Identification	Area of JFMC Forest (Ha)	Distance from Village (Km)	Condition of Forest [Good - Forest with crown density of 40% of more Else 'Degraded']	Frequency of Use by Community [2-3 m / 3-6 m / 6-9 m / Over 9 m]
(A) Assigned Forest				
RF / PF Name: Beat: jharbari Compartment:	60 Ha	10 km	Good Area: -	Once in week
(B) Other Planted Area	134			
Location: Type of Forest: VF / Other	Outside the JFMC		Good Area-:-134	
TOTAL	194 ha		Good Area: -Ha Degraded Area: 60 Ha	

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

It is seen that the Nijiraguri JFMC has 194 Ha under its forests, of which 134 Ha is 'Good' and the rest is 'Degraded'.

1.2. Forest Soil Type

The forests of Nijiraguri 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 JFMC

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

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

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

- (a)Loam soil
- (b)Less fertile

1.3. Existing Composition of Flora

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

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

Parameter	Local Name(s)	Biological Name(s)
Major Forest Species	Khair	Senegalia Catechu
	Sisso	Dalbergia sissoo
	Arjun	Terminalia arjuna
	Bhelkor	Trewia nudiflora
	Ghora neem	Melia azedarach
Associates		
Shrubs	Dhekia	Ferns
	Jharmoni bann	Eupatrium
Medicinal Plants	Arjun,	Terminalia arjuna
	Hilikha	Terminalia Chebula
	Neem	Azadirachta indica
	Amla	Phyllanthus emblica
Produces		
Others, if any		

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

2. Other Inputs for the Forest Development Plan

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

2.1. Past Protection Measures of the JFMC

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

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

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

2.2. Domestic Requirements of Forest Produce

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

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

Name of Forest Produce	Average Household Requirement		How met at Present	Source
	Frequency of Requirement	Approx. Qty		
Firewood	Once in a week	65-70 kg		Forest
Timber for House	Once in a year	2-3 qntl/yr		
Small timber for Implements	Nil			
Pole / Bamboo	Once in a month	2-3 bamboo / per month		Village area
Fodder from Forest	-			
NTFP	-			_
Other	-			-

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

There are 46 households in the Nijiraguri JFMC. From the above table and this number of households, it is inferred that the total annual requirements of the Nijiraguri and Didanpuri village for forest produce for own use is as follows:

Table-4 (B): Total Domestic Requirement of Forest Produce - \underline{All} Households of the Nijiraguri JFMC

Name of Forest Produce	Community Requirement (Kg per annum) (*)	Remarks
Firewood	161000	Through out the year

Timber for House	110400	Dec - Jan
Small Timber for Implements	-	
Pole / Bamboo	1656 bamboo	Village bamboo garden
Fodder from Forest	-	
NTFP	-	
Other		

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

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

2.3. Collection & Marketing of Forest Produce by Villagers

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

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

Name of Forest	Collection for I	Collection for Marketing		
Produce	Season / Months	No of Households Collecting	Average Qty. Collected (Kg)	Collection
Firewood	Dec/ Jan	3-4	400-500	Ripu & Chirang RF
Timber for House				
Small timber for Implements	-			
Bamboo	Once a month	4-5	8-10 pc	Village area
Pole	-			
Fodder from Forest	-			
NTFP	-			
Other				

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

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

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

Name Or Produce	of Forest	Surplus Marketed (Kg)	How marketed	Average Income per HH from sale of Forest Produce
Firewood		1575kg	Patgaon market	1600-

			2000/month
Timber for House	-	-	
Small timber for Implements	-	-	
Bamboo	32-50 pc/per month	Patgaon market	800- 1250/month
Pole	-	-	
Fodder from Forest	-	-	
NTFP	-	-	
Other			

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

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

The total requirements of forest produce by the community members of the Nijiraguri 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 Nijiraguri JFMC

Name of Forest Produce	Community Requirement (Kg per annum) From Table-4(B)	Surplus Marketed (Kg) From Table- 5(B)	Total Requirements (Kg)
Firewood	161000 kg	1575	162575
Timber for House	110400 kg	-	110400
Small timber for Implements	-		
Bamboo	1656 pcs	384-600pcs	2040-2256pcs
Pole	-		
Fodder from Forest	-		
NTFP	-		
Other	-		

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

3. Forest Protection Issues

3.1. Protection Problems

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

Table-7: Protection Problems of the Nijiraguri 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	Nil	
Smuggling of Timber	yes	No
Accidental Fires	Nil	
Encroachment of Forest Lands	Nil	
Others	Nil	

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

- (a) Cutting of trees
- (b)Grazing of cattle

[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 Nijiraguri 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 Nijiraguri JFMC from the issues discussed earlier at Sub-section 3.1

Table-8: Protection Plan of the Nijiraguri JFMC

Protection Work	Location in	Quantification	Timing	Priority
[to be filled from Table	Forest Area	of the		[High /
3.7 of Proforma-3 as		Measures		Medium /
applicable]		[Length, Area,		Low]
		Size etc.]		
1. Fencing	Nijiraguri forest			High
2. Fire protection				

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 Nijiraguri 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 Nijiraguri JFMC are given hereunder.

Table-9: Types of Operations Proposed in the Nijiraguri 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	April - august	
Protection to Cut Stumps of Trees				
Watershed Treatment	Yes	Yes		Nil
Water Reservoirs				
Grass & Silvi-pasture				
Bamboo Plantation	Yes	Yes	Jun- August	
Seed Sowing	Yes	Yes	Jun/July	Nil
Root & Shoot Cutting & Plantation	yes	Yes	Jun/July	nil
Cut Back & Coppice Treatment				
Physical Fencing	Yes		Sep- Nov	nil
Social Fencing				
Other Activities				

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 Nijiraguri JFMC:

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

4.3. Forest Improvement Plan - Advance Works & Creation

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

Table-10: Forest Improvement Planned in the Nijiraguri JFMC

Treatment	Area in Ha under Plantation Module	Priority for Block Plantation	Species	Spacing (metre x metre)
Assisted Natural Regeneration (with plantation in gap)			Saal, Teak, Gamari,	4m x 4m
Block Plantation	200	High	Saal, Teak, Gamari, Sissoo, Ghoraneem, Khayer	3m x 3m; 2m x 2m
Sowing of Neem, Amla, Mahua, Bahera (Medicinal Plants)	50	High	NTFPs	2m x 2m
Enrichment Plantation	-	-		
Direct Plantation	-	-	-	-
Other	-	-	-	-
TOTAL AREA (in Ha)	250	-	-	-

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

4.4. Forest Improvement – Action Plan

Action Plan for Block Plantation of Teak Mixed with Associates

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 (27,500 annually)
Number Blocks : 4 Numbers(25 ha each)

Species : Teak; Associates-Gamari, Sissoo, Titasopa, etc.

Rates : As Approved by APFBCS(to be increased by 20% every two years)

Financial Year	Activities
	Identification of suitable site for regeneration-examine possibilities of natural seed fall-
2016 17	determine intensity and nature of biotic interference-Area Not Less than 100 ha,
2016-17	Demarcation of land during the month of December-January, Partition of land in 4
	blocks, Land development, Soil Working, 3 wired barb fencing
2017-18*	Block Plantation 3m x 3m, 1100 plants/ha-during the season of April-June ; GPS
2017-18	marking of the area
Block Plantation 3m x 3m, 1100 plants/ha-during the season of April-June ; GF	
2018-19*	marking of the area
	1st Weeding; Replacement of dead/struggling saplings raised in the previous year
	Block Plantation 3m x 3m, 1100 plants/ha-during the season of April-June ; GPS
2019-20*	marking of the area
	2nd Weeding; Replacement of dead/struggling saplings raised in the previous year
2020-21*	Block Plantation 3m x 3m, 1100 plants/ha-during the season of April-June ; GPS
2020-21	marking of the area

	3rd Weeding
2021-22*	4th Weeding; Replacement of dead/struggling saplings raised in the previous year
2022-13*	5th Weeding; Replacement of dead/struggling saplings raised in the previous year
2023-24*	6th Weeding; Replacement of dead/struggling saplings raised in the previous year
2024-25*	7th Weeding
2025-26*	8th Weeding

^{*} Silvicutural thinning to be undertaken on intervals of five years post plantation

<u>Action Plan for Block Plantation of Mixed Harwood Plantation(MHWP) - Teak with Associates, Firewood and Bamboo</u>

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

Firewood and Bamboo

Plantation Period : 2016-17 to 2025-26 (10 Years)

Plantation Area : 100 ha

Spacing : 2m X 2 m-2500 plants per ha

No. of Plants to be Raised : 2,50,000 (62,500) approx. annually)

Number Blocks : 4 Numbers(25 ha each)

Species : Teak; Associates-Ajar, Khoroi, Khayer, Sissoo, Jia, Arjun, Ghora Neem,

Bamboo(Jaati, Kako, Bholoka, Bijili), etc

Rates : As Approved by APFBCS(to be increased by 20% every two years)

Andinidian		
Activities		
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, 3 wired barb fencing		
Block Plantation 2m x 2m, 2500 plants/ha-during the season of April-June ; GPS marking of		
the area		
Block Plantation 2m x 2m, 2500 plants/ha-during the season of April-June; GPS marking of		
the area		
1st Weeding; Replacement of dead/struggling saplings raised in the previous year		
Block Plantation 2m x 2m, 2500 plants/ha-during the season of April-June; GPS marking of		
the area		
2nd Weeding; Replacement of dead/struggling saplings raised in the previous year		
Block Plantation 2m x 2m, 2500 plants/ha-during the season of April-June; GPS marking of		
the area		
3rd Weeding		
4th Weeding; Replacement of dead/struggling saplings raised in the previous year		
5th Weeding; Replacement of dead/struggling saplings raised in the previous year		
6th Weeding; Replacement of dead/struggling saplings raised in the previous year		
7th Weeding		
8th Weeding		

^{*} Silvicutural thinning to be undertaken on intervals of five years post plantation

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

Action Plan for Block Plantation of Non Timber Forest Produce

Name of Plantation : NTFP PLANTATION

Plantation Period : 2016-17 to 2025-26 (10 Years)

Plantation Area : 50 ha

Spacing : 2m X 2 m-2500 plants per ha No. of Plants to be Raised : 1,25,000 (31,250) approx. annually)

Number Blocks : 4 Numbers(25 ha each)

Species : Amla, Hilikha, Bhomora, Bohera, Mango, Guava, Neem, Arjun, etc Rates : As Approved by APFBCS(to be increased by 20% every two years)

Financial Year	Activities
2016-17	Identification of suitable site for regeneration-examine possibilities of natural seed fall-determine intensity and nature of biotic interference-Area Not Less than 50 ha,
2010 17	Demarcation of land during the month of December-January, Partition of land in 4 blocks, Land development, Soil Working, 3 wired barb fencing
2017-18*	Block Plantation 2m x 2m, 2500 plants/ha-during the season of April-June ; GPS marking of the area
	Block Plantation 2m x 2m, 2500 plants/ha-during the season of April-June ; GPS
2018-19*	marking of the area
	1st Weeding; Replacement of dead/struggling saplings raised in the previous year Block Plantation 2m x 2m, 2500 plants/ha-during the season of April-June ; GPS
2019-20*	marking of the area
	2nd Weeding; Replacement of dead/struggling saplings raised in the previous year
	Block Plantation 2m x 2m, 2500 plants/ha-during the season of April-June ; GPS
2020-21*	marking of the area
	3rd Weeding & Prunning
2021-22*	4th Weeding & Prunning; Replacement of dead/struggling saplings raised in the
2021 22	previous year
2022-13*	5th Weeding & Prunning; Replacement of dead/struggling saplings raised in the
	previous year
2023-24*	6th Weeding & Prunning
2024-25*	7th Weeding
2025-26*	8th Weeding

4.5. Nursery Development Plan

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

(a) JFMC Peoples' Nursery (incl. Departmental Nursery)

The details are given below.

JFMC Nurseries

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

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

Location of Nursery	Species	Year of Development	Number of Seedlings	Remarks
*****	Major- Saal, Teak		37000	Provide sapling for
Within the Vilage	Associates- Gamari, Sissoo, Titasopa, Ghoraneem, Khayer,	2016-17	37000	plantation to be under taken in the 2017-18

Location of Nursery	Species	Year of Development	Number of Seedlings	Remarks
	etc			
	NTFP		50000	
	Major- Saal, Teak		37000	
	Associates- Gamari, Sissoo, Titasopa, Ghoraneem, Khayer, etc	2017-18	37000	Provide sapling for plantation to be under taken in the 2018-19
	NTFP		45000	
	Major- Saal, Teak		37000	
	Associates- Gamari, Sissoo, Titasopa, Ghoraneem, Khayer, etc	2018-19	37000	Provide sapling for plantation to be under taken in the 2019-20
	NTFP		40000	
	Major- Saal, Teak		37000	
	Associates- Gamari, Sissoo, Titasopa, Ghoraneem, Khayer, etc	2019-20	37000	Provide sapling for plantation to be under taken in the 2020-21
	NTFP		40000	

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

4.6. Maintenance Plan - 10 Years

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

(A) Timber Species Saal, Teak, Associates

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

Year(s)	Treatment
2016-17 to 2025-26	As provided in Action Plan for Block Plantation of Saal Mixed with Associates
2016-17 to 2025-26	As provided in Action Plan for Block Mixed Harwood Plantation - Teak with Associates, Firewood and Bamboo

Source: Discussions with Forest Department personnel & Community members

(B) Bamboo

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

Year(s)	Treatment
2016-17 to 2025-26	As provided in Action Plan for Block Mixed Harwood Plantation - Teak with Associates, Firewood and Bamboo

Source: Discussions with Forest Department personnel & Community members

(C) Fuel wood Plantation

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

Year(s)	Treatment
2016-17 to 2025-26	As provided in Action Plan for Block Mixed Harwood Plantation - Teak with Associates, Firewood and Bamboo

Source: Discussions with Forest Department personnel & Community members

(D) NTFP / Medicinal Plantation

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

Year(s)	Treatment
2016-17 to 2025-26	As provided in Action Plan for Block Plantation of Non Timber Forest Produce

Source: Discussions with Forest Department personnel & Community members

4.7. Miscellaneous Operations Plan

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

Table-13): Miscellaneous Operations in the Nijiraguri JFMC

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

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

5. Expected Benefits

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

5.1. Expected Benefits Related to Wood & Grass

The above has been tabulated below for the Nijiraguri 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 Nijiraguri JFMC

Item	Month	Year (Indicative)	Quantity
Firewood	Throughout the year	2021-20	2 quintals annually /household
Timber for House	Throughout the year	2025-26	2-3 trunks per household annually
Small timber for Implements	Throughout the year	2025-26	6-7 trunks per household annually
Bamboo		2017-18 onwards	100 pieces
Pole	-	-	-
Fodder from Forest Trees & Grass			
NTFP	June-July	2021-22 onwards	1 MT

Wages	Planation and Weeding Season	2016-17 onwards	-
Other	-	-	-

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

5.2. Sharing Mechanisms

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

Table-15: Sharing Mechanism for Nijiraguri JFMC

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

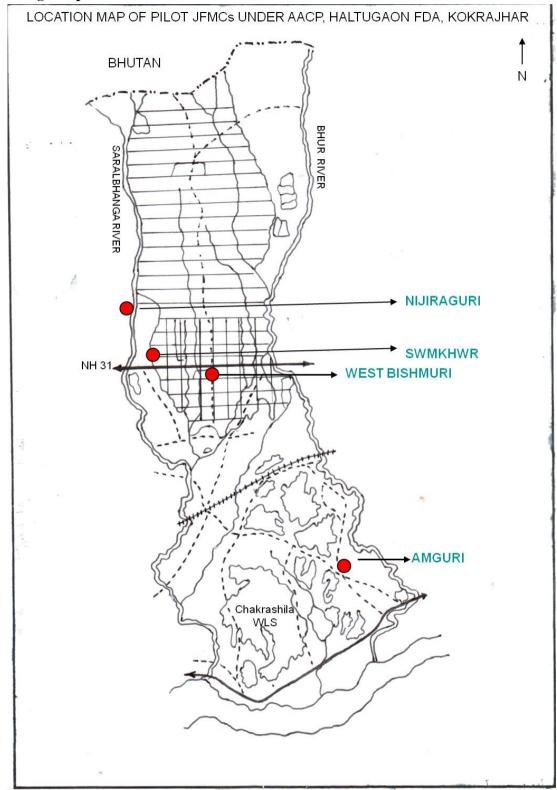
Source: Proforma-3, Table-3.15 / Discussions with Forest Department personnel & Community members

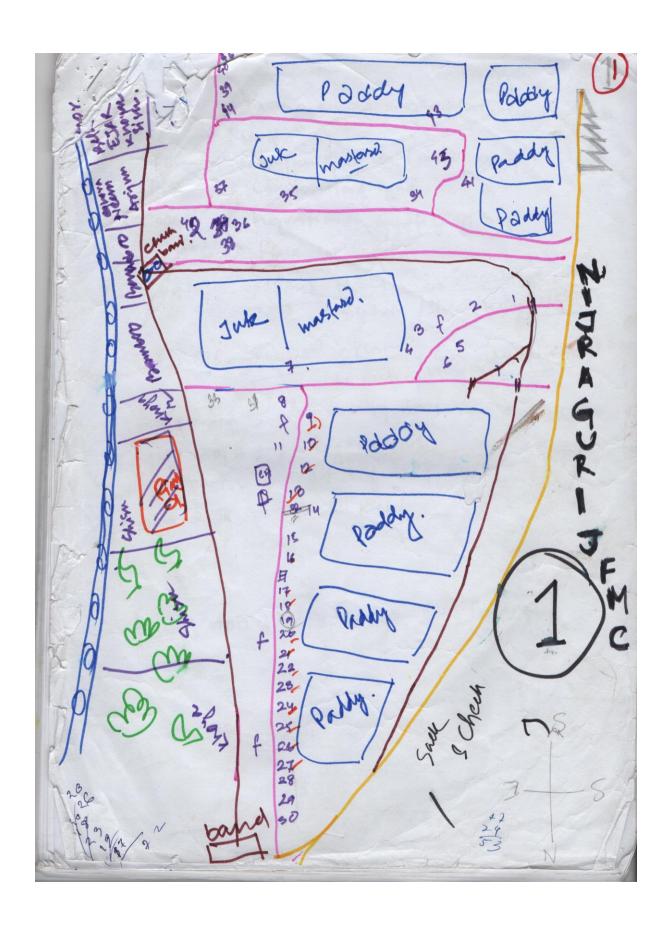
6. List of Annexures

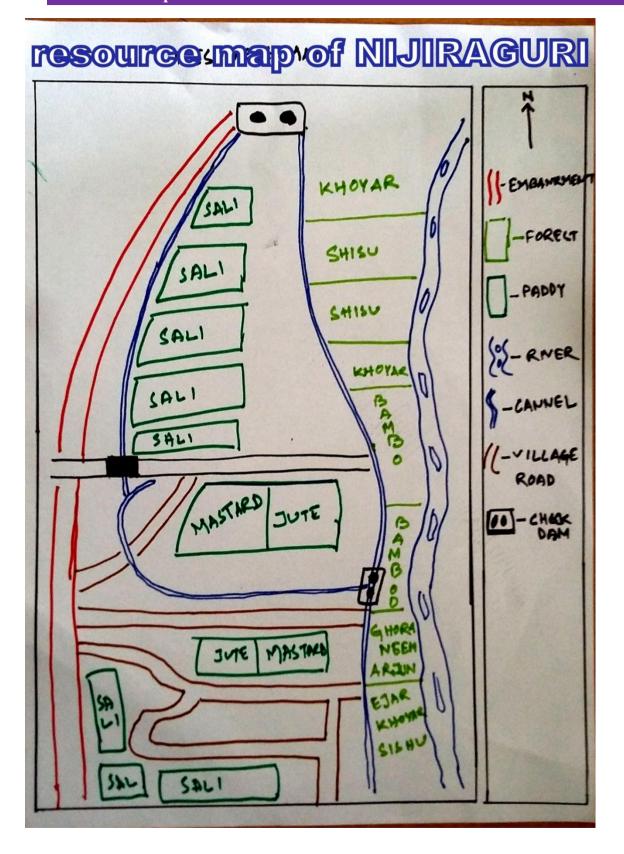
Annexure No	Heading	Page No
1	Maps	
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Annexure I

1. Village Map:

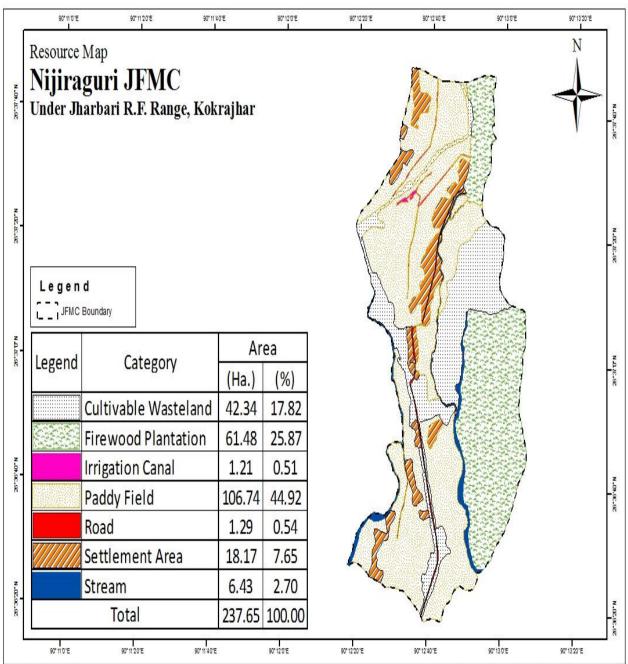






Annexure II

Land Use map of GIS



Source: Google earth Imagery

Prepared by: Indian Institute of Enterpreneurship

Annexure III

PRA ACTIVITY

Location and Timing of Participatory Rural Appraisal:

Numbers of participants :	60
Time:	1.30 pm, 6 th June 2016
Venue:	Community Hall (Nijiraguri village)

Table - 3.1Brief about the villages under NIJIRAGURI JFMC

Sl. No.	Name of the Village	No. of households	Population		
			Total	Male	Female
1	Nijiraguri	33	166	80	86
2	Didanpuri	13	67	32	35
	Total	46	233	112	121

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 visualise the socio-economic aspects of the Nijiraguri JFMC where the housing patterns of the households, the numbers of schools, social infrastructure, and religious beliefs among households. Awareness camp about the project was carried out beforehand. So it was easy to gather people for the PRA process in the community hall. And due to time constraint we have to skip the transect walk. The villagers were enthusiastic about the mapping process and they actively participated in the process.

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

Table 3.2: Information about the villages

	Village →	Nijiraguri	Didanpuri
Social information	Total population	166	67
al ir	Male	80	32
l for	female	86	35
ma	Total households	33	13
l ti o	Numbers of Pucca Houses	0	0
5	No of thatch house	32	13
	Nos of semi pukka house	1	-
	Bridges	2	-
	Stream	2	1
	River	1	
L	PHE	1	(same river)
anc	Community hall	1	-
Landmarks	Community Hand pump	5	1
ks	Well	1	-
	Embankment	1	(same)
	Check Dam	1	1
	Play Ground cum Grazing filed	1	-

Findings of social map:

- The participants of social mapping have identified all 46 households out of which 45 households are thatch house or kuccha house. There is only 1 semi Pukka house and no IAY household though the entire village come under BPL category. This signifies that the IAY scheme of Government has not achieved considerable coverage of poor people residing in rural area yet.
- Other than the class based division of the households, important places like community hall, schools, and playground, stream, well, embankment, check dam, hand pump and bridges are mapped.
- Main sources of water for the villagers are the community hand pump and the streams and the river which is used by villagers for their day to day use. But the water is available only for 4-6 month (during monsoon season).
- Provision of Education facility is not satisfactory in the villages as even primary school
 facility is not available within the boundary of the village. The nearest primary school is
 1km far from the village. There is one Anganawadi centre in the village but the
 interesting fact is that there is no infrastructure of the centre. They are running the centre
 in the community hall.
- All of the people belong to the Bodo community and are of schedule tribe caste. The religion of all the villagers is Hindu.

Learnings:

➤ Electricity is not available inside the villages of the Nijiraguri JFMC. However, few of them use solar light to tackle their electricity deficiency problem. There is no LPG gas

connections in the villagers of the JFMC villages. The Household still dependent on forest and use firewood for their cooking purposes. They used to go to the forest for collecting the firewood which is still a concern for the forest department for degradation of the forest.

- The primary health center along with post office is located in Jharbari, which is 4 KM away from the JFMC. The villagers have to cover a long distance for their health check-up.
- ➤ There is also one community hall available in the JFMC where various meetings are held. Major meeting are Gram panchayat meeting, village head meetings, forest department meetings and other political meetings.
- The availability of fodder for domestic animals depends on the resource available in the forest area and the capacity of the household who can rear the livestock's. The two villages of the JFMC are fully dependent on crop residue, trees fodder, grasses, and green fodder. Field residues are materials left in an agricultural field after the crop has been harvested. These residues include stalks and stubble (stems), leaves, and seed pods.
- ➤ There are some grazing field where villagers use for their cattle rearing. These fields are available for a maximum of six months. Seasonal grazing incorporates "grazing animals on a particular area allows the land that is not being grazed to rest and allow for new forage to grow.
- The villagers of the Nijiraguri JFMC have to move Patgaon, a distance covered with 7 km, for their weekly marketing activity. Domestic materials, utensils, bangles, cloths and stationeries are sold in different stalls.

3.2 Wealth Ranking:

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

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

- a) Land holding
- b) Occupation

As such about 34.78 per cent people are poor, about 65.22 per cent are belong to middle class and about 0 per cent are categorised to be rich. Poor people are mainly irregular wage earners, sometimes they lease (adhi lua) others land. They also have good amount of agricultural land.

Wealth Ranking Analysis



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
1992	First Village was constructed as 23	Construction
	household migrated from	
	neighbouring village	
1993	Village road was constructed.	Construction
1994	Village playground was constructed.	Construction
1996, 1998	There was a community clash in the	Socio political
	village between Adivasi community	
	and Bodo community.	
1996	Severe Flood in the village.	Environmental
2006	1st self-help group formed in the	economic
	village.	
2006	First outward migration from, the	Economic.
	village to Gujrat in search of work.	
2009	1st plantation in the village under	Environmental
	NARMIL (134 hctr.)	
2009-10	1 st Anganawadi was established.	Social

2009	Formation of JFMC	Environmental
2010	1st BPL card was issued in the village.	Social
2012	Community hall was established.	Social
2015	2 nd plantation in the village. (60 hac.)	Environmental

In 1992 the people from neighbouring village migrated to the area and established a new village named Nijiraguri. The main reason of the migration was scarcity of land. Total 23 numbers of household were setup in 1992 which increased to 46. The village road was constructed in 2013 by the people of the village and till date it has not been developed further.

In 1996 a community clash touched the village. As a result most of the villagers escaped the village and they stayed in the relief camp. After the severe flood in the village the people again returned to their village and since then no such events have been reported.

The present Joint Forest Management Committee (JFMC) was formed in 2009. In this line, first forest plantation was done in 134 hectares plot of land in 2009. After that in 2015, second forest plantation was initiated in the village in 60 hectares plot.

Learning:

- The village was established to overcome the land shortage in the neighbouring village.
- After the formation of 1st self-help group in 2006, the villagers initiated some kind of social activities like establishment of community hall (in 2012) and Anganwadi Centre (2009-10), formation of JFMC(2009) etc.
- After the community clash in 1996, the villagers are now more aware about such events as it causes huge lost to the people of the villagers.

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.

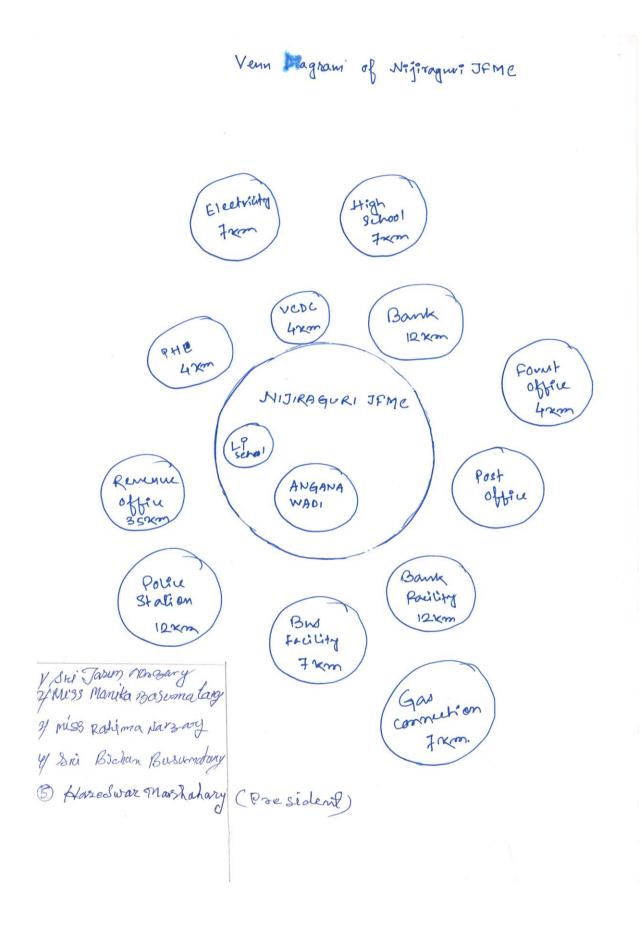
Seasonal mapping mainly covers the seasonal variation of crops. In seasonal mapping, we considered agricultural crops and the timing of three activities viz. showing, cropping and harvesting criteria and collected the details throughout the year. From the seasonal mapping, it has been noticed that the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

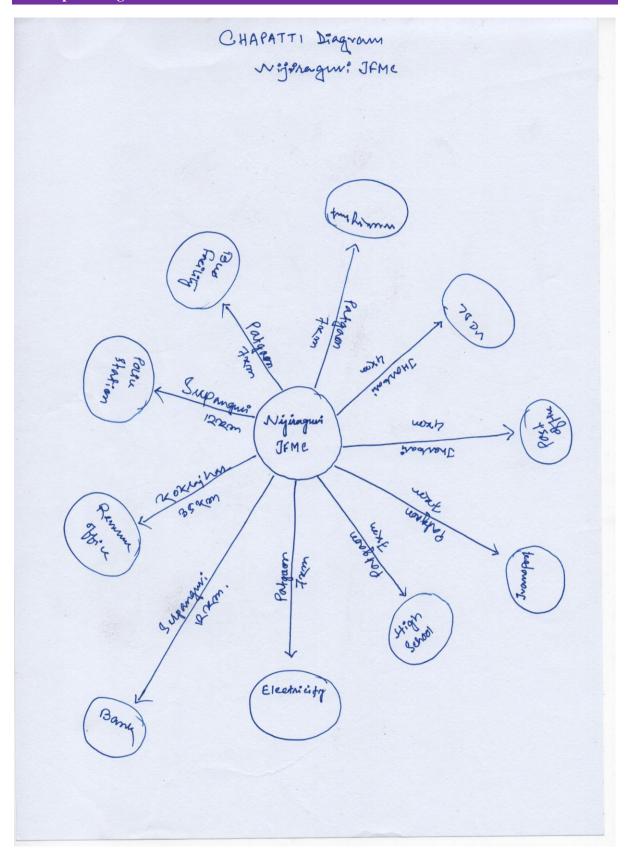
SEASONAL MAPPING OF NIJIRAGURI JFMC September

Figure 3.2: Seasonal Map of Nijiraguri JFMC

Table 3.4 Seasonal cropping pattern

Categories		Time	of Activity				
ਸ ਬ		Sowing	Harvesting	Plucking			
Farming	Sali	May-June	July-Aug	Oct-Nov			
ng S	Betel-Nut	May-June	Jan-Feb	July-Dec			
	Mustard	Oct-Nov	Oct-Nov	Jan-Feb			
	Maize	April		Aug-Sep			
	Turmeric	April-May	Oct-Dec	June-Sep			
	Jute	March-April		July			
	Ginger	April-May	Oct-Dec	June-Sep			
	Sericulture		ear				
Z	Weaving						
Non-Farming	Livestock						
Far	Rearing						
Ë.	Daily Wage						
ng G	Earning	Throughout the year					
	Shop-keeper						
	Masonry						
	Electrician	7					
	Tailoring						





Priority Ranking-Livelihood and EPA

25 4 5		
Priority	Kanking-	Livelihood

Livelihoo Activities		E Handloom	(E) Livestock	(i) Horticulture	Food Processing	E Driving	(F) Tailoring	© Masonry	E Carpentry	E Cane & Bamboo	Marks	Rank
Handloom	(A)	X	В	C	A	A	A	A	A	A	6	1
Livestock	(B)	x	X	В	В	E	В	G	H	В	5	3
Horticulture	(C)	X	x	x	D	C	C	C	C	C	6	1
Food Processing	(D)	x	x	x	x	Е	D	G	D	D	4	5
Driving	(E)	x	x	x	x	X	I	E	E	E	5	3
Tailoring	(F)	X	x	x	x	X	X	G	Н	F	1	9
Masonry	(G)	X	x	x	x	X	x	x	G	I	4	5
Carpentry	(H)	X	X	X	x	X	X	X	X	Н	3	7
Cane & Bamboo	(I)	x	x	x	x	x	x	x	x	x	2	8

Priority Ranking EPA

Entry Point Activ	ities	Road	Sanitation	School	Drinking Water	Electricity	Community Health Centre	JFMC Office	Market Shed	Community	Marks	Rank
		(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)		
Road Connectivity	(A)	X	A	A	A	A	A	A	A	A	8	1
Sanitation	(B)	X	X	C	D	E	В	В	В	В	4	5
School	(C)	X	X	X	D	E	C	C	C	C	5	4
Drinking Water	(D)	X	X	X	X	D	D	D	D	D	7	2
Electricity	(E)	X	X	X	X	X	E	E	E	E	6	3
Community Health Centre	(F)	X	X	x	X	х	X	G	Н	F	1	8
JFMC Office	(G)	X	X	X	X	X	X	X	G	G	3	6
Market Shed	(H)	X	X	X	X	X	X	X	X	Н	2	7
Community Hall	(I)	X	X	X	X	X	X	X	X	X	0	9

ignature Obei Jarun Nanzany @ miss Ratima Narsary

@ sni Bishon Busumdan & Sni HuseSwar Markahany (president

@ Miss Maneka Basonnatany

Annexure IV

PHOTOGRAPHS



PRA ACTIVITY



COMPLETION OF SOCIAL MAPPING



A SNAP WITH THE VILLAGERS



GPS CORDINATES COLLECTION BY THE TEAM MEMBERS



TRANACT WALK WITH THE VILLAGERS



A PRIVATE BAMBOO GARDEN

Annexure V

LIST OF JFMC MEMBERS

RECORD 7: MEMBERSHIP REGISTER

Name of JFMC

Division

Range

Beat

JFMC Code

Sr. No.	Name	Father's / Husband's name	Age	Male / Female	Education	SC/ST / BC/OBC
1	Harrhwar	1	48	M	lχ	ST
2	Barnmatary		49	M	X	ST
3	Thengena Navesary		45	M	VIII	ST
4	Bichan			M	Ví	12
5	Ranjet		41	M	_	57

6. Sangel Berum. (30) 2. Rameda musalione 8. Indina Barun.

W-8 8-2

Annexure VI (Record I)

Table 1: Basic data of the village:

Table 1: Basic data of the JFMC

Slno	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
	Nijiraguri	2009	10	Harereswar Musahary	Naresh Basumatary					

Table 2: Village wise population data:

Table -2: Demographic status of the project villages

Sl. No.	Name of village	Households (No.)	ST		Sex ratio (per 1000 male)	Avg. HH size	
110.		(140.)	Total	Male	Female	(per 1000 maie)	SIZC
1	Nijiraguri	33	166	80	86	1,075	5.03
2	Didanpuri	13	67	32	35	1094	5.15
	Total	46	233	112	121	1,080	5.06

Source: - Field survey report.

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

Table3 Village wise farmer category on the basis of land holding

Sl no	Name of the village	Type of famer according to land holding						
		Large farmer >10 ha.	small farmer 2-10 ha.	Marginal farmer (household) <2ha.	Land less (household)	total		
1	Nijiraguri	-	-	26	7	33		
2	Didanpuri	-	-	11	2	13		
	Total	-	-	37	9	46		

Table 4: Cattle Population:

Table 4: Cattle Population of the JFMC

Sl	Name of the	village wis	village wise no of cattles or type of animal							
no	village	cows	buffaloes	goat	Sheep	bulls	camels	pig	total	
1	Nijiraguri	53	6	51	-	2	-	36	148	
2	Didanpuri	16	0	15	-	-	-	5	54	
	Total	69	6	66	-	2	-	41	202	

Table 5: Village wise Infrastructure:

Table 5 showing village wise infrastructure

Sl no	Infrastructure	Location	Distance from village	
1	Electricity	Patgaon	7km	
2	Gas connection	Patgaon	7km	
3	Transport	Patgaon	7km	
4	PHE	Jharbari	4km	
5	LP school	Haldibari	1km	
6	High school	Patgaon	7km	
7	Post office	Jharbari	4km	
8	Bank	Serpanguri	12km	
9	Anganawadi centre	Inside		
10	VCDC	Jharbari	4km	
11	Revenue Office	Kokrajhar	30km	
12	Police station	Serpanguri	12km	
13	Forest Office	Jharbari	4km	
14	Post office	Jharbari	4km	
15	Bus facility	Patgaon	7km	
16	Railway Station	Kokrajhar	30km	
17	District head quarter	Kokrajhar	30km	

Table 6: Agricultural crops

Table 6 Agriculture Crops

	Rain Fed		Irrigation		
	Name of the crop	Area (in ha.)	Name of the crop	Area (in hac)	
Kharif	Sali rice	40	NA		
Rabi	Mustard	4	NA		
Others	Vegetable, Fruits	9.3	NA		

Table 7: Crop production profile of NIJIRAGURI JFMC:

Table 7 Crop production profile of NIJIRAGURI JFMC

Type of crop	Total Production (approx) in quintals	No of household growing	Average production (quintal/ hac) approx	Area under crop (hac) approx
Paddy	840	42	21	40
Oil seeds	6	16	1.5	4
Vegetable	6.7	46	1	6.7
Fruits	2.6	46	1	2.6

Table 8: Fodder Availability (animal)

Table 8 fodder availability of the JFMC

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

Table 9: Location of market from the village

Table 9 Location of market from the village

For Purchase	Location	Distance from village if in other village (in km)
Grocery shop	Patgaon	7 km
Weekly Market	Patgaon	7 km
Major Market	Patgaon	7 km
Forest Corporation Sale Depot.	NA	-
Tendu Patta PHAD	NA	-
Fish Market	Patgaon	7 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	1	Seasonal	Irrigation, livestock
			rearing
Stream	1	Seasonal	Irrigation, livestock
			rearing
Tube well	12	Perennial	Domestic use
River	1	Seasonal	All type of use
Community ring well	-	-	-

Table 11: Energy consumption:

Table11 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	46	12	Forest	Major
Kerosene stove	10-15	12	Market	Secondary
Gobar/Bio gas	NA	-	-	-
LPG	NA	-	-	-
Electric Healer	NA	-	-	-

Additional table :

(i) Literacy Status

The literacy rate of the project villages is 72.10% per cent which is found lower than state average (74.04%) and represents a poor status .

Table –Status of literate person in the JFMC

Sl. No.	Name of village	Households (No.)	Population (No.)			Total Literates	
			Total	Age group (0 – 4 yrs)	Excluding Age group		(in %)
1	Nijiraguri	33	166	60	106	118	71.08
2	Didanpuri	13	67	23	44	52	77.61
	Total	46	233	83	150	170	73.08

Source: - Field survey report.

Table: classification of educational status

Sl no	Categories	Percentage
1	Illiterate	26.92
2	Up to ME	46.15
3	Class VIII to class X	9.61
4	Cass X to XII	5.76
5	Graduate	.82
6	Children	10.50
	Total	100

Source: field survey report

(ii) Human resource profile

Table 2.B Status of workforce in the project villages.

Sl.	Name of Village	Work Force				
No.		Total	Cultivator	Livestock	Service	Wage- Labour
1	Nijiraguri	95	61	33	-	15
2	Didanpuri	40	24	16	-	10
	Total	135	85	49	-	25

Source: - Field survey report.

(iii) Income status and sources

The baseline survey information reveals that most of the farmers are marginal farmers with not more than an annual income of about Rs. 10,000 /- to 15,000/- year (12.5 approx..) in each of the project villages. The main activities of the community are reported to be agriculture, livestock and horticulture.

RECORD: II LIVELIHOOD OPPORTUNITY ANALYSIS

Table 12: Agriculture and Horticulture:

Table 12: showing the agricultural and horticultural status

Constraints	Reason	Opportunities	Programme
Low Production	 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 viz, power tillers, tractors etc. Non usages of high yielding seeds. 	 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. 	 Tractor operation training Agri-skill development programme. Training on insecticides, pesticides, hybrid cultivation
Storage and Production	 Lack of common storing place Lack of cold storage facility due to non-availability of electricity 	 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. 	PackagingTransportation and distribution.

Marketing	 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. 	 Smooth transportation facility will help the farmers to carry their products to the nearby markets. Generate highest market price by removing middle men. More knowledge about the current market situation as well as the current value of their products. They can sell their products outside of the state, as the JFMC is located in Assam West Bengal border and Bhutan border is also not far from it. 	Buyers sellers meet
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Table 13: Livestock

Table 13 Livestock

Constraints	Reasons	Opportunities	Programme
Less grazing land	Not Applicable		
Availability of fodder	 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. 	 Higher income from livestock rearing. The villagers can make it as an alternative livelihood opportunity if they have the easy access of livestock fodder. 	
Veterinary care facility	 No veterinary care clinic Lack of knowledge about the proper rearing of live stock 	 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	 Less availability of fodder No scientific knowledge on cattle rearing to increase the milk production. 	 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	Less contact with the direct market for milk	A huge demanded market for milk is available as	

Unaware of the market demand of different milk made products.	Kokrajhar district head quarter and West Bengal	
	state is too far from the JFMC.	

Table 13: NWFP

Table 14 NWFP

Constraints	Reasons	Opportunities	Programme
Less collection	Less availability of	Availability of fertile	Plantation of Food
	NWFP	fallow land	plans, Medicinal Plant
			etc.
Unsustainable	• NA	Availability of	•
extraction		fertile fallow land	
Low rates	• NA	•	•
Value addition	No processing units	•	•
	Non availability of		
	required resources		
	No technical know-how		

Table 15: Specialised skill

Table 15: Specialised skills: Handloom

Constraints	Reasons	Opportunities Programme		
Raw material availability	 Non-Availability of Raw Materials within reachable location (market 7km away) No Storage 	Common place for setting a raw material storage	Setting up a raw material bank	
Product quality	 Shortage of High Quality Materials Use of Traditional machineries 	Developing Quality Products for new market exploration.	 Training on Modern Tools and Equipment. Providing modern technology to the villagers 	
Marketing potential	 No standardised market No pricing policy No linkage with the institutional buyers No Product Diversification or New Product Development. 	Exploring new markets with diversified products	Providing a bulk buy arrangement of the finished product with institutional buyers.	
Credit facilities	 No linkage with the banks or post office saving banks. Unaware of the development schemes of banks and government 	 Financial assistance by the Govt. Providing easy access to credit. 	Microfinance, Term Loans, Working Capital Arrangement	
Product Diversification	 No Product Diversification or New Product Development. Lack of concept for product 	Developing Demand Based Products, as per the needs of the	Skill Upgradation & Training on New Product Development and	

diversification.	modern day	Product
	market.	Diversification

Table 16: Credit facility

Table 16 Credit facility

Constraints	Reason	Opportunities	Programme
Indebtness	Nil	Setting up modern financial institution in the nearby areas.	
Rate of interest	Higher lending rates charged by the private money lender	Subsidised credit arrangement	
Availability of loan	Fear of risk takingNo knowledge of documentation	Start-ups entrepreneurial venture	
Mortgage difficulty	Unavailability of proper documentation of mortgaged property.	Proper awareness about documentation in the area	

Annexure VII

List of Beneficiaries identified for livelihood Generation activities

1) Mixed Livestock

Trade:	MIXED LIVESTOCK							
Location :	NIJIRAGURI	NIJIRAGURI (MIXED LIVESTOCK)						
Start Date	24/08/16							
End								
Date	9/9/2016							
Master Trainer	DR.MRINMOY KALITA &DR.RITUBAHA DUR LAMA							
SL.NO	Name of Participants	Guardian Name	Address	Qualifica tion	Ag e	Ge nd er	Cate gory	Conta
1	MANIKA BASUMATARY	MEBLA BASUMATRY	NIJIRA GURI	х	22	F	ST	N
2	RATIMA NARZARY	THENGWNA NARZARY	NIJIRA GURI	IX	20	F	ST	N
3	MANARANJAN BASUMATARY	MEBLA BASUMATARY	NIJIRA GURI	HS	20	M	ST	N
4	BITHWN BASUMATARY	RAHEN BASUMATRY	NIJIRA GURI	HSLC PASSED	19	М	ST	N
5	DANSWRANG BASUMATARY	SACHIN BASUMATARY	NIJIRA GURI	IX	19	М	ST	N
6	ALANGBAR BASUMATARY	BHARAT BASUMATARY	NIJIRA GURI	х	20	М	ST	N
7	GABINDO BRAHMA	RAMAN BRAHMA	NIJIRA GURI	VIII	22	М	ST	N
8	RUPALI NARZARY	NIREN NARZARY	NIJIRA GURI	IX	21	F	ST	N
9 .	DAOHARU NARZARY	DURJYA NARZARY	NIJIRA GURI	IX	15	М	ST	80119° 6883
10	TARUN NARZARY	PHANIN NARZARY	NIJIRA GURI	HSLC PASSED	32	М	ST	80116 5339
11	KANUN MUSHAHARY	HARESWAR MASHAHARY	NIJIRA GURI	MA	24	М	ST	881283 0157
12	BICHAN BASUMATARY	RATEN BASUMATARY	NIJIRA GURI	IX	28	М	ST	N
13	PAGUNA BASUMATARY	SAHILAL BASUMATARY	NIJIRA GURI	v	30	М	ST	N
14	KUMAR NARZARY	THENGWNA NARZARY	NIJIRA GURI	HSLC PASSED	19	М	ST	985434 6008
15	SUNIRAM BASUMATARY	KANTO BASUMATARY	NIJIRA GURI	х	26	М	ST	N
16	RATAN GAYARY	SANKAR GAYARY	NIJIRA GURI	v	36	М	ST	N
17	NAMALA BASUMATARY	SAKRAJIT BASUMATARY	NIJIRA GURI	IV	28	F	ST	N
18	NIROKUMA BASUMATARY	SANJIB BASUMATARY	NIJIRA GURI	Ш	32	F	ST	N
19	HARESWAR MUSHAHARY	LT KALICHARAN MUSHAHARY	NIJIRA GURI	IX	48	М	ST	995739 7341
20	PRAMILA NARZARY	THENGWNA NARZARY	NIJIRA GURI	HSLC PASSED	18	F	ST	N

