



CONSERVATION



# NO. 2 BAPAPUNG ECO DEVELOPMENT COMMITTEE (EDC) DIGBOI FOREST DIVISION

# **MICRO-PLAN**

(2016-17 to 2025-26)

Prepared by No.2 Bapapung Eco Development Committee

> Assisted by Assam Forest Department & COMPELO (IIE & RGVN)

Divisional Forest Officer Digbol Division, Digbol Tinsukia, Assam

**June 2017** 

# 1. Introduction

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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 <i>Agence France de Développement</i> (AFD)- i.e. the French Development Agency, with co-funding from the Government of Assam. The Assam Projection 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	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.
&Livelihood	A consortium comprising of Indian Institute of Entrepreneurship (IIE) Guwahati, <i>Rashtriya Gramin Vikas Nidhi</i> (RGVN) and Centre for Microfinance & Livelihood (CML) has been formed to implement ( <i>inter-</i> alia) 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.
Development	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.

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Micro-Plan forthe2 No Bapapung EDC	This document gives the Micro-Plan for the 2 No Bapapung EDC, which is located in the Tinsukia district of Assam. The 2 No Bapapung EDC falls under the jurisdiction of the Digboi Forest Range under Digboi Forest Division. 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 Centre for Microfinance and Livelihood (CML) Guwahati in June2016.The micro-plan has been compiled by CML based on the project guidelines. The document has been discussed and finalized for adoption in July 2016.

# 2. Village Socio – Economic Profile

Location	The 2 No Bapapung (EDC) was formed comprising Four villages namely 2 No Bapapung, Kherjan, Bhimpathar, and Christainbasti. It is situated 5kms away from Digboi Forest Division and is located in Dibrugarh district of Assam. Nearest town of the village is Duliajan and the distance from 2 No Bapapung EDC to Duliajan is 5 km. District head quarter of the village is Tinsukia which is 27 km away. It falls under Magherita development block under Tinsukia district. <b>Appendix-1</b> gives the Village Map and GIS Map		
	The key information of the EDC is furnished below. <b>Table A</b> : <b>Key Information of the EDC</b>		
	N (4 550	2 No Bapapung Eco	
	Name of the EDC	Development Committee Golai	
	Name of the Gram Panchayat Block	Magharita	
	District	Dibrugarh	
Key	Forest Division	Digboi	
Information	Forest Range	Digboi	
Information	Forest Beat	Kharjan	
	Year of formation	2015-16	
		North:Nizirating	
	Description of Decedery of	South:Digboi	
	Description of Boundary of EDC	East:uperdhing reserve forest West:oirawat paddy field	
	Total Households	200	
	Number of EDC Villages	4	
		e-1 of Record-I (Given as annexure)	
Brief Details of the	The brief details of the Executive		
Executive Committee &	of the EDC are contained in the	table, which is given below:	
General Body	Table B: Brief details of the Executive Committee& General         Body		
	Name of President	Mr. Hemanta Buragohain	
	Name of Secretary	Mr. Arun Kr. Hazarika	
	No. of Members in Executive Committee	11 Male: 7 Female: 4	

	Source: EDC Records			
Household and Population Structure	The EDC has Four villages namely 2 No Bapapung, Kherjan, Bhimpathar & Christainbasti with a total households of 200 and the total population of 657.			
	The total male population stands at 370 whereas the total female population is 287. Hindu is the dominant religion of the EDC and residing communities are Sonowal Kachari, Boro, Ahom ,Singhphu and Adivasi.			
	Almost 90% of the total population belongs to OBC category and rest are ST and others.			
	The average size of the households is 5 and the sex ratio is 776 females per 1000 males in the EDC villages.			
	As per the household survey conducted, 84% of the households are BPL and 82% possess Government ration cards.			
	27 villagers possess MGNREGA job card.			
	Table-2 of Record-I may be referred for further details.			
Education & Skills Development	The total literacy rate of the EDC villages is 67%. Most of the villagers have attained school education upto standard IV. Only a mere 7% of the total population have passed Higher Secondary.			
	The literacy rate of Bapapung village at 75.13% is better than the 2 No Bhimpathar, Kherjan & christainbasti village.			
	Table-3 of Record-I may be referred for further details.			
	In the 2 No Bapapung EDC villages, the villagers are traditionally skilled in followingareas:			
	<ul> <li>Agriculture - 134 households are engaged</li> <li>Handicraft -35 households are engaged</li> <li>Weaving - 82 households are engaged</li> <li>Daily wage Labour – 18 households are engaged</li> <li>Carpentry- 6 households are engaged</li> <li>Source: Field survey</li> </ul>			
Soil	The Study has found different types of soil in 2 No Bapapung EDC villages. There are three types of soil available: sandy loam, loam and clayey loam in 2 No Bapapung EDC villages. These favour the cultivation of winter rice, mustard, pea, vegetables, etc. Of the total area, 82.0 percent is arable, 7.0 percent is non arable land and 11.0 percent is not available for cultivation.			
	The soils of this area may be classified into following classes			
	a) Recent riverine alluvial soils (Antisol)			

	b) Old riverine alluvial soils (Inceptisol)		
Water	Ground water is the main source of drinking water. Community consultation revealed that adequacy and quality is not a problem in case for drinking water. Good quality water is available to the villagers around the year. Villages where river or stream present, people also use this for their domestic purpose.		
	Digboi river which flows through the EDC is home to several species of fishes like rohu, grass-carp, cat-fish etc.		
Climate, Temperature & Rainfall	Highest temperature is generally observed in the months of July/August (35°C) and lowest is in the months of December/January (7-8°C).		
	Humidity is the morning hour's ranges from 90-95% and 50-70% in the afternoon hours. Wind speed ranges generally from 30-60km/hour.		
	The climate of the region is sub-tropical wet and is characterized by hot and humid summer and dry cool winter.		
	The 2 No Bapapung EDC experiences 2300 to 3000 mm rainfall per year. It is observed that on an average 64 to 68% of annual rainfall is received during the monsoon period (June-September) and 22-26% of annual rainfall during pre-monsoon period (March-May).		
Forest & Bio-diversity	The local forests have been broadly classified as- Tropical Wet Evergreen and Tropical Semi-Evergreen.		
	The 2 No Bapapung EDC forest is enriched with tree species like- Lagerstroemia speciosa (Ajhar), Mansoniadipikae (Badam), Morns laevigata (Bola), Biscofiarnmnica (Uriam), Cordial dichotoma (Bual), Bombaxceiba (Simalu), Lagerstroemia parviflora (Sida), Delonixresia (Radhasura), Canariumbenealensis& C resiniferum ( Dhuna, Dhup), Ficushispida (Dimoru), Premnabengalensis (Gohra), Caeslpimapulcherima		
	(Krishnasura), Tetramelesmdiflora (Bheleu), and Tactonasrandis (Segun).		
	A wide variety of plants and animals is available in 2 No Bapapung EDC villages, that can easily attract tourists, and thus there is a high possibility for the development of ecotourism in this area. In the rain forest, there are a number of rare plants and animals. A large number of species of orchids, butterflies, birds and wild cats are the attractions of the forest which cannot be found in any other rain forests.		

Land-use Pattern	The cropping system is diversified depending upon soil, microclimate condition and socio-economic status		
	<ul> <li>Land under agricultu</li> <li>Land under non-agri</li> <li>Cultivable wasteland</li> <li>Land under Misc. tre</li> <li>Barren and uncultiva</li> </ul>	cultural use: <b>24</b> % l: <b>14 %</b> e crops and grov	
Land Holdings	The land-holding pattern of	of the EDC can d	le depicted as below:
	Homestead land: 95% of lands.	the total house	holds have homestead
	Farm land: 66% of the tot	tal households h	ave farm lands
	Wasteland: 5.44% of the	total households	s have waste lands
	<b>Share-cropping:</b> Almost 9 % of the total households are practicing share-cropping		
	Land lease: 9% of the total households have taken land on lease.		
	The details of the land-holding pattern is provided at <b>Table 4 of Record-I</b>		
Livestock	The total numbers of livestock in the EDCvillages are - cows, bulls, buffaloes, duck, local poultry, pigs and goats.The details of the livestock reared are provided as below:		
	Cow	206	
	Bull	258	
	Buffalo	65	
	Duck	430	
	Local poultry	597	
	Pig	160	
	Goat	400	
	Table 5of Record-I can be referred for details on the above.		
Village Infrastructure & Communication Facilities	The infrastructures which are available in the villages can be categorized under the following heads:		
	1. Physical Infrastructur	re: The housel	holds have the basic

	<ul> <li>amenities including electricity, mobile phones, cycles and motorbikes for communication purposes. Almost 67% of the households have access to electricity. The road to the EDC from Digboi through Ramnagaris a motorable condition but requires repair. There are three approach roads to reach the EDC namely DigboiPangary road, PNGB road and Bogapani estate road. The nearest market is located at Digboi.</li> <li><b>2. Education and Health facilities:</b> Education and health facilities include Four primary schools, sixanganwadicenters, one Public Health Centre at 2no Bapapung. The are two ME school and 2 high school. For medical emergencies and regular checkup, people mostly refer to Oil India Hospital located at Digboi.</li> </ul>
	<b>3. Govt. Offices:</b> The Government offices and line departments which are existing at a reasonable distance from the EDC are Panchayat office, Revenue office, local police station, Forest beat office and range office.
	<b>4. Financial Institutions:</b> There are banks and post offices which are present in the area but they are at a considerable distance of at an average distance of 3-5 kms from the villages.
	Details of infrastructures are given in <b>Table 6</b> of <b>Record I</b>
Agriculture Crops&Crop Production Profile	The principle cultivated crops grown in the EDC villages is: Kharif: Paddy (Sali)& tea Cultivation Almost 80% of the households cultivate paddy with an average harvest of 1233.54 kilograms. The average investment made by a farmer for paddy cultivation is INR 3475.
	It was also seen that there is no irrigation facility in the farm lands and 100% of the farm land under paddy cultivation is rain-fed.
	The field survey has not reported cultivation of seasonal vegetables and fruits which clearly indicates that most of the farmers go for a single crop in their farm land.
	Table 7 of Record-I depicts the details on agriculture crops
Fodder Availability	The main sources of fodder are:
	<ol> <li>Collection from Forest</li> <li>Household kitchen waste</li> </ol>
	It is seen that almost 42% of the households let their livestock graze especially cow, bull and bullocks on forests and the peak

	season of forest grazing starts from June till December.		
	Table 8 of Record-I depicts the seasonality of grazing		
Markets	Themainmarketsusedby thecommunity and its distance from the EDC villagesarementioned below:		
	<ul> <li>The Grocery/ PDS shops are nearly 2- 3kmdistance from village at Digboi</li> <li>The Weekly/ Bi-weeklyMarket is nearly 3kmaway</li> <li>Major Market is at Digboi which is 3 km respectively from the EDC villages.</li> </ul>		
	Table 9 of Record-I depicts the seasonality of grazing.		
Water Resources	The main water resources within the EDC villages are as follows:		
	<ul> <li>(a) Tube-well:180 (Water availability: Perennial)</li> <li>(b) Ring Well: 4 (Water availability: Perennial)</li> <li>(c) River: 1(Water availability: Perennial)</li> <li>(d) Pond: 15(Water availability: Perennial)</li> </ul>		
	It has been observed that in most of the water sources, iron content has been found to be high.		
	Table 10 of Record-I depicts the availability of water resources		
Energy Consumption	The major sources of energy in the village have been listed below:		
	<ul> <li>Firewood: Households Depending: 120</li> <li>Source: Local forest area</li> <li>Average HH consumption of firewood: 303.10 kg</li> </ul>		
	<ul> <li>Kerosene: Households Depending: 131.</li> <li>Source:Local market.</li> <li>Average HH consumption of Kerosene: 4.19 litres</li> </ul>		
	<ul> <li>LPG:80</li> <li>Source: Local Gas Agency</li> <li>Average HH consumption of LPG: 1 cylinder/month</li> </ul>		
	Table 11 of Record-Idepicts the energy use of villagers		
	In case of household lighting, 30% of the households completely depend on kerosene lamp which clearly shows that poor penetration of electricity in the EDC villages. Again, 35% of the total households depend both on kerosene lamps and electric run bulbs for household lighting.		

Socio-Economic Status	<ul> <li>Social set-up: The population caste break-up is quite diverse in the EDC villages as there multiple communities inhabiting the villages namely Ahom, Adivasi and Sonowal Kachari.,Singhphu.</li> <li>Economic Condition: The overall economic condition of the villagers is not found to be satisfactory. The average household income has been found to be INR 27, 653 as per the field survey undertaken.</li> <li>If we compare the standard of living between the Adivasi community on one hand and the Ahom and SonowalKachari on the other, it is seen the socio-economic condition of the latter is</li> </ul>		
	much better than the former.		
Maps	<ul> <li>Appendix-1 gives the following maps, based on PRA exercise:</li> <li>Village Map (Resource and Social)</li> <li>GIS Map</li> <li>Wealth Ranking</li> </ul>		

# 3. Livelihood Opportunity Analysis

PRA Exercise	The CML team conducted the PRA exercise on 3 <sup>rd</sup> June, 2016 at 2 No Bapapung village in presence of representatives from both 2 No Bapapung and Bhimpathar, Kherjan & christainBasti villages, EDC President, Executive Committee Members and Personnel from Forest Department.		
Objectives of PRA	<ul> <li>The specific objectives of the exercise are to:</li> <li>(a) To understand the livelihood options existing within the region, its prevalence and challenges.</li> <li>(b) Better understand the credit needs of the poor and their coping mechanism. Examine the options, challenges, and opportunities for financial institutions interested in delivering financial services and</li> <li>(c) Identify existing livelihood support mechanisms and explore viable options of providing livelihood support services for increasing income and employment opportunities of the people.</li> </ul>		
Tools Used for PRA	<ul> <li>The tools applied for PRA are given as below:</li> <li>Focus Group Discussion (FGD)</li> <li>Seasonality Analysis</li> <li>Social and Resource Mapping</li> </ul> Appendix-2 furnishes the details on the above		
Ranking	<ul> <li>Ranking exercise has been conducted for the following: <ul> <li>Livelihood &amp; Skills Development</li> <li>Entry Point Activities (EPA)</li> </ul> </li> <li>Appendix-2 elaborates the above.</li> <li>Ranking of Livelihood &amp; Skills Development: <ul> <li>Bamboo Craft</li> <li>Livestock Rearing</li> <li>Eco-Tourism</li> </ul> </li> <li>Ranking of EPAs</li> </ul>		

	Rank	Village EPA as Ranked	Details (Appendix-2 Additional Particular)	Probable source of funding/Deptt.
	1	LPG connection	Connection to BPL families	
	2	Electricity/Solar Lighting solution	Connection to BPL families	
	3	Veterinary Extension Services	Establish al- least one vet care to promote the livestock activity	Dept. Veterinary (Assam)
	4	Road Connectivity	Black Topping Road	PMGSY/PWD
	5	Skill Training School	Up-gradating the existing skills	NSDC
Livelihood Opportunities	<ul> <li>Bamb</li> <li>Lives</li> <li>for re</li> <li>Eco-<sup>-</sup></li> </ul>	aring of local poul Fourism	gery and develo ltry)	opment of Cluster
Bamboo Craft	<ul> <li>The main constraints towards promotion of bamboo craft as a potential livelihood option are:</li> <li>Lack of design development</li> <li>Lack of knowledge on market and pricing</li> <li>Poor infrastructure</li> <li>Lack of mechanization- more use of traditional tools and equipment</li> </ul>			
	Some of the possible interventions in the promotion of bamboo craft sub-sector are as follows:			
	<ul> <li>Basic skills-development training on bamboo craft which can be again upgraded for advanced-level training on bamboo craft making</li> <li>Introduction of specialized tools for enhancing production</li> <li>Training on entrepreneurship and business orientation</li> </ul>			
	Table-12 und	ler <b>Record-II</b> cab	be referred for	details

Livestock Rearing	The main constraints towards promotion of livestock rearing as a potential livelihood option are:			
	<ul> <li>Outbreak of diseases</li> <li>Lack of knowledge on scientific method of livestock rearing</li> <li>Lack of initial investment on the part of the villagers</li> <li>Unavailability of quality feed - nutrients and other sources of fattening and growth.</li> </ul>			
	Some of the possible interventions in the promotion of livestock rearing sub-sector are as follows:			
	<ul> <li>Specialized training on livestock rearing and para-vet professional</li> <li>Setting up of a community/EDC run agro-veterinary care centre</li> <li>Training on entrepreneurship and business orientation</li> </ul>			
	Table-13 under Record-II cab be referred for details			
Eco-Tourism	The main constraints towards promotion of eco-tourism as a potential livelihood option are:			
	<ul> <li>Inadequate infrastructure - proper roads, electricity etc.</li> <li>Non-availability of tourist guides in the circuit</li> <li>Unawareness on the part of the villagers about the concept of eco-tourism</li> </ul>			
	Some of the possible interventions in the promotion of eco- tourism are as follows:			
	<ul> <li>Basic skills-development training on tourism and hospitality for the unemployed youth of the EDC which can be again upgraded for advanced-level training on specialized tourist guides and support.</li> <li>Promotion of eco-tourism by establishing camps for tourist stay</li> <li>Training on entrepreneurship and business orientation</li> </ul>			
	Table-14 under Record-II cab be referred for details			
Credit Facility	The main constraints with regard to credit facility in the EDC are as follows:			
	<ul> <li>High rate of interest charged by the unorganized village money lenders</li> <li>Reluctance on the part of the financial institutions to provide loans to interested borrowers</li> </ul>			

	Some possible interventions in order to foster better credit facilities among the villagers may be follows:
	<ul> <li>Facilitating bank linkage program on a regular basis</li> <li>Penetration of Microfinance institutions into the area</li> <li>Promotion of SHGs or village level institutions</li> </ul> <b>Table-15</b> under <b>Record-II</b> can be referred for details
Strategic Interventions	<ul> <li>Some of the strategic interventions for the above mentioned livelihood opportunities are as follows:</li> <li>Bamboo Craft:</li> <li>✓ Basic skills-development training on bamboo craft which can be again upgraded for advanced-level training on bamboo craft making</li> <li>✓ Introduction of specialized tools for enhancing production</li> <li>✓ Training on entrepreneurship and business orientation</li> </ul>
	<ul> <li>Livestock Rearing:</li> <li>✓ Specialized training on livestock rearing and para-vet professional</li> <li>✓ Setting up of a community/EDC run agro-veterinary care centre</li> <li>✓ Training on entrepreneurship and business orientation</li> </ul>
	<ul> <li>Eco-Tourism:</li> <li>✓ Basic skills-development training on tourism and hospitality for the unemployed youth of the EDC which can be again upgraded for advanced-level training on specialized tourist guides and support.</li> <li>✓ Promotion of eco-tourism by establishing camps for tourist stay</li> <li>✓ Training on entrepreneurship and business orientation</li> </ul>
	<ul> <li>Credit Facility:</li> <li>✓ Facilitating bank linkage program on a regular basis</li> <li>✓ Penetration of Microfinance institutions into the area</li> <li>✓ Promotion of SHGs or village level institutions</li> </ul>

## 4. Livelihood Development Plan

Income Generating activities	The main income generating activities as planned for the EDC villages are as:
	Farm Sector:
	<ul> <li>Promotion of livestock cluster (Piggery and local poultry)</li> </ul>
	Non-Farm Sector:
	<ul> <li>Promotion of bamboo craft cluster with special focus on household utility items</li> <li>Promotion of eco-tourism circuit</li> </ul>
	Source: Table 32 of Record-IV
SHG Activities	SHGs can play a very pivotal role in harnessing the social capital of the EDC by taking up the following activities:
	<ul> <li>To generate awareness on importance of skill development and entrepreneurship among the villagers</li> </ul>
	<ul> <li>To promote Village Organizations (VO) through formation of multiple SHGs</li> </ul>
	<ul> <li>Promotion of micro-enterprises with focused livelihood interventions among the SHGs thereby creating a cluster of specialized interventions in the EDC villages.</li> </ul>
	<ul> <li>To also play as an agent to check social evils available within the villages</li> </ul>
	Source: Table 33 of Record-IV
Exposure Trips	exposure trips are required with in the state
	Source: Table 34 of Record-IV
Summary of Action Plan	Attached in the subsequent pages of the plan
Convergence	The planned initiatives have a lot of possibilities to invite convergence from multiple stakeholders including Government and Private players:
	<ul> <li>National Bamboo Mission</li> <li>Department of Industries &amp; Commerce, Govt. of Assam</li> <li>All India Artisan and Craftworkers Welfare Association (ALACA)</li> </ul>
	<ul><li>(AIACA)</li><li>Assam Tourism Development Corporation Ltd.</li></ul>

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<ul> <li>Directorate of Tourism, Govt. of Assam</li> <li>The National Smallholder Poultry Development Trust (NSPDT)</li> <li>Indian Council of Agricultural Research: National Research Centre on Pig, Guwahati</li> <li>Indian Oil Corporation Limited (IOCL)</li> <li>Coal India Limited (CIL)</li> <li>National Livelihood Mission</li> </ul>
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# 5. Action Plan

# Action Plan of 2 No Bapapung EDC

SI.	Activity	Numbers	Method					
No.	uticinatory Micro Dispusing							
	articipatory Micro Planning							
1	Preparation of Micro Plan	1	PRA, Baseline Survey					
B (	B. Organize Producers and Build Entrepreneurial and Technical Capacities (Capacity							
Build			encuriar and recrimear capacities (capacity					
1	Awareness Build-up Programme	1	Awareness Programme					
B1		Training or	n Skill development					
1	Skill Development Training Programme in Bamboo craft	1	Conducting Training on skill development in Bamboo craft (200 hours)					
2	Skill Development Training Programme in Livestock Rearing	1	Conducting training on Livestock rearing and development of Para Professional (20 days)					
3	Training on Promotion of Eco-Tourism	1	Conducting training on Eco-tourism development (for 30 days)					
4	Training on Entrepreneurship Orientation	1	Entrepreneurship Orientation programme (30 days)					
0.0								
C. So 1	ocial Mobilization Awareness generation		4 days awareness camp on formation of collective					
	camp on Formation of collective units (e.g. SHGs, Societies, NGOs, Bodies, Producers Companies)		units through cooperative experts					
2	Hand Holding guidance support and linkage promotion programme for self-employment and placement		Hand holding support from agencies experts throughout the year up to march 2017					
	alua Chain Improvoment							
D. Va D1	alue Chain Improvement Product improvement Thro	ough Value C	hain Improvement					
1	Value Chain Improvement	1	7 days Training on processing activities					
B2	in Bamboo craft	Supply	of modern tools					
1	Supply of modern tools kits	3uppiy	supply of modern tools					
	for artisans							
2	Rearing Tools	20						
B3	Improved Production and Processing Capacity							
E C	upport for Access to Market							
	upport for Access to Market	1	Oresting relations for house 1 1 1					
D1	Linkage with institutional buyers and/or govt.	2	Creating platform for buyers' and sellers' interactions					

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	Organizations. (throughout the year)		(5 days)
D2	Setting Up Ban Bazar	Throughout the year	Linkage through van bazaar
D3	Trade Fair & Exhibition Participation	1	Participation in one exhibition and Fair through forest department
D4	Access To Other Geographical Markets	1	Exposure visit
D5	Publicity through E-portal, brochure, catalogue etc.	1	2 day training and awareness programme taken by marketing experts

## 6. 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 2 No Bapapung. The objective of the plan is to provide for the sustenance of the conservation and bio-diversity values, environmental functions and productive potential of the forests assigned to the EDC; while meeting the consumption and livelihood needs of the community in a sustainable manner.

#### Status of the EDC Forests

The micro-plan takes into consideration the following categories of the 2 No Bapapung EDC Forests:

- (a) Forest areas assigned to the EDC 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 EDC forests is briefly discussed below.

#### Forests & Their Conditions

The details of the status of forest areas assigned to the EDC 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 2 No Bapapung have been summarized below.

Identification	Area of EDC Forest (Ha)	Distance from Village (Km)	Condition of Forest [Good - Forest with crown density of 40% of more Else 'Degraded']	Community [2-3 m / 3-6 m / 6-9 m /
(A) Assigned Forest		4 KM	Good area 10 ha degraded 20 ha	6-9
Along with the pheriphary area URDF (EB)	30 ha	-	Good area 10 ha degraded 20 ha	6-9
(B) Other Planted Area	-	-	-	-
To be allotted as per senction amount in due course of time	808 hact. (NR-606 hac. IP-202 hac.	-	-	6-9
TOTAL		4 KM	Good area 10 ha degraded 20 ha	6-9

#### Table-1: Conditions of the Forests of 2 No Bapapung EDC

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

It is seen that the 2 No Bapapung has 30 Ha under its forests, of which 10 Ha ( 33 %) is 'Good' (Crown density >40%) and the rest 20 ha is 'Degraded'.

## Forest Soil Type

The forests of 2 No Bapapung EDC are located in Margherita West. Some salient points of the forest soil type have been given in the following table.

	Soli Type in 2 No Bapapung EDC	1
Parameter	Status in Assigned Forests	Status in Other Planted Areas
Fertility Level	4.5 to 5 organic	NA
Soil Erosion Status	Accelerated erosion	NA
Presence of:		
(a) Silt	37.5 %	NA
(b) Mud-flat	26.4 %	NA
(c) Newly accreted land	23.10 %	NA
(d) Sand dune	13 %	NA

Table-2: Forest Soil Type in 2 No Bapapung EDC

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

For the 2 No Bapapung; the salient points of the forest soil type are summarized below:

- 1. Alluvium
- 2. Entisol
- 3. Alfisols

#### **Existing Composition of Flora**

In the forests of the 2 No Bapapung EDC, the existing composition of the flora has been given as follows. It may be noted that the local forests are classified as: Tropical Semi-Evergreen and Tropical Wet Evergreen

Parameter		Local Name(s)	Botanical Name(s)	
Major Species	Forest	Bhelkar Rain Tree Simolu, Velkor		
Associates		Bandordima Morhal Poma		

#### Table-3: Existing Composition of Flora in the 2 No Bapapung EDC

	Bhat ghila	
Shrubs	Putukola	
Children	Bagdhoka	
	Dighloti	
Medicinal Plants	Nefafu	
	Narahingha	
	Hatibhekuri	
Produces	-	
Others, if any	-	

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

## Other Inputs for the Forest Development Plan

The following sub-sections discuss the other inputs for the Forest Development Plan of the 2 No Bapapung EDC

### Past Protection Measures of the EDC

No measures have been taken by the 2 No Bapapung EDC for the forest protection in the past.

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

#### **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:

Name of Forest Produce	Average Household Requirement		How met	Source
	Frequency of Requirement	Approx. Qty	at Present	
Firewood	Whole year	80,000	-	Local
Timber for House	3-4 months	2000-2500 cft	-	Local
Small timber for Implements	Plantation time	100 cft	-	Local
Pole / Bamboo	Whole year	2000 pieces	-	Local
Fodder from Forest	Whole year	40000-60000	-	Local
NTFP	-	-	-	-
Other	-	-	-	-

Table-4 (A): Domestic Requirement of Forest Produce per Hous	ehold of the 2 No
Bapapung EDC	

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

There are 202 households in the 2 No Bapapung EDC. From the above table and this number of households, it is inferred that the total annual requirements of the two villages under 2 No Bapapung EDC for forest produce for own use is as follows:

Table-4 (B): Total Domestic Requirement of Forest Produce - All Households of the 2	No
Bapapung EDC	

Name of Forest Produce	Community Requirement (Kg per annum) (*)	Remarks
Firewood	80,000	-
Timber for House	2000-2500 cft	-
Small Timber for Implements	100 cft	-
Pole / Bamboo	2000 pieces	-
Fodder from Forest	40000-60000	-
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 <u>202</u> Households

## **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 2 No Bapapung EDC villages is given in the following table.

Table-5 (A): Collection & Marketing of Forest Produce by Villagers of th	e 2 No Bapapung
EDC	

Name of Forest	ame of Forest Collection for Marketing				
Produce	Season / Months	No of Households Collecting	Average Qty. Collected (Kg)	Collection	
Firewood	Whole year	180	3	Local	
Timber for House	Dec-Jan	180	2-3	Local	
Small timber for Implements	April-May	180	45	Local	
Bamboo	Dec-Jan	180	2000	Local	
Pole	winter	180	700	Local	
Fodder from Forest	Whole year	180	40000-60000	Local	
NTFP	-	-	-	-	
Other	-	-	-	-	

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

The community collect the above mentioned forest produces for their self-consumption. In the above connection, the following table gives additional pertinent information.

Table-5 (B): Collection	& Marketing	of Forest	Produce -	Additional	Information 2 No
Bapapung EDC	-				

Name of Forest Produce	Surplus Marketed (Kg)	How marketed	Average Income per HH from sale of Forest Produce
Firewood	NA	-	-
Timber for House	NA	-	-
Small timber for Implements	NA	-	-
Bamboo	NA	-	-
Pole	NA	-	-
Fodder from Forest	NA	-	-
NTFP	NA	-	-
Other	NA	-	-

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

### **Total Requirements of Forest Produce - Domestic Use & Marketing**

The total requirements of forest produce by the community members of the 2 No Bapapung EDC have been summarized below - based on the information in the previous sub-sections.

Name of Forest Produce	Community Requirement (Kg per annum) From Table-4(B)	Surplus Marketed (Kg) From Table- 5(B)	Total Requirements (Kg)
Firewood	80,000	NA	80,000
Timber for House	2000-2500 cft	NA	2000-2500 cft
Small timber for Implements	100 cft	NA	100 cft
Bamboo	2000	NA	2000
Pole	-	-	-
Fodder from Forest	40000-60000	NA	40000-60000
NTFP	-	-	-
Other	-	-	-

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

### **Forest Protection Issues**

### **Protection Problems**

The protection issues of the forests of 2 No Bapapung EDC have been summarized below.

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	No	No
Accidental Fires	No	No
Encroachment of Forest Lands	No	No
Others	No	No

#### Table-7: Protection Problems of the 2 No Bapapung EDC

**Source**: Proforma-3, Table-3.5 / Discussions with Forest Department personnel & Community members

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

- (a) The grazing animals destroy the crop during harvesting period.
- (b) Due to increase in population, land are encroached by the people.
- (c) Accidental fire and smuggling is another factor that is contributing in degradation of forest.

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

In the 2 No Bapapung EDC, the reasons for degradation of forest are as follows: (a) Increase of Population

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

#### **Components of the Forest Development Plan**

The following sub-sections discuss the main components of the Forest Development Plan of 2 No Bapapung EDC; viz. the plans for Protection, Forest Improvement (Treatment), Nursery Development, Maintenance and Miscellaneous Operations.

## **Protection Plan**

The Protection Plan given at below, discusses the measures for the protection of the forests of 2 No Bapapung EDC from the issues discussed earlier at Sub-section 3.1

Table-8: Protection Plan of the 2 No Bapapung EDC

Protection Work [to be filled from Table 3.7 of Proforma-3 as applicable]	Location in Forest Area	Quantificationofthe Measures[Length, Area, Sizeetc.]	Timing	Priority [High / Medium / Low]
Hiring of local Chowkidar	2 No Bapapung EDC	30 ha	Round the year	High
Bring awareness through camp regarding importance of forest for environmental balances	2 No Bapapung EDC	90 radius	Round the year	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 2 No Bapapung EDC

(with high / medium priority) are as follows:

- 1. Hiring of local Chowkidar should be given high priority. He can give regular monitoring within and nearby the EDC area.
- 2. Bringing awareness about environmental and eco-logical balances among the villagers

should also provide high priority. It can reduce the un-necessary cutting of forest trees.

## Types of Operations Proposed

The types of operations proposed for the treatment of degraded areas of the EDC Forest 2 No Bapapung EDC are given here under.

Treatment	Required	Responsibility	Month / Year	Extent of Area
	(Yes/ No)	of EDC (Yes / No)	when can be done	proposed for Treatment (Ha)
Restoration of Degraded Forests	Yes	Yes	Nov-Jan	50
Protection to Cut Stumps of Trees	Yes	Yes	Nov-Jan	50
Watershed Treatment	Yes	Yes	Nov-Jan	50
Water Reservoirs	Yes	Yes	Whole year	50
Grass & Silvi-pasture	Yes	Yes	Nov-Jan	50
Bamboo Plantation	No	No	-	-
Seed Sowing	No	No	-	-
Root & Shoot Cutting & Plantation	Yes	Yes	Nov-Jan	50

 Table-9: Types of Operations Proposed in the 2 No Bapapung EDC

Treatment	Required (Yes/ No)	Responsibility of EDC (Yes / No)	Month / Year when can be done	Extent of Area proposed for Treatment (Ha)
Cut Back & Coppice Treatment	Yes	Yes	Nov-Jan	50
Physical Fencing	No	No	-	-
Social Fencing	Yes	Yes	Nov-Jan	50
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 2 No Bapapung EDC:

### Forest Improvement Plan - Advance Works & Creation

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

Treatment	Area in Ha under Plantation Module	Priority for Block Plantation	Species	Spacing (metre x metre)
Assisted Natural Regeneration (with plantation in gap)	30	-	Bhelkar Rain Tree Simolu, Velkor	2*2
Block Plantation	-	-	-	-
Sowing of Neem, Amla, Mahua, Bahera (Medicinal Plants)	-	-	-	
Enrichment Plantation	-	-	-	
Direct Plantation	-	-	Bhelkar Rain Tree Simolu, Velkor	2*2
Other		-		
TOTAL AREA (in Ha)	30	-	-	-

#### Table-10: Forest Improvement Planned in the 2 No Bapapung EDC

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

### **Forest Improvement - Annual Targets**

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

Table-10 (A): Annual Targets of Forest Improvement in 2 No Bapapung EDC (Year-1 to Year-5)

Treatment	2016	2017	2018	2019	2020
Assisted Natural Regeneration (with plantation in gap)	30	60	90	120	150
Block Plantation					
Sowing of Neem, Amla, Mahua, Bahera (Medicinal Plants)					
Enrichment Plantation					
Direct Plantation					
Silvi-cultural Operations					
Intermediate Operations					

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

Table-10 (B): Annual Targets of Forest Improvement in 2 No Bapapung EDC (Year-6 to Year-10)

Treatment	2021	2022	2023	2024	2025
Assisted Natural Regeneration (with plantation in gap)	180	210	240	270	300
Block Plantation	-	-	-	-	-
Sowing of Neem, Amla, Mahua, Bahera (Medicinal Plants)	-	-	-	-	-
Enrichment Plantation	-	-	-	-	-
Direct Plantation	-	-	-	-	-
Silvi-cultural Operations	-	-	-	-	-
Intermediate Operations	-	-	-	-	-

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

## Nursery Development Plan

The Nursery Development Plan for the **2 No Bapapung EDC** depends on the following types of Nurseries:

(a) Site Nursery(2 No Bapapung EDC)

The details are given below.

## **EDC Nurseries**

The following table gives the details of the nurseries of the 2 No Bapapung EDC. This includes the Departmental Nursery involved in EDC works.

		Nul Selles Of the	2 No Dapapang		
Location	of	Species	Year of	Number of	Remarks
Nursery			Development	Seedlings	
Site Nursery 2 Bapapung EDC)	No	Velkor Ajhar Rain tree	2016-17	3000	Individuals will be assisted
		Velkor Ajhar Rain tree	2016-17	3000	Individuals will be assisted

Table-11 (A): Nurseries of the 2 No Bapapung EDC

**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 2 No Bapapung EDC.

Name of Nursery	Species	Year of Development	Number of Seedlings	Remarks
No	No	No	No	No
-	-	-	-	-
-	-	-	-	-

#### Table-11 (B): Other Nurseries near the 2 No Bapapung EDC

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

#### Maintenance Plan - 10 Years

The maintenance plan for plantations raised in the **2 No Bapapung EDC** is given below. This covers a period of ten years.

#### Timber Species: firewood (Velkor,Mojj,Ajhar)

### Table-12 (A): Maintenance Plan of Teak Plantation in the 2 No Bapapung EDC

Year(s)	Treatment
1 <sup>st</sup> Year	Weeding
2 <sup>nd</sup> Year	Removal of creepers
3 <sup>rd</sup> Year	Weeding in more effectively

Year(s)	Treatment
4 <sup>th</sup> to 6 <sup>th</sup> Year	Trimming up
7 <sup>th</sup> to 9 <sup>th</sup> Year	Pruning
10 <sup>th</sup> Year	Removal of side branches

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

## Bamboo

Treatment
Weeding
Removal of heavy weeds
Separation of culmps
Trimming of criss cross culms
Light pruning
Light pruning
Trimming
Removal of clumps

Source: Discussions with Forest Department personnel & Community members

## **Fuel wood Plantation**

Table-12 (C): Maintenanc	e Plan of	Fuel	Wood	Plantation	in	the	2 N	o Bapapung
EDC								

Year(s)	Treatment
1 <sup>st</sup> Year to 2 <sup>nd</sup> Year	Weeding and Ring formation around the seedlings
3 <sup>rd</sup> Year to 4 <sup>th</sup> Year	Removal of side branches
5 <sup>th</sup> Year	Weeding
6 <sup>th</sup> Year	Cutting of unwanted branches
7 <sup>th</sup> year	Cutting of unwanted branches
8 <sup>th</sup> Year	Weeding

Year(s)	Treatment
9 <sup>th</sup> Year	Pruning
10 <sup>th</sup> Year	Light pruning

Source: Discussions with -Forest Department personnel & Community members

## NTFP / Medicinal Plantation

Table-12 (D)	: Maintenanc	e Plan	of	NTFP	1	Medicinal	Plantation	in	the2	No
Bapapung E	DC 0									

Year(s)	Treatment
1 <sup>st</sup> & 2 <sup>nd</sup> Year	Weeding
3 <sup>rd</sup> Year	Disbudding
4 <sup>th</sup> Year	Minimum pruning
5 <sup>th</sup> 6 <sup>th</sup> & 7 <sup>th</sup> Year	Fruit yield
8 <sup>th</sup> & 9 <sup>th</sup> Year	Fruit yield and pruning
10 <sup>th</sup> Year	Thinning up and Fruit yield

Source: Discussions with Forest Department personnel & Community members

## **Miscellaneous Operations Plan**

The miscellaneous operations planned in the **2 No Bapapung EDC** are given below.

 Table-(13): Miscellaneous Operations in the 2 No Bapapung EDC

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

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

### **Marketing Operations**

For produce from the 2 No Bapapung EDCthe planned marketing operations are:

- (a) Linkages will be established with traders inside and outside the district
- (b) Selling to the Ban Bazar
- (c) Participating in Exhibition and food festivals

### **Expected Benefits**

This sub-section furnishes the benefits expected from the forests protected by members of the 2 No Bapapung EDC, as well as the sharing mechanism for the usufruct benefits.

### **Expected Benefits Related to Wood & Grass**

The above has been tabulated below for the 2 No Bapapung EDC. 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 2 No Bapapung EDC

Item	Month	Year (Indicative)	Quantity
Firewood	-	-	-
Timber for House	-	-	-
Small timber for Implements	-	-	-
Bamboo	-	-	-
Pole	-	-	-
Fodder from Forest Trees & Grass	-	-	-
NTFP	-	-	-
Wages	-	-	-
Other	-	-	-

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

#### Sharing Mechanisms

The sharing mechanism for the benefits is indicated below for members of the 2 No Bapapung EDC.

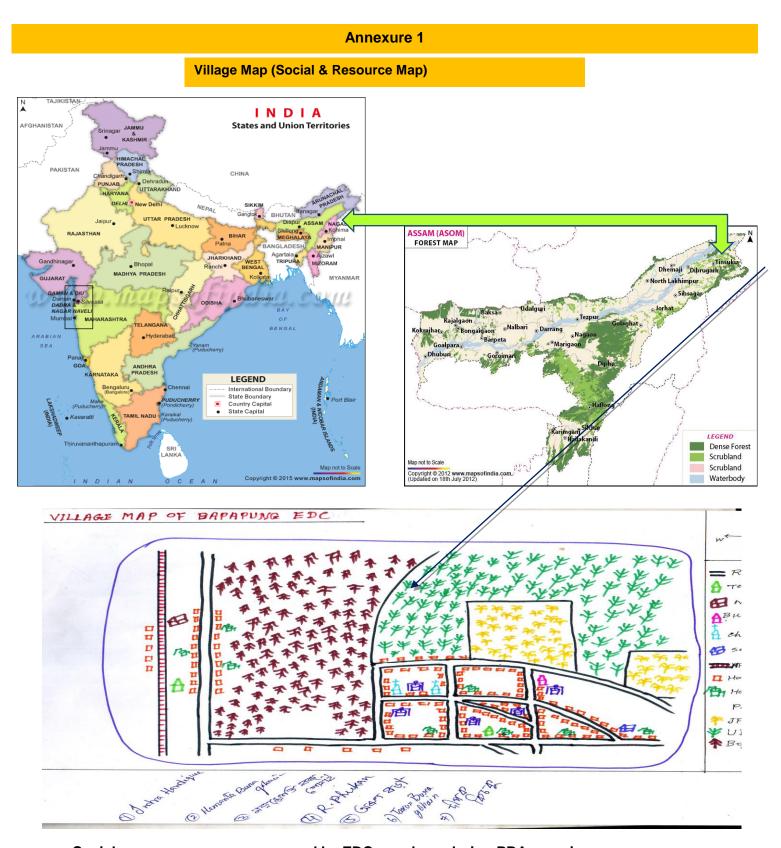
Table-15: Sharing Mechanism for **2 No Bapapung EDC** 

Method	Items
To be shared equally	-
To be freely collected by the members	-
Other Methods	-

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

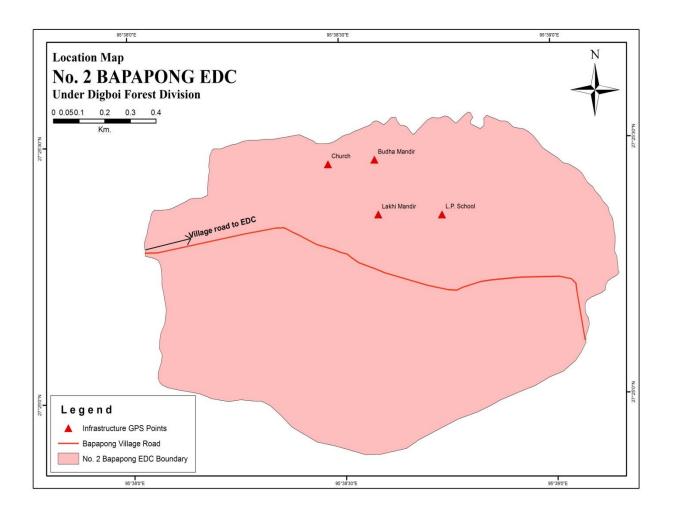
# List of Appendices

Annexure No	Heading		
2	Maps         • Village Map (Social and Resource Map)         • GIS Map         PRA Exercise         • Focus Group Discussion         • Seasonality Analysis         • Social Mapping         • Wealth Ranking         • Venn Diagram         • Chapatti Diagram         • Ranking Exercise		
3	Pictorial glimpses of the PRA exercises		
4	Filled up Table ( Proforma 1 to Proforma 4) Table nos. 1-37		



Social cum resource map prepared by EDC members during PRA exercise

**GIS Map** 



#### **Annexure 2**

#### **PRA EXERCISE**

#### Location and Timing of PRA

Numbers of participants	137
Time	12:30 noon
Venue	2 No Bapapung Village

SI. No.	Name of village	Households (No.)	Population (No.)		
			Total	Male	Female
1	2 No	86	287	170	117
	Bapapung				
2	Bhimpathar	34	138	68	70
3	Kherjan	44	175	90	85
4	Chiristainbasti	36	160	78	82
		202	760	406	354

**Table: 2.1**Brief about the villages under 2 No Bapapung EDC

#### Source: Village Survey

The tools used for conducting PRA in 2 No Bapapung EDC are as follows:

- Focus Group Discussions (FGD)
- Seasonality Analysis
- Social Mapping
- Wealth Ranking
- Venn Diagram
- Chapatti Diagram
- Ranking Exercise

#### 2.1 Focus Group Discussions:

The entire FGD were centered on the elements of rural economy namely- primary livelihood options of the EDC, agriculture, livestock, skill-sets, available support services, infrastructure etc. and also considering the important determinant of the presence of forests area all around. These factors have been blended well before extracting the information out from the respondents.

## **Findings from FGD**

- The existing livelihood options available in the EDC villages are agriculture, daily wage labour and a few private jobs. Few of the villagers have of late started doing backyard tea cultivation, betelnut, yam and black-pepper cultivation as well.
- Some of the emerging livelihood options are mid-scale poultry and security guards where some of the unemployed youth are working outside Northeast India.
- Some of the serious challenges faced by the villagers practising agriculture are concurrent floods, elephant depredation, poor irrigation facility and spoilage of farm land due to leakage from the nearby crude oil fields.
- There is no support services available in the field of agriculture.
- The villagers rear cow, duck, local poultry and pig. Almost in 90% of the cases, it is mostly the womenfolk who looks after the reared livestock. However, the villagers face serious challenges like outbreak of diseases, attack of wild animals etc. while rearing livestock.
- There is no support services provided by the Government authorities in ensuring proper rearing of livestock. Even the veterinary sub-centre available in BhadoiPanchali is non-functional.
- Some of the traded where the villagers are skilled at are bamboo craft, weaving, driving, electrician, plumbing etc. In few of these courses, the villagers have been provided basic training as well under the Forest Department project.
- Some of the Government schemes through which some of the villagers have been benefitted are MGNREGA, IAY, provision of tube-well etc. However, these benefits have covered only 20-30% of the villagers.

## 2.2 Seasonality Analysis:

Seasonality analysis was done to generate information about and identifying periods of particular stress and vulnerability. In the context of a group discussion with respondents during the PRA, parameters such as expenditure, income, credit and savings were probed in sync with the factors such as employment trend, health conditions, education etc. associated with its increase or decrease in one's households.

#### Expenditure& Income

Children's education is also a component where most of the households spend during the start of the year. It is especially during the months of January to March when the new academic session of schools begin and apart from admission fees, the people also spend on buying new uniforms, textbooks and stationaries. The community also spends during April as it marks the onset of festival of Bihu. Again, for those engaged in paddy cultivation spends significantly during sowing season starting May till July along with harvest season starting in the months of October till December.

When it comes to income, it is seen that selling of paddy, arecanut and livestock provides a good source of income to the villagers in the months of October and November. Those are engaged as daily wage labour in nearby tea estates earn good amount of income in the months of June and July as these months are considered to be peak season for plucking.

#### Savings and Credit

It was mostly found that amount of savings increases with the increase in income and most of the dwellers resort to institutional savings with likes of Post Office and bank savings. There are almost 10 number of SHGs who are also engaged in inter-loaning as well as provides credit to other members. It is to be noted that the rate of interest for credit varies between group inter-loaning and outside members.

#### Seasonality of Engagement\_ Farm Activities

Сгор	Sowing	Harvesting
Paddy	May-July	October- December

#### Seasonality of Engagement\_ Non-Farm Activities

Engagement	Period of Engagement
Daily Wage Labour	June- August
Carpenter	Throughout the year
Petty business	Throughout the year
Security Service (Company guards)	Throughout the year
Mason	August to March
Other Private Service	Throughout the year

## 2.3 Social Mapping:

Social mapping is used to visualize the socio-economic aspects of the 2 No Bapapung EDC where the land holding patterns of the households, the numbers of schools, social infrastructure, and religious beliefs among households. Awareness among the villagers was carried out by the field teams, in order infuse the self-consciousness for protection and enhancement of the forest areas. People from all the households of the village gathered for the PRA process, which was conducted in the community hall of the village. The PRA process marked with enthusiasm and active participation from all people present.

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

	Village	2 No	Kherjan	Bhimpathar	Christain
		Bapapung			Basti
	Total Population	252	125	172	108
	Male	135	72	87	76
	Female	117	53	85	37
Social	Total households	80	40	55	35
information	Numbers of semi pucca Houses	59	26	25	23
	Numbers of Pucca Houses	21	14	30	12
	Numbers of IAY Houses	Not reported in	Nor		
	Houses	survey	reported in survey		
	Bridges	1			
	Stream	1			
	River	1			
	PHE	Existing but not working			

Table 2.2: Information about the villages

#### Microplan for No. 2 Bapapung EDC (2015-16 to 2025-26)

Landmarks	Power Transformer	-			
	Community hall	1			
	Primary School	4			
	Anganwadi Centre	4			
	ME, High School & College	-			
	Approach Roads	3			

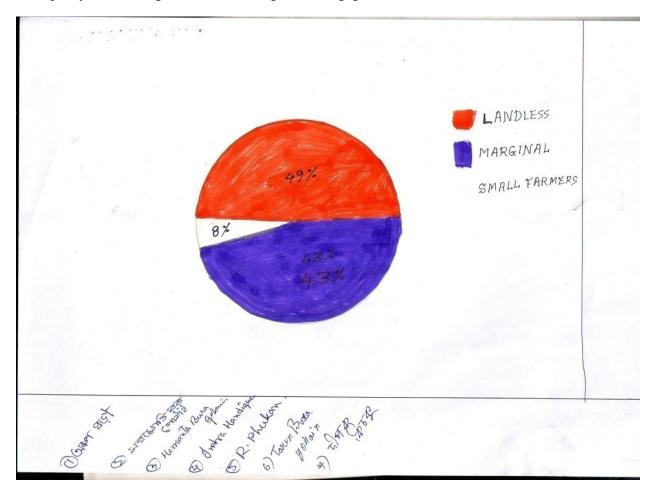
- Under social mapping study a total of 202 households have been identified. Out of which 12 households are having a proper pucca house with tin roof and cemented floor and 83 households having a kachcha house (thatched roof)
- Physical infrastructure like primary schools, Anganwadi centres and bridges in poor condition were mapped by the participants. Provision of Education facility up to primary level is quite satisfactory. However, ME school is located 0.5 to 1 km from the villages but it does fall within the EDC area.
- The 2 No Bapapung village is dominated by the Ahom community but there is also concentration of Sonowal Kachari and Boro community. Whereas, the Kherjan villages is completely dominated by the Adivasi community.
- > There is Digboi river which flows by the EDC villages.
- > There are 3 approach roads to reach 2 No Bapapung EDC .

#### WEALTH RANKING:

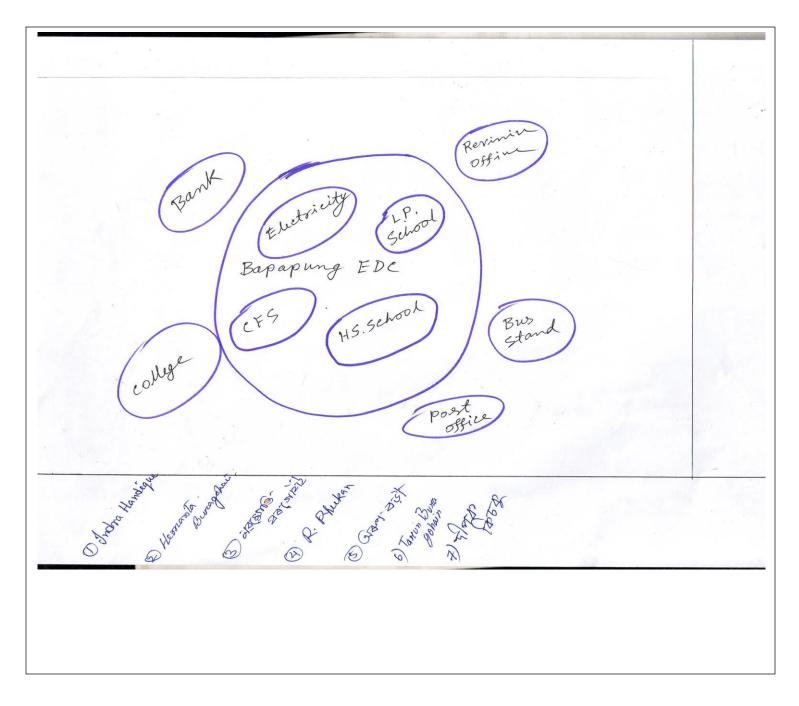
Wealth ranking, or well-being ranking, involves community members identifying and analysing the different wealth groups in a community. It enables evaluators to learn about the socio-economic stratification of project beneficiaries and local people's definitions and indicators of wealth/well-being. Wealth ranking was done with the help of the following information about the households

- a) Occupation/livelihood
- b) Land holding
- c) Types of living house
- d) Ownership of assets

As such it is found that about 49 % per cent people are poor, about 43 % per cent are belonging to middle class and about 8 % per cent are categorized to be rich. Poor people are mainly irregular wage earners and mostly mortgage land for the paddy cultivation. Rich people are mainly involving in tea cultivators and paddy cultivators with good amount of agricultural land. They also have televisions sets, two wheelers, and four wheeler etc. Middle class people are doing cultivation of Tea, horticulture products as well as of paddy with own agriculture land along with mortgage lands.



## Venn Diagram



## Chapatti Diagram



## Annexure 3

# Photographs











#### Annexure 4

## **Record-I**

Table -1: Basic data of the EDC							
SI. No	Name of the EDC	Date of Establishment	No. of Members in Executive Committee	Name of the President	Name of the Secretary		
1	2 No Bapapung	2015	11	Hementa Borgohain	Arun Kr. Hazarika		

## Table- 2: Demographic Status of the EDC villages

SI. No.	Name of village	Households	Population (No.)			Sex Ratio	Avg. HH size
NO.	village	(No.)	Total	Male	Female	-	5120
1	2 No	80	252	135	117		4
	Bapapung					776	
2	Kherjan	40	125	72	53	-	6
3	Bhimpathar	55	172	87	85		
4	Christainbasti	35	108	76	32		
	Total	202	657	370	287		

Source: Field Survey Report

#### **Caste Profile:**

The caste profile of EDC from the two villages in the area is:

SI. No	Caste	Number of HHs	Percentage of HH
1	OBC	190	95 %
2	ST	7	3 %
3	Others	5	2 %

## Table- 3: Village wise farmer category on the basic of land holding

SL.NO		TYPE OF FARM		TOTAL		
	THE VILLAGE	Large	Small Farmers	Marginal Farmers	Landless	-
		Farmers >10 Hact.	2 to 10 hact.	< 2 Hact.		
		>10 Hact.				
1	Bapapung		7	26	49	80
2	Kherjan		2	18	20	40
3	Bhimpathar		4	28	23	55
4	ChristainBasti		3	16	16	35
			16	88	108	202

## Table- 4: Village wise details on literacy

Level of Education		Total			
	2 No Bapapung	Kherjan	Bhimpathar	ChristainBasti	
Illiterate	49	47	48	46	195
I-IV	53	60	62	35	210
V-VII	35	30	32	31	128
VIII-X	26	10	14	12	62
XI-XII	15	5	7	2	30
Graduate	5	3	1	1	10
Post Graduate	3				3
Total	186	155	164	127	632

## Table- 5: Village wise education categorisation

SI.	Name of	Households		Population (No.)			Literacy Rate
No.	village	(No.)	Total	Age group (0 – 6 yrs)	Excluding Age group	Literates	(In %)
1	2 No Bapapung	80	186			186	29.4%
2	Kherjan	40	155			155	24.52%
3	Bhimpathar	55	164			164	25.94%

#### Microplan for No. 2 Bapapung EDC (2015-16 to 2025-26)

4	Christainbasti	35	127			127	20.09%
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#### Source: Field survey

If we refer to **table 3**, we see that the literacy status of Soraipung village which is 75.13% is better than 2 No Bapapung's rate of 57.49%. Altogether, there are 10 graduates in the EDC with 3 post graduates. Most of the population have attained education upto class IV.

#### Table 6-: Village wise farmer category on the basis of land

Land Type	Total Households	Possession/Use (in %)	Average holding (in acre)
Homestead	192	95	0.34
Farm	134	66	1.552
Waste Land	11	5.44	0.80
Lease in/out	18	8.91	1.17
Share-cropping	18	8.91	1.60

#### Table -7: Details on Cattle population of the EDC

Type of livestock	Total number possessed	% of HH rearing it	Average herd size
Cow	206	50.9	2
Bull	258	51.9	2.4
Buffalo	65	4.45	7.2
Duck	430	32.67	6.5
Local Poultry	597	48.01	6.15
Pig	98	30.1	1.58
Goats	106	21.28	2.46

## Table -8: EDC Village Infrastructure

SI. No	Infrastructure	Location	Distance from villages
1.	Electricity	Within the village	-
2.	Gas connection	Digboi	5 km
3.	Transport	Digboi	5 km
4.	PHC	BhadoiPanchali	5 km
5.	LP school	Within the Village	
6.	High school	With in the village	5 km
7.	Bank	BhadoiPanchali	5 km
8.	Anganwadicentre	With in the village	
9.	VCDC	Digboi	5 km
10.	Revenue Office	Digboi	10 km
11.	Police station	Digboi	5 km
12.	Forest Office	Digboi	4 km
13.	Post office	Digboi	5 km
14.	Bus facility	Digboi	5 km
15.	Railway Station	Digboi	20 km
16.	District head quarter	Tinsukia	60 km

Table- 9	): Details o	on agricultural	crop/s				
Crop			Rain Fed			Irriga	ation
Season	Name of the Crop	Households cultivating (in %)	Avg. Area in cultivation (in acres)	Avg. harvest quantity (in kg)	Avg. investment (in INR)	Name of the crop	Area (in ha)
Kharif	Paddy (Sali)	42%	4.7	1233.54	3475	NA	NA

Table -10: Details on Fodder availability for livestock			]
Types	1-3month	3-6month	>6month
Cropresidue			
Treesfodder			
Grasses			
GreenFodder			
GrazinginForest			

Table- 11: Details on Market		
For Purchase	Location	Distance from village if in other village (in km)
Groceryshop	With in the village	5 kms
WeeklyMarket	Digboi	5 kms
Major Market	Digboi & Duliajan	12& 60
Forest CorporationSale	-	-
Tendu Patta PHAD	-	-
FishMarket	Digboi	-
Medicinal Plant collection	-	-
Forest Corporation Medicinal plant Collection		-

Table- 12: Water resource availability				
Source of Water	Ownership households (in %)	Availability	Average depth of water source (in feet)	Purpose
Tube well	57	Perennial	22.58	Household use
Ring well	7	Perennial	27.45	Household use
Pond	0.99	Perennial	10	Household use and fish rearing
River	-N/A-	Perennial	-	Household use

Table -13:				
Energy form	Availability in HHs	Source	Average monthly consumption of HHs	Purpose
Fuel Wood	132	Forest area	303.10 kg	Household consumption
LPG Cylinders	3	Local Gas agencies	3 units	Household consumption
Kerosene	131	Local market	4.19 litres	Household consumption

# Livelihood Opportunities Analysis

#### Table- 14: Bamboo Craft

Constraints	Reasons	Opportunities	Programme
Product quality and diversification	*ShortageofHighly skilled craftsmen *UseofTraditional tools and implements *Lackofstrategiesforpr oduct diversification.	* Good export potential * E-commerce platform * Huge potential for tourism- Craft based tourism may be an option	*Skill Up-gradation &Trainingon NewProduct Development and Product Diversification
Marketing potential	*Nopricingpolicy *Nolinkagewiththe institutional buyers *NoProduct Diversification	Exploringnew markets	*Providingabulk buyarrangement ofthefinished product with institutional buyers.
Credit facilities-Seed funding	*Nolinkagewiththebanks and other FIs *Unawareofthe development schemes * Inadequate initial investment capacity *Lack of sound business orientation	*Financial assistanceby the Govt. or MFI players Providingeasy access tocredit.	*Financial Literacy is an important area of intervention along with entrepreneurship development programmes for emerging entrepreneurs in this sub-sector

## Table- 15: Livestock Rearing

Constraints	Reasons	Opportunities	Programme
Veterinarycare facility	*Inadequate support services related to veterinary care *Lackofknowledgeabout scientificrearingoflivesto ck	*Enhancing incomefrom livestock rearing *Good market *Healthy breed of livestock	* Training on para-veterinary professional * Setting up community own and run agro-vet are centre in the EDC villages

Table -16: Eco-To	ourism		
Constraints	Reasons	Opportunities	Programme
Infrastructure Support	*Access to proper roads to reach 2 No Bapapung EDC *Unawareness on the part of the villagers on the prospects of eco- tourism	*Close proximity to Dehing Patkai WLS *Employment opportunity for the youth *Investment potential *Potential for craft and agro- tourism	*Construction of all-weather roads under EPA decided by the community *Training on tourism and hospitality to the unemployed youth of the villages *Development of proper
			tourist circuit for DehingPatkai
Marketing and Branding	*No successful demonstration of eco-tourism prototype close to EDC area	*Huge inflow of tourists thereby giving a boost to the tourism eco-system	*Vibrant and effective promotion of Northeast tourism all across the globe
	*More emphasis to already established tourist destinations viz. Kaziranga and Manas NP	*Revenue generation for the State Government as well as the EDC	*Using social media to spread awareness
Credit facilities-Seed funding	*Nolinkagewiththebanks and other FIs *Unawareofthe development schemes * Inadequate initial investment capacity *Lack of sound business orientation	*Financial assistanceby the Govt. or MFI players Providingeasy access tocredit.	*Financial Literacy is an important area of intervention along with entrepreneurship development programmes for emerging entrepreneurs in this sub-sector

Constraints	Reason	Opportunities	Programme
	Higher rates charged by the private money lender	Penetration of MFIs into the EDC area	*Financial literacy
loan	*Lack of proper documentation/proof on the part of the borrowers *Lesser interest shown by banks and other financial institutions	<ul> <li>* Fostering the enterprise eco- system</li> <li>* Promotion of village level institutions</li> </ul>	*Facilitating the bank linkage programme

Approved but

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