

# List of Acronyms

Acronym	Full Form	
ACF	Assistant Conservator of Forests	
AfD	Agence France de Développement	
APFBC	Assam Project on Forest & Biodiversity Conservation	
APL	Above Poverty Line	
BPL	Below Poverty Line	
CCF	Chief Conservator of Forests	
CF	Conservator of Forests	
COMPELO	Consulting Service for Micro Planning Enhancing Livelihood	
	Opportunities	
DCF	Deputy Conservator of Forests	
DFO	Divisional Forest Officer	
EDC	Eco-Development Committee	
EPA	Entry Point Activity	
FCA	Forest (conservation) Act, 1980	
FD	Forest Department	
FRA	Forest Rights' Act	
FV	Forest Village	
FYP	Five Year Plan	
GHG	Green House Gases	
GoI	Government of India	

GP	Gaon Panchayat	
На	Hectare	
IEC	Information Education & Communication	
IIE	Indian Institute of Entrepreneurship	
JFMC	Joint Forest Management Committee	
MDR	Major District Roads	
MGNREGS	Mahatma Gandhi National Rural Employment Guarantee Scheme	
MoEFCC	Ministry of Environment, Forests & Climate Change	
NTFP	Non Timber Forest Produce	
OBC	Other Backward Classes	
ODR	Other District Roads	
PCCF	Principal Chief Conservator of Forests	
РНС	Primary Health Center	
PMU	Project Monitoring Unit	
PRA	Participatory Rural Appraisal	
REDD+	Reducing Emission from Deforestation and Forest Degradation Plus	
RGVN	Rashtriya Gramin Vikas Nidhi	
RO	Range Officer	
Sc	Scheduled Caste	
SDG	Sustainable Development Goals	
SLF	Sustainable Livelihood Framework	
Spp	Species	

ST	Scheduled Tribe
SWOT	Strength Weakness Opportunity & Threat
TV	Taungya Village
TV	Television
WLS	Wildlife Sanctuary
WPA	Wildlife (Protection) Act, 1972
WPC	Working Plan Circle

S.No.	Vernacular Name	Botanical Name
1.	Agar	Aquilaria agallocha
2.	Amra	Spondius mangifera
3.	Amloki/Amla	Embilica officienalis
4.	Aslia/Kalaujha	Cordia myxa
5.	Asok	Sarac indica
6.	Aswatha	Ficus Religiosa
7.	Awal	Vitex pedunculoris (Sila-titu)
8.	Badam	Sterculia alata
9.	Bohera	Terminalia bellerica
10.	Bajrang	Xanthoxylum budrunga
11.	Banak	Schima wallichii
12.	Ban Am	Mangiferra sylvatica
13.	Ban Belphai/Jalpai	Elaeocarpus Floribundus or E. Varunna
14.	Bandar fela (Rata)	Dysoxylum binectariferum
15.	Bandar lathi	Cassia fistula
16.	Bon simul	Bombax insigne
17.	Barun	Crataeva religiosa
18.	Bat	Ficus bengalensis
19.	Bella	Sapium baccatum
20.	Bhadruk	Vitex pubescens
21.	Bhatkar	Vitex heterophylla
22.	Bhola	Morus laevigata
23.	Bhubi	Baccaurea sapida
24.	Bhuri	Trewia nudiflora
25.	Bonsum	Phoebe goalperensis
26.	Borpat	Ailanthus grandis
27.	Banbogori	Heritiera acuminate
28.	Bogori	Zigyphus zuzuba
29.	Charim	Alstonia scholaris
30.	Chakroshi	Chickrassia tabularis

# Glossary of Vernacular Name of Trees, Shrubs, Herbs and Other Plants

31.	Chailta ban	Dillenia pentagyna
32.	Chailta	Dillenia indica
33.	Chalmugra	Hydnocarpus kurzii
34.	Cham	Artocarpus chaplasha
35.	Chami	Polyalthia simiarum
36.	Chamia	Hibiscus macrophyllus
37.	Champa	Michelia champaca
38.	Dalmugra	Gynocordia odorata
39.	Dephal	Garcinia xanthochymus
40.	Dewa	Artocarpus lakoocha
41.	Dhuna rata	Canarium bengalensis
42.	Dimoru	Ficus glomerata
43.	Fulkat/phulkat	Stynax serrulatum
44.	Fulujha/Banmala	Calicarpa macrophylla
45.	Fuara	Litsea spp
46.	Gamari	Gmelina arborea
47.	Garjan	Dipterocarpus turbinatus
48.	Garumara	Crypteronia paniculata
49.	Gondroi	Cinnamomum glanduliferum
50.	Bagnala	Litsea sebifera
51.	Gulal	Diospyros toposia
52.	Haldi Kat	Adina cordifolia
53.	Hansh	Albizzia stipulate
54.	Hartaki	Terminalia chebula
55.	Hatia	Chikrasia tabularis (Bogi Pom)
56.	Heloch	Antidesma spp
57.	Hergoza	Dillenia pentagyna (Oxi)
58.	Hengl/Engla	Bursera serrata
59.	Hinaru/Moroi	Albizzia odoratissima
60.	Hizal	Barringtonia acutangla (Pani-amra)
61.	Hona/Bhatgila	Oroxylum indicum
62.	Honur	Stereosparmum spp

63.	Jam	Eugenia spp
64.	Jakura	Macaranga denticulate
65.	Jangli badam	Sterculia alata
66.	Jarul	Lagerstroemia flosreginae
67.	Jhalna	Terminalia myriocarpa
68.	Jhawa	Holigarna longifolia
69.	Jhoki	Bischofia javanica (Uriam)
70.	Jinari	Podocarpus nerrifolia
71.	Kadam	Anthocephalus cadamba
72.	Kat badam	Castanopsis indica
73.	Kala-ujha	Cordia myxa (Lessora)
74	Kanchan	Bauhinia variegate
75.	Karach	Pongamia glabra (karanj)
76.	Kawa thuti	Cordial fragmentissima
77.	Kayengla	Garuga pinnata
78.	Koinari	Miliusa spp
79.	Koroi	Albizzia procera
80.	Korol	Kayea floribunda
81.	Katal	Artocarpus integrifolia
82.	Kow	Garcinia cowa
83.	Kum	Careya arborea (Kumhi)
84.	Kuma	Cedrela toona
85.	Kuroil	Dipterocarpus turbinatus
86.	Kurta	Palaquium polyanthus
87.	Larubandha	Macaranga spp
88.	Lakiam	Mangifera sylvatica
89.	Lonchak	Parkia roxburghii
90.	Luk luki (Panial)	Flacourtia cataphracta
91.	Madhubura	Pterosprmum accerifolium (Hati polia)
92.	Marhal	Vatica lanceaefolia
93.	Mahidal	Cordia fragrantisima
94.	Madar	Erythrina indica

95.	Mathang	Carallia integerrima (C.Lucida)
96.	Maralia	Mallotus albus
97.	Mon	Randia dumetorum (Mainphal)
98.	Monawal	Vitex altissima
99.	Moroi	Albizzia spp
100	Moralia	Mallotus albus
101.	Nageswar	Messua ferrae (Nahar)
102.	Newr	Bursera serrata (Nejor)
103.	Pakhirhar	Diplospora singularis
104.	Paraia awal/Paroi (Paroli)	Stereospermum chelonoides
105.	Ping	Cynometra polyandra
106.	Pipla	Albizzia lucida
107.	Pisanti	Grewia microcos
108.	Poma	Cedrela toona (Toon)
109.	Pongta	Diplospora singluaris
110.	Poreng	Eleocarpus robustus
111.	Ramdala	Duabnga sonneratiodes
112.	Romkota	Quercus spp
113.	Rata/Phul Rata (Amari)	Amoora wallichii
114.	Rongi Rata	Dysoxylum hamitonii
115.	Rudrakksha	Elaeocarpus gonitrus
116.	Sanjanel	Lagerstroemia parviflora
117.	Satkora	Citrus hystrix
118.	Seleng	Elaeo carpus robustus
119.	Simul	Bombax ceiba (Cotton tree)
120.	Siris	Albizzia procera (Safed siris)
121.	Sita	Echinocarpus assamicus (Phul Hingori)
122.	Sundi, Maricha	Michelia Montana
123.	Sundi, Til/Jati Sundi	Tallauma phelocarpa
124.	Sundi, Champa	Michelia champaca
125.	Satrong	Lophopetalum fimbriatum
126.	Tarua	Endospamum chinensis

127.	Tezhuara	Myrstia angustifolia
128.	Tezia	Cinnamomum obtusifolium
129.	Tezapata	Cinnamomum spp
130.	Telo	Canophyllum enophyllum
131.	Tula	Tetrameles nudiflora
132.	Tetul	Tamarix indica
133.	Udal	Sterculia alata
134.	Ukhali	Talauma hodgsonii (Baram thuri)

# **Bamboo**

<u>S.No.</u>	Vernacular Name	Botanical Name
1.	Bazail	Pseudostachyum polymorphum
2.	Bhulka	Bamboosa balcooa
3.	Bakail/Burwal/makail	Bambusa pallid
4.	Beri bans	Bambusa mastersii
5.	Dalu	Teinostachyum dullooa
6.	Daral/Lata bans	Melocalamus compactiflorus
7.	Kalia	Bambusa auriculata
8.	Kail	Oxytenanthera nigrocilliata
9.	Kata/ketura	Bambusa valgaris
10.	Kaligoda	Oxytenanthera nigrocilliata
11.	Kali sundi	Oxytenanthera albociliata
12.	Karail/Jati	Dendracalamus strictus
13.	Khang	Dendracalamus longispathus
14.	Lota	Dinocloa maclellandii
15.	Mirtenga/Bijli	Bambusa tulda
16.	Muli	Melocanna baccifer
17.	Parua/paura	Bambusa teres
18.	Pecha/Kako	Dendracalam hamittonii
19.	Rupali/Rupahi	Dendrocalamus longispathus
20.	Pichlee	Bambusa nutans

# Canes

<u>S.No.</u>	Vernacular Name	Botanical Name
1.	Golla	Daemonorps jenkinsianus
2.	Horna	Calamus latifolius
3.	Jail	Calamus tenuis
4.	Jhalna	-
5.	Sundi	Calamus guruba

# <u>Shrubs</u>

<u>S.No</u>	Vernacular Name	Botanical Name
1.	Biardala	Livistonia jenkinsiana (Toko pat)
2.	Ban laldi	Curcuma spp
3.	Bhat	Clerodendron infortunatum
4.	Dudhkari	Holarrhena antidysenterica
5.	Gandhi	Homalomena rubsescens
6.	Kitta pata	Phrynium imbricatum
7.	Lutki/Phutuki	Melostoma malabarithicum
8.	Patidul/Chhatipat	Licuala peltata
9.	Patidoi (Murta)	Clinogyne dichotma
10.	Pisach ban	Eupotarium spp
11.	Ramgua	Pinanga gracilis
12.	Suchutra/surat pat	Laportea crenulata
13.	Tara pat	Alpinia nutans

# Weeds and Grasses

<u>S.No.</u>	Vernacular Name	Botanical Name
1.	Kash	Saccharum procerum
2.	Khagra	Saccharum spontaneum
3.	Ekra	Erianthus raveneac
4.	Nal	Phragmites karka

5.	Rema	Thysanolaena maxima
6.	Khor/Thatching grass	Impereta cylindrical

# **Epiphytes**

S.no.	Vernacular Name	Botanical Name
1.	Karau	Loranthus scurrula

# **Climbers**

S.No.	Vernacular Name	Botanical Name
1.	Bat	Ficus spp
2.	Chaittalat/panilot	Delima sarmentosa
3.	Ghilla	Entada scandens
4.	Kuchai/Boloa lot	Acacia pinnata

## MILONKUR ECO DEVELOPMENT COMMITTEE PANIDIHING BIRD SANCTUARY, SIVASAGAR FOREST DIVISION

## Micro-Plan

(2016-17 to 2026-27)

# **Table of Contents**

Chapter	Title
	PART-I
1	Introduction
2	General Description of the Area
3	Village Socio-Economic Profile & EDC Profile
4	Livelihood Asset Profiles and Vulnerability Context
5	Existing Plans and Programs
	PART-II
6	Micro plan Objectives, SWOT and GAP analysis
7	Village Development Plan
8	Livelihood Development Plan
9	Forest Development Plan
10	Implementation Strategies, Timelines and Budget

## PART-III

Tables, Maps and Appendices

Divisional Corest Officer (1) Shasagar Division, Strasagar

## MILONKUR ECO DEVELOPMENT COMMITTEE PANIDIHING BIRD SANCTUARY, SIVASAGAR FOREST DIVISION

Micro-Plan (2016-17 to 2026-27)

PART-I

## **1. Introduction**

#### **1.1 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 nonforest 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.

#### 1.2 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 and *Rashtriya Gramin Vikas Nidhi* (RGVN) has been formed to implement (*inter*-alia) the micro-planning and livelihood development under the above project. The above consortium has been titled as 'Consulting Service for Micro Planning 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.

## **1.3 Micro-Plan for the MILONKUR EDC**

This document gives the Micro-Plan for the Milonkur EDC, which is located in Sivasagar district of Assam. The EDC falls under the jurisdiction of the Sivasagar Forest Division. The profile of the committee is given in the next section.

## 2. General Description of the Area

#### **2.1 General Description**

The Panidihing Bird Sanctuary is located in Sivasagar District of Assam. It was constituted in the year 1999 vide Govt. Notification No. FRW.71/95/Pt.-6 dtd. 10/08/1999 by carving out a small portion of RF and a major portion of Non-Cadastral land existed adjacent to the said Reserve Forest.

The Bird Sanctuary was constituted with the following areas:-

Reserved Forest	= 2.93 sq. Km
Non-Cadastral area	<u>= 31.00 sq. Km.</u>
Total area of the Bird Sanctuary	= 33.93 sq. Km

It has also been recognized as an Important Bird Habitat (IBA) Site by Bombay Natural History Society (BNHS). The Protected Area recorded 167 species of birds. The water masses of the PA forms an ideal habitat for indigenous fishes and other aquatic animals and birds.

#### 2.2 Location

The Bird Sanctuary is located in Sivasagar district of Assam within the geographical limits of  $27^{0}$  4.5' N and  $27^{0}$  10' N latitudes and 94<sup>0</sup> 25' E to 94<sup>0</sup> 40' E longitudes. The altitude of the area varies from 100 to 110 meters above mean sea level.

The PA is surrounded by Sapekhatibam., Kokilamari & Milonkur village in the North, the Dhaiali & the Reserve forest in the East, the Desang River in the South and the Brahmaputra river in the west.

The boundary of the PA was demarcated in February '2001 by fixing 38 nos. of R.C.C. boundary pillars (B.P.) along the artificial boundary. It is observed that villagers raise agricultural crops along the northern boundary from B.P. No 7 to 17 and in the southern boundary from B.P. No 31 to 37. The natural boundary demarcated by the Demow River which is 6.5 km in length.

#### 2.3 Soils

The area comprises of alluvial flood plains of the Brahmaputra River. There is no rock exposure in an around the PA.

#### 2.4 Water

The main sources of water are the Brahmaputra, Desang and Demow rivers. There are seventeen numbers of Beels of varying sizes inside the PA. The names of the Beels are Balijan, Ghoka, Singorajan, Phuklai, Dighali, Tokia, Jorjoria, Gelademow, Uzantoli, Lalitangkur, Barpathar, Sogunpara, Kandulijan, Pulai, Kotiani& Goroimari Kekurakhati. Beels are distributed uniformly in the P A. During the rainy season the PA is over flooded and hence construction of highlands is absolutely necessary to shelter the animals. Floodwaters deposit huge amount of silt in the PA. At present water bodies are being silted up gradually and no proper study on these water bodies has been done.

#### 2.5 Climate

The area falls under temperate zone and the climate can be divided into four seasons- Viz. Winter season, pre-monsoon, Monsoon and post monsoon season (autumn).

- Winter season: The winter season is spread to the months December, January and February. During this season the weather is cool and pleasant and is sometimes interrupted by casual drizzle bringing cold spells. Fogs are very common and rainfall is very rare.
- Pre-monsoon: This is a transitional season in between dry winter and wet monsoon and is spread to the months of March and April. Temperature rises gradually and thunderstorms occur in the later part of the season.
- Monsoon: Monsoon season starts from the month of May and continues till the month of September. There is an alternate rise and fall in temperature with very heavy rainfall. Hot, humid and cloudy weather is the characteristic of the season.
- Autumn season: October and November constitute the autumn season, which mingle with winter. November is almost free from rain.

The mean annual temperature during winter is  $7^{\circ}$  C to  $23^{\circ}$  C and during summer from  $21^{\circ}$  C to  $33^{\circ}$  C. June is the hottest month and December and January are the coldest month.

Heavy rainfall occurs during the monsoon season i.e. from May to September. Average annual rainfall recorded during the last 20 years is 2370 mm. Maximum precipitation is recorded during the month July.

#### 2.6 Eco-system and Biodiversity:

The eco-system of the Bird Sanctuary is flood plain one comprising mainly of grassland and water bodies locally called "beels" and some stream crisscrossing the entire topography. The Demow river that flows right through the sanctuary is perennial with high water current. It lies between the mighty river Brahmaputra and the river Desang. It is a representative of wet alluvial grassland of the Brahmaputra river.

The sanctuary is an 'Important Bird Area' as per B.N.H.S. Notification and more than 27,000 birds were counted during 2008 by Professor Dr. P.K. Saikia of Guwahati University and his team. Till now, ornithologists have identified more than 267 bird species (migratory 70 sps.) in the sanctuary and many are yet to identified.

Being an important wetland in between the two rivers, the PA attracts thousands of migratory birds and it is a breeding ground of waterfowls (like endangered large whistling teal, swamp partridge) and fishes. The PA is the heaven for bird watchers and harbours many species of resident waterfowls, seventy species of migratory birds, seven species of storks. The main species found in the PA are Dillenia indica, Ficus glomerata, Albizzia lucida, Anthocephalus cadamba, Eugenia jambolana, Bombax ceiba, Zizyphus jujube, Erythrina variegate, etc.

## 2.7 Concern of Biodiversity Conservation

**Poaching and Fishing**: The poaching of migratory birds and illegal fishing take place in and around the PA. Poachers mix chemicals with food grains and keep these in the PA or agricultural fields as baits.

Illegal fishing by local people also takes place in the PA.

**Illegal removal of NTFP**: the people of the fringe village collect thatch and other grasses for construction of their huts.

**Grazing:** As the PA area is surrounded by human habitation, there is tremendous grazing pressure from cattle belonging to community members of fringe village.

## 3. Village Socio-Economic Profile and EDC Profile

## **3.1 Key Information**

Milonkur is a revenue village and is located in Sivasagar District of Assam. The village was formed as EDC and registered on 10/01/2017.(Appendix III as per the registration certificate) under the jurisdiction of Sivasagar Forest Division. The village is located in the fringes of Panidihing Bird Sanctuary.

Name of the EDC	Milonkur
Name of the Gram	Pachim Panidihing
Panchayat / VCDC	
Revenue Circle	Demow
District	Sivasagar
Forest Division	Sivasagar
Forest Range	Sivasagar
Forest Beat	Dichangmukh
Year Formed	2017
Registration no.	KNP/FG.761/EDC/RC/SIVASAGAR
	DIVN./2016-17/01
Description of Boundary	As below
of EDC	North: Brahmaputra river/Kumargaon
	South: Bird Sanctuary
	West: Sitolia Village
	East: Samukhjan Village

Table-A: Key Information of the EDC

Source: EDC Records & Discussions during PRA Exercise in March 2017

## **3.2 Brief Details of the Executive Committee**

The brief details of Executive Committee & General Body of the EDC are contained in the table, which is given below.(**Appendix IV**- Signed list, **APPENDIX V-** Group photo of the EDC members)

Name	Ag	Address	Educational	Phone No	Designation
	e		qualification		
Sri Bimala Prasad 37 S/O - Chandra Kanta		HSLC Passed	9854608790	President	
Chungkrang		Chungkrang			
		Village-Namoni			
		Milonkur			
Sri Bonomali	58	S/O Lt. Pua Ram	HSLC	9678479182	Member
Bora		Borah			Secretary/
					Beat officer
Sri Arun Jyoti	25	S/O –Sanjib Doley	HS	8135807945	Member
Doley		Village-Namoni			
		Milonkur			
Sri Surjya	34	S/O - Chandra Kanta	B.A Pass		Member
Chungkrang		Chungkrang			
		Village-Namoni			
		Milonkur			
Nabin Pegu	45	S/O-Adadung Pegu	HSLC		Member
Sri Digonta Doley	42	S/O-Au Ram Doley	HSLC		Member
Sri Pradip Doley	43	S/O-Lt Prati Nath	Illiterate		Member
		Doley			
Sri Jyoti Prasad	31	S/O-Ukudhar Pegu	Illiterate		Member
Pegu					
Sri Boben Pegu	30	S/O-Hiranoy Pegu	HS		Member
Miss Ailesh Pegu	50		Illiterate		Member
Smt Nabanita	38	D/O- Kiron Pegu	Illiterate		Member
Pegu					
Smt Anita Kaman	40	D/O- Ramakanta	Illiterate		Member
		Kaman			
		Village- Bhahir			
		Milonkur			
Smt Kirish Doley	42	D/O-Lt Tatjung	HSLC		Member
		Doley			

**Table-B: Brief Details of Executive Committee** 

		Village-Bhahir			
		Milonkur			
Sri Utpal Doley	45	S/O-Lt Ahu Ram	HSLC		Member
		Doley			
		Village-Namoni			
		Milonkur			
Sri Basanta Mili	45	S/O-Lt Jiten Mili	HS	7399286133	Member
		Village-Ujoni			
		Milonkur			
Sri Gobindo Mili	27	S/O- Daya Ram	HS		Member
		Doley			
		Village-Namoni			
		Milankur			
Manoj Pegu	42	S/O-Ukudhar Pegu	HSLC		Member
		Village- Namoni			
		Milonkur			

Source: EDC Records

## 3.3 Households & Population Composition

The village has total 300 households, out of which 151 households are BPL (Below Poverty Line) households. The total population of the village is 2500 persons. As per census 2011, the total population was 1580 out of which 820 are males while 760 are females. From the total 300 household 217 number of households were surveyed in the month of March, 2017. The following data and information were derived from the survey-

## **Table-C: Demographic Profile**

Demography						
No of						
Category	Households	Male	Female	Total		
OBC	1	3	2	5		
ST	216	624	637	1261		
Total	217	627	639	1266		

The total population of the surveyed households is 1266 of which 627 are male and the rest 639 are female members. The population includes majority of Schedule Tribe (ST).

From this, it is inferred that:

- (1) The average number of persons in a household is 5persons.
- (2) The sex ratio is 101 females per 100 males in the village.

Age and Sex Distribution						
Age Class	< 5 years	5-18 years	18-45 years	45-60 years	>60 years	
Male	57	181	283	60	46	
Female	98	187	271	52	31	
Total	155	368	554	112	77	

## **Table-D: Age Group Distribution**

## 3.4 Education & Skills Development

The education profile of the EDC is given in Table E below.

### **Table-E : Education Profile**

Age class	Primary	Mid dle	High School	H.S	Gradu ate	Masters	Illiterate
<25 years	73	89	110	49	10	0	43
>25 years	169	180	118	53	21	0	178
Total	242	269	228	102	31	0	221

Over 68.87 % of the population is found to be literate.

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

- (a) Agriculture
- (b) Weaving
- (c) Bamboo and cane craft
- (d) Ethnic beverages and food items

### 3.5 Land Use Pattern

The population is largely dependent on Agriculture and Livestock.

From the land-use pattern of the village, it is seen that the land-use in the village is as follows:

Crop Land: 45% Tree Cover:8 % Habitation: 35% Water Bodies: 9% Barren Land: 3% **3.6 Land Holding Pattern** 

From the type of households as per land-holding, it is seen that:

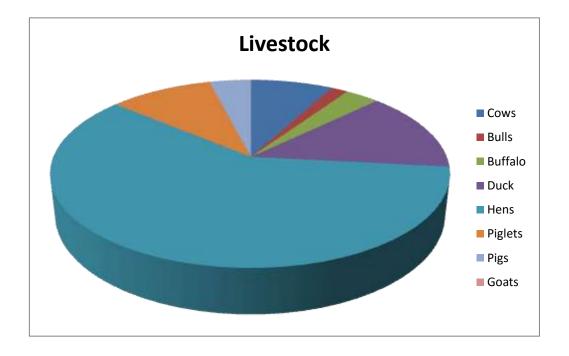
- 58 % of the households are marginal farmers (less than 2 Ha)
- 21 % of the households are small farmers (2-10 Ha) and
- 20 % of large farmers (>10 ha.)

## 3.7 Livestock

The main types of livestock possessed by the households include:

Sl.No	Livestock	Number
1	Cows	400
2	Bulls	80
3	Buffalo	167
4	Duck	700
5	Hens	3000
6	Piglets	500
7	Pigs	200
8	Goats	40

**Table-F: Livestock Details** 



## 3.8 Village Infrastructure & Communication Facilities

In any community; the availability of basic infrastructure enables the development of sustainable livelihood options. The present condition of infrastructure in the village is not satisfactory. This gives the present status of the village infrastructure.

SL.	Point Infrastructure	Location	Number (if	Approximate	Condition and
No.		inside or	applicable)	Distance from	status present
		Outside		village, if	use
				outside	
				(m/Km)	
1	Bus stand	Outside		4 km	Poor
2	Primary Health	Outside		5 km	Poor
	Centre				
3	Primary School	Inside	3		Poor
4	Middle School	Inside	1		Poor
5	High School	Outside		3 km	Good
6	H.S School	Outside		15 km	Good
7	College	Outside		15 km	Good
8	Post Office	Inside	1		Fair
9	Bank	Outside		26 km	Good
10	Telephone	Outside		26 km	Good
11	Anganwadi Centre	Inside	2		Fair
12	Gram Panchayat	Outside		7 km	Good
	Office				
13	Revenue Circle Office	Outside		26 km	Good
14	Police Outpost/Thana	Outside		26 km	Good
15	Forest Beat Office	Outside		7 km	Good
16	Forest Range Office	Outside		41 km	Good
17	Railway Station	Outside		100 km	Good
18	Drinking Water	NILL			
	Sources				
19	Community Hall	NILL			
20	House with	60			
	Electricity				
21	Street Lighting	NILL			
22	No. Tractors	Inside	2		
23	No. of Power Tillers	Inside	1		
24	Temple/ Namghar	Inside	7		Good

25	District Headquarter	Outside	45 km	Good
26	No. of Vehicles (	NILL		
	Cars/ Trucks)			
27	No. of JCB	NILL		
28	Nearest Market	Outside	6 km	Good

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

**Physical Infrastructure:** The physical infrastructure of the village is not satisfactory. There are no paved roads, proper electricity connectivity, water supply, mobile network etc. There is no public means of transport and communication. The villagers travel by bicycle and private vehicles at higher rate of fare.

Education & Health Facilities: The village has minimal educational and health facilities. The infrastructures of the schools are poor. High schools and colleges are quite far away from the village. Health centers in and around the village have poor medical facilities. The village also lacks in sanitation facilities like public toilets.

**Govt. Offices**: The government offices (such as Police station, Revenue office, Forest Beat office etc.) are located at a considerable distance, which gets amplified as the villagers do not have access to regular public transport from either the habitation or from nearby areas.

**Financial Inclusion**: Facilities for financial inclusion like bank and post office are located at a considerable distance from the habitation. Hence, a very few community members have bank accounts or postal savings accounts.

## 3.9 Agriculture/Crops

The above shows that the following are the main crops grown in the village.

Kharif Crops: Paddy(Sali paddy,Boro paddy)

Rabi Crops: Vegetables

Maximum numbers of households are involved in growing crops like Paddy, oilseeds and vegetables.

The production and yield of these crops is given as follows:

- (a) Paddy: Production 1888quintal; Yield: 30 quintal/ha
- (b) Oil seeds: Production 819 Quintal; Yield: 15 quintal/ha
- (c)Vegetables: Production 122 quintal; Yield: 15 quintal/ha

## 3.10 Fodder Availability

The village depends on the nearby forest. The main sources of the fodder in the village are as follows:

- a) Local crop land
- b) Market
- c) Fringes of Bird Sanctuary

## 3.11 Markets

The main markets used by the community are as follows:

(a) Grocery / PDS : Dichangmukh at 7km away.

- (b) Weekly / Bi-weekly Market: : Samukhjan at 3km away
- (c) Major Market: Demow at 20km away

## 3.12 Water Resources

The main water resources with the water availability are as follows:

(a) Brahmaputra river (Water Availability: Perennial)

(b)Nassar pond.(Water Availability: Seasonal)

(c)Tube wells :200 (Water Availability: Perennial)

## **3.13 Energy Consumption**

The major sources of energy in the village have been listed below.

(a) Fuelwood: Households Depending: 300 Nos.; Source: Homestead, fringes of Bird Sanctuary

(b) Kerosene: Households Depending: 290 Nos.; Source: Nearby market

## 3.14 Socio-economic status

**Social set-up:** The village is inhabited by Mising (ST) community. They do not have caste system neither has major social divisions. Patriarchal society is followed by the community. Both men and women equally participate in socio-economic activities like paddy cultivation, rearing of livestock etc.

**Economic Condition:** The economic position of the community is not satisfactory. The main livelihood of the community is based on agro allied activities and livestock rearing. Average annual income of an individual is Rs.25, 000 to Rs. 45,000.

Additional details are available in the next section.

## 4. Livelihood assets profile and vulnerability contexts

This section deals with the livelihood assets and their current status in the village. The vulnerability context has also been analysed in the section

#### 4.1 Livelihood Assets Analysis

As per the sustainable livelihood framework (SLF) there are five most important livelihood assets i.e. Human capital, financial capital, social capital, natural capital and physical capital that are needed for livelihood enhancement in a village. The status of the five capitals have been analysed and are given below:

#### Human Capital

About 68% people in the village are literate. Only 31number people in the village have graduated and none of them have completed a master's degree. The people in the village possess a number of traditional skills like weaving, cane and bamboo craft, livestock rearing. About 300 persons in the village are involved in bamboo and cane .There are very few persons who are engaged in services and business. The people of the village are very active but alcoholism makes them less efficient.

#### **Physical Capital:**

There are 3 numbers of primary school and one M.E school in the village. There are two Anganwadi centres. There is also a play ground in the village. There is an embankment that lies to the eastern most part of the village. The village has two tractors and one power tillers. Livestock wealth includes cows 400, bulls 80, buffalo 167, duck 700, hens 3000, piglets 500, pigs 200 and goats 40 numbers. The condition of the roads in the village is poor and do not have proper connectivity to other important places like hospital, markets, schools, college etc. Majority houses of the village are made of bamboo and cane with raised platform, popularly named as *Chang Ghar*. This type of platform protects the houses from getting flooded during monsoon season and also protects from wild animals.

#### Natural Capital:

The village is bestowed with fertile soil which is good for paddy cultivation and other agricultural activities. Moreover the village is located near the river Brahmaputra which provides good scope for fishing. But during monsoon season this also becomes the cause for flood. The Wildlife Sanctuary lies to the northern part of the village. This sanctuary is famous for rare birds like bar-headed goose, greylag goose, spot-billed duck, mallards, gadwall, pigeon, garganey, shoveller, red crested pochard, common pochard, ferruginous duck, adjutant stork, kingfisher, lesser adjutant stork, open bill stork, white necked stork.

The village is also rich in bamboo, grasses, banana, simulu and few local species of trees and shrubs.

#### Social Capital

There are 6 Namphars, 2nos of temples and 1 church. In the village there is a Gaon Burha, a village headman and a religious head. While the community is very united, sometimes due to alcoholism there are disputes in the village. Women of the Mising community are good in weaving. They practise it from their childhood as a tradition. The community celebrates diverse festivals and traditional customs, especially the Bihu festival and Ali-Ai-Ligang. Ethnic food items and beverages are popular among the community. Dried fish items, smoked meat, variety of rice cakes items are widely made by the community.

#### **Financial Capital**

Branches of major banks are located in Demow, 26km from the village. About 200 persons have bank accounts and 160 people have MGNREGA job cards. Piggery, silkworm rearing and paddy cultivation are the main source of income for the community. Traditional way of money lending exists among the community. Crop land and livestock are usually kept as mortgage in turn of security. The concept of SHG and JLG is not yet popular among the villagers.

#### 4.2 Livelihood Asset Pentagon

Based on the analysis and assessment of the existing five livelihoods assets in the village a livelihood pentagon was studied. The livelihood pentagon is not balanced and gaps could be plugged by taking appropriate livelihood strategies and actions that are mentioned in the village development plan and livelihood development plan

#### 4.3 Vulnerability Context Analysis:

Milonkur village is adversely affected by flood. The inundated water from the river Brahmaputra enters the village and causes flood. Flood usually occurs in the months of June-August. The crop land gets submerged in water, and the main road connecting the village to the nearby areas also goes flooded. This cause serious communication problem as the roads gets eroded. There is wide spread of water borne disease after the flood. Beside this the village is also prone to seasonal diseases like dysentery and malaria. Dysentery usually takes the form of epidemic during July-October and Malaria affects mostly during March& April.

Pest attack and rodents also attacks crops and damage them. The attack is more prevalent in the months of September – November. There is depredation of elephant in the harvesting months of November - February causing damage to crops and houses of the village people. Other than elephant, buffalo also depredates in the cropland and damages the crops.

#### 4.4 Seasonality:

The seasonality calendar of the Milonkur EDC shows the seasonal variations of crops grown, animal depredation, occurrence of diseases and floods. Among the major crops grown in the area, Bodo paddy is cultivated from January to April, while Sali paddy from June to October. There are also other vegetables such as pumpkins, tomatoes, potatoes, cabbages and other crops such as maize and mustard that are grown in the area.

The EDC is prone to many kinds of hazards such as floods during June to September which disrupts crops and spread diseases like malaria (March to April) and dysentery (July to October). Animal depredation is another vulnerability concern for the locality. Elephants and buffalo depredation causes damage to standing crops and property.

Months	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec
	Boro Paddy				Sali Paddy							
Crops									Vegetables(Cabbage,			
									Р	umpki	in, Pota	ito
										Τοι	nato)	
		1	Maize	1							Mustar	<sup>.</sup> d
Risk					I		Fle	ood				
Factor/			Malaria				Dyse	ntery				
Hazards												
Animal	Elephant						Eleph	hant			1	
depredation	Ви	ıffalo									Bų	ffalo

## SEASONALITY CALENDER OF MILONKUR EDC

## **5. Existing plans and programs**

This Chapter deals with certain essential linkages with other key planning and execution mechanisms and processes which have direct bearing upon microplanning. The topmost among these is the Working Plans which provide an overall umbrella for sustainable development and forestry and wildlife conservation in forest areas of the State. In wildlife areas, these plans are known as Management Plan. In addition, there are several plan scheme components such as the Tribal Sub Plan (TSP), and Scheduled Caste Component Plan (SCP) which also get implemented in forest villages through the Forest Department. There are several line departments providing health, education, power, irrigation and livelihood services. Often these departments also implement schemes in the forest villages.

After the promulgation of the Assam Joint (Peoples' Participation) Forestry Management Rules, 1998 in Assam, the joint forest management got initiated, and the JFMCs and EDC were constituted in 2002. Prior to this, some working plans had prescriptions for joint forest management or constituted JFMC circles. However, the National Working Plan Code, 2014 gave the right impetus to the microplanning and has incorporated detailed guidelines to this effect. This Microplan is based on the 2014 National Working Plan Code.

### **5.1 Eco Sensitive Zone**

## **Introduction:**

Panidihing Bird Sanctuary under Sivasagar Forest Division within the State of Assam is rich in avifauna with 167 identified bird species both from resident and migratory points of view. The eco-system is basically a wetland associated with the network of the mighty Brahmaputra river system. Due to the nature of marshy eco-system the diversity of aquatic plants and animals are maximum and quite significant. Since avifaunal and aquatic animals cannot be confined with the protected area network, as such it is aimed to provide 'shock-absorbers' within the 'transition zone' of the animals by regulating certain activities around the sanctuary to minimize the negative impacts. Therefore, within the provisions of IBWL's Decision dtd. 21<sup>st</sup> January'2002, National Wildlife Action Plan (2002-2006), Decision of National Board for Wildlife 17<sup>th</sup> March'2005, Hon'ble Supreme Court's decision vide Writ Petition No. 460/2004 and within the Statuary Provisions of sections 5 C (1) of the Wildlife (Protection) Act 1972, Section 3 of the Environment (Protection) Act 1986 and Section 5 (1) of the Environment (Protection) Rules 1986, this proposal has been made to declare the Eco-Sensitive Zone (ESZ) around Panidihing Bird Sanctuary identifying the ecologically sensitive localities within the parameters of richness of

flora and fauna, rarity and endemism of species in the area within the guidelines as provided by the Department of Environment & Forests (Wildlife Division), Govt. of India

### Constitution of Suggestion Committee for Eco-Sensitive Zone of Panidihing Bird Sanctuary

A committee has been formed namely Panidihing Bird Sanctuary Eco-Sensitive Zone Suggestion Committee as per the guidelines as provided by the Department of Environment & Forests, Wildlife Division, Govt. of India.

The committee members include:

i. Sri Diganta Borboruah, AFS, DFO, Sivasagar Forest Division

ii. Circle Officer, Demow Revenue Circle

iii. Dr. Rebajyoti Stafford, Lecturer, Sivasagar College, Joysagar.

iv. Sri Biman Taye, President, Pachim Panidihing Gaon Panchayat

The committee has suggested the following parameters for framing the proposal of Eco-Sensitive Zone for Panidihing Bird Sanctuary. These include:

- i. Extent of Eco-Sensitive Zone around Panidihing Bird Sanctuary.
- ii. The requirement of the Eco-Sensitive Zone for Panidihing Bird Sanctuary to act as shockabsorber.
- iii. Suggestion for the best method land use for management of Panidihing Eco-Sensitive Zone.
- iv. Suggestions for broad based thematic activities to be included in the Master Plan for the region.

#### Significance of Panidihing Bird Sanctuary

The Panidihing Bird Sanctuary is located in Sivasagar District of Assam. It was constituted in the year 1999 vide Govt. Notification No. FRW.71/95/Pt.-6 dtd. 10/08/1999 by carving out a small portion of Panidihing RF and a major portion of Non-Cadastral land existed adjacent to the said Reserve Forest.

The Panidihing Bird Sanctuary was constituted with the following areas:-

Panidihing RF	= 2.93 sq. Km
Non-Cadastral area	<u>= 31.00 sq. Km.</u>
Total area of the Panidihing Bird Sanctuary	= 33.93 sq. Km

Panidihing Bird Sanctuary, an important bird habitat, is located in Sivasagar district of Assam within the geographical limits of  $27^{0} 4.5'$  N and  $27^{0} 10'$  N latitudes and  $94^{0} 25'$  E to  $94^{0} 40'$  E longitudes. The altitude of the area varies from 100 to 110 meters above mean sea level. It has also been recognized as an Important Bird Habitat (IBA) Site by Bombay Natural History Society (BNHS). The PA recorded 167 species of birds. The water masses of the PA forms an ideal habitat for indigenous fishes and other aquatic animals and birds.

The area comprises of alluvial flood plains of Brahamaputra river. The entire area of PA is more or less a flat ground interspersed with streams and water bodies (Beels). The main sources of water are Brahamaputra, Dishang & Dimow river. There are 14 Nos. of Beels inside the PA. During the rainy season the whole PA is flooded & at the end of the rainy season the excess water is drained out through Dimow & Dischang river into the river Brahmaputra. So, there is a water scarcity in the winter season. The PA is predominantly covered by Grass land & wetlands. The PA is surrounded on its 3 (three) sides by human habitation. There is tremendous amount of grazing pressure from cattle belonging to forest fringes villagers. Migratory birds are also visited the PA in winter session.

#### Committee for drafting notification of eco sensitive zone for Panidihing Bird Sanctuary

A committee as follows was constituted to prepare the Draft Notification for defining and demarcating of Eco-Sensitive Zone for Panidihing Bird Sanctuary vide Govt. of Assam, Environment and Forest Department Notification no. FRW.1/2007/114 dt 5<sup>th</sup> November 2014, in pursuance of Govt. of India Guideline issued vide no. 1-9/2007WL-1(Pt.) dtd. 09/02/2011:

i) Sri Y. Suryanarayan, IFS Chairperson

- ii) Dr Alka Bhargava, IFS Member
- iii) Sri C.R. Bhobora, IFS Member Convenor

This was modified vide FRW.1/2007/127 dt 24.4.2015 as follows:

- i. Dr Alka Bhargava, IFS Chairperson
- ii. Sri Y. Suryanarayan, IFS Member
- iii. Sri C.R.Bhobora, IFS Member Convenor

By a partial modification vide FRW.1/2007/134 dt 17.6.2015 Sri Y. Suryanarayan, IFS was replaced by Sri Utpal Bora as member of the Committee.

Sri N.K. Malakar, DFO, Sivasagar Division was also co-opted in the committee due to his extensive knowledge of the area and local requirements.

#### **Public Hearing**

As the some of the revenue area in the proposed eco-sensitive Zone also falls under the Sivasagar Revenue Circle, the Circle Officer, Sivasagar Revenue Circle was also included in the Suggestions Committee and reconstituted as follows:

- i. Divisional Forest Officer, Sivasagar Division
- ii. Circle Officer, Demow Revenue Circle.
- iii. Circle Officer, Sivasagar Revenue Circle.
- iv. Dr. Rebajyota Stafford, Lecture, Sivsagar College, Joysagar
- v. President, Pachim Panidihing Gaon Panchayat

A notice was published in the daily "Dainik Janombhumi" dtd. 02/06/2015 to announce public hearings on 10/06/2015 and 11/06/2015 at 3 (three) locations. All the stakeholders and the suggestion committee members were invited to be present in the said public hearing.

As per the recommendation of the above committee the entire Panidihing R.F. should be included in the proposed eco sensitive zone. The stakeholders i.e. forest villagers of Panidihing R.F. were invited on 23.06.2015 at Demow Forest Beat Office for discussion over the inclusion of Panidihing R.F. in the proposed ESZ. The Circle Officers, Dimow; Councillor, Pachim Panidihing Panchayat and the forest villagers were present. The forest villagers agreed to the inclusion of Panidihing RF in the proposed Eco-Sensitive Zone.

#### Legal Status of land in the proposed eco-sensitive zone

The Eco-sensitive Zone is proposed on forest and revenue land. Some of the revenue land is owned by the patta holders.

Area in forest land	21.39 sq. km
Area in revenue land	233.45 sq. km
Total	254.84 sq. km

#### The broad based thematic activities to be included in the Master plan

(a) The people of the northern fringe localities within the Eco-Sensitive Zone are very poor and their livelihood is basically cattle rearing, which are mostly unproductive cows and buffaloes. The people rear cattle in large number and let them loose to graze in the open areas including the PA. Grazing by large number of cattle will cause destruction to the eco-system not only of the proposed Eco-Sensitive Zone but also that of the PA. So, it shall be aimed to regulate the same through introduction of high breed cattle and promote stall feeding for improved returns to the owners as well for protection of the PA and Ecosensitive zone

- (b) The big land masses in between River Brahmaputra and the P.A. within the proposed Eco-Sensitive Zone, are lying idle and may be taken up for afforestation activities through Eco-Development Committees (EDC). These would enhance the habitat of elephant/wildlife. This EDC would be associated in protection and conservation of the biodiversity of the Eco Sensitive Zone.
- (c) Some of the people around the Eco-Sensitive Zone are earning livelihood through fishing. In order to safeguard the livelihood of the people of the Eco-Sensitive Zone, it shall be aimed at encouraging scientific fish-farming among the communities within the Eco-Sensitive Zone for improving the economy of the people and better safeguard of the Eco-Sensitive Zone. Alternate income generating options would also be introduced for these communities, including the EDCs, to decrease the pressure on forests for livelihoods.

#### Details of land use pattern within the proposed Eco-sensitive Zone

The economy of the fringe of PA and forest villagers is mostly based on agriculture, fishing & animal husbandry. Almost all the population are poor and some of them are below poverty line also. The domestic cattle of the Khutis (cattle herder) tend to graze inside the protected area. Many families of the forest fringe villages have been traditional fishermen. Fishing activities are conducted in mainly in beels (wetland) & Brahmaputra river.

a)	Agricultural activities include paddy cultivation,	:	70% approx
	pisciculture, sericulture, rearing cattle etc.		
b)	Unspecified forests including bamboo cultivation	:	10% approx
c)	Human settlement, market, road & bridges, industry	:	20% approx
	etc.		

#### Conclusion

The proposed Panidihing Bird Sanctuary Eco-Sensitive Zone shall minimize the negative impacts of human activities by regulating some of the activities and prohibiting the more deleterious ones as necessary for ecological sustenance of the area. The people residing within the zone as well as the fringes of the PA will be associated in eco-restoration activities. Hand in hand with conservation and protection, it would be the endeavor to improve the living standards of the people within the Eco-Sensitive Zone of Panidihing Bird Sanctuary through eco-friendly activities as detailed in the Master Plan to be completed after final notification of the eco-sensitive zone.

## 5.1.2. No. Development Zone

No development Zone in nearest of Panidihing Bird Sanctuary.

## 5.2 Linkage with the Tiger Conservation Plan(TCP).

No tiger reserve are under Sivasagar (T) Division, Sivasagar

## **Eco-Development Committees:**

. In each villageIn 1995-96, the Government of India decided to implement The India Eco Development Project as a five-year pilot project in 7 protected areas. The IEDP envisaged Ecodevelopment as a strategy that in to conserved biodiversity by addressing both the impact of the local people on the protected areas and impact of the protected areas on local people.

As on today there are 15 registered EDCs under Sivasagar (T) Division, Sivasagar FDA. Eco Development Committees will be formed in all the fringe villages bordering Panidihing Bird Sancutary on the periphery of the P.A.. A Confederation of EDCs comprising of representatives of all the EDCs would be constituted and have been registered, Self Help Groups will be formed for different income generating activities. Existing Eco-Clubs under National Green Corps in the fringe village schools of the area will be converted to Nature Clubs. Wherever Eco Clubs are lacking, efforts would be made to constitute them. The Nature Clubs may also include institutions and organisations formed independently to educate people on environment and its values.

Livelihood Support Initiatives through Village Micro Plans:

Effective PRA exercises and socio-economic surveys in the fringe and forest villages would be conducted with the help and support of local NGOs and Institutions in order to make micro plans for the villages. With the help of the micro-plans, livelihood support to the villagers will be provided through various income generating activities (IGA).

The Eco Development programme of the Panidihing Bird Sanctuary has been undertaken with the following objectives-

- To create a congenial relation between the Panidihing Bird Sanctuary management and the

people, this will act as an effective barrier against attempt of poachers and miscreants.

- To improve capacity of Protected Area management to conserve resources of the Sanctuary and to achieve local co-operation in achieving Sanctuary management objectives.
- To develop effective and extensive support for eco-development by putting in places an effective participatory conservation model for Panidihing Bird Sanctuary.

Specific Issues to be tackled through the Eco Development Programme -

- 1. Alternative livelihood strategies.
- 2. Improvement of living condition.
- 3. Mitigating negative impact arising out of man animal conflict.
- 4. Community development work.
- 5. Non consumptive use of Protected Area through eco-tourism.
- 6. Dependence of villagers on forest resources.
- 7. Sustainable use of forest resources.

Broad strategies for operationalizing the Eco Development Programme -

- 1. Conduct participatory micro-planning and provide implementation support for ecodevelopment.
- 2. Provide assistance for village Eco-development program which specify measurable action by villagers to strengthen conservation effort of the Park management.
- Implementation of Eco-development activities which will encourage alternative livelihood and resource use, conservation and protection of the Protected Area.
   Other suggested initiatives are-
- Livelihood Support Initiative through Village Micro-plans
- EDC Livelihood Support Initiative:
- Mitigation of Human Wildlife Conflicts
- Village Development Activities:
  - -Entry point activities
  - Income Generation Activities IGA)
- Human Resources Development/Capacity Building Plan

#### • Ecotourism Activities

#### **Monitoring and Evaluation**

#### Expected Commitments from the EDCs:

- 1. No destruction of PA habitat due to activities such as grazing, encroachment, illegal forest fire, illegal felling, illegal NTFP collection etc.
- 2. No poaching or illegal felling in the Protected Area.
- 3. Provision of intelligence, information and other assistance in the prevention and investigation of offences and offenders.
- 4. Facilitating registration of all fire arms in the village.
- 5. Ensuring 100% immunisation of village livestock.
- 6. Participation in sustainable eco tourism without damage to the PA habitat.
- 7. Maintenance of cordial relationship with the PA management.

Microplan Implementation Strategy: Micro-planning support teams composed of protected area personnel, NGOs and villagers will assist village communities to develop and implement Microplans on a continuing basis. Micro-plan should accommodate all issues such as guidelines, investment criteria, training programme, schedule, and commitment etc. so as to ensure achieving the set objectives. Strengthening of EDCs should be carried out in the fringe villages of the Reserve Forest buffer area components. The rural development works in the fringe villages can be taken up in collaboration with other line departments. The monitoring and evaluation of the eco development activities will be carried out by other than the implementing agencies. Local NGOs, Institutions, university can be asked to evaluate the ongoing activities. All the eco-development programmes should have in- built Monitoring and Evaluation mechanism so as ascertain the progress in right direction and also keep the ongoing activities in right track through timely corrective measures.

#### **5.3 Forest Department Initiatives in the past**

Milonkur EDC is a newly identified EDC. No fund allotted to the EDCs so far.

#### 5.4 Schemes of other departments

No scheme has been undertaken by other departments in the EDC.

## MILONKUR ECO DEVELOPMENT COMMITTEE PANIDIHING BIRD SANCTUARY, SIVASAGAR FOREST DIVISION

Micro-Plan

(2016-17 to 2026-27)

PART-II

## 6. Micro plan Objectives, SWOT and GAP Analysis

#### 6.1 Micro plan Objectives

A village level Micro-Plan is a village development plan and forest development plan, which is needbased and site specific, commensurate to available resources. As the unit of the plan is small, it is called a micro plan. The Micro plan tries to meet the twin objectives of:

- i. Enhancing livelihoods
- ii. Biodiversity conservation and maintaining the ecological balance

In India, micro-plans have become an integral part of the joint forest management approach adopted by the Government of India. In this context, a micro-plan is a simple document prepared with the active participation of the community members. The community (village) is the unit for such micro-planning. The document aims to link local forest based resources to local needs and programme objectives of the Forest Department. As per the JFM Guidelines of 2000, the Forest Officers and EDC should prepare a micro plan after having detailed PRA exercise in the village. The micro-plans of the EDC are to be incorporated into the working plans of the Forest Department.

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 the following Participatory Rural Appraisal (PRA) process undertaken by the community and personnel of Rashtriya GraminVikas Nidhi (RGVN) in month of March 2017. The various steps followed are enumerated briefly below:-

- a) Community meetings organized at the outset in March 2017 to discuss the objective of the project and obtaining their cooperation to gather the required information about the community and its contexts;
- b) Collection of the baseline data on the community and its contexts as per the available formats;
- c) Validation of collected information through community discussions held thereafter; and
- d) Preparing the outline of the Action Plan as per the community participation and feedback.
- e) The micro-plan has been compiled by RGVN based on the project guidelines. The document has been discussed and finalized for adoption by May, 2017.

#### 6.2 Need Assessment and GAP Analysis

Based on the resource assessment, capacity assessment, livelihoods assets mapping and vulnerability assessment through focused group discussions, PRA exercises, village level and household level survey, the need assessment, gap analysis and SWOT analysis was carried out. The action plan, livelihood, village development strategies and forestry development plan were conceptualized for the JFMC/EDC primarily based on this analysis.

#### **Training Need Assessment:**

- a. Capacity building of communities through regular awareness programmes on important development issues like Forests and Biodiversity, Sustainable development, climate change issues, Gender issues, Financial inclusion, importance of WATSAN, Soil and water conservation, Flood management should be carried out. A mechanism for the same is proposed in the action plan for village development.
- b. Skill Development: Conducting regular review of livelihood skills and providing specialized training on use of equipments and tools and processes and procedures for livelihood enhancement to be conducted on a regular basis as proposed in the action plan for livelihood development.

#### **GAP** Analysis

- Flood affected area
- Poor road connectivity
- Lack of infrastructure
- Poor traditional knowledge
- Lack of market linkage

#### 6.3 SWOT Analysis

The SWOT analysis was carried out through participatory approach by involving both male and female members of the community.

#### Strengths

- i. Weaving tradition by women(skilled)
- ii. Traditional knowledge of livestock and silkworm rearing
- iii. Fertile cropland
- iv. Bamboo craft

#### Weaknesses

- i. Lack of technical knowledge
- ii. Alcoholism
- iii. Lack of access to vocational institutes
- iv. Lack of interest in commercialization

#### **Opportunities**

- i. Weaving modernization and commercialization
- ii. Handicraft up gradation
- iii. Livestock modernization especially piggery
- iv. Dairy farm

#### Threats

- i. Flood and erosion of village connecting roads
- ii. Animal depredation
- iii. Cultural lag
- iv. Spread of diseases among humans and livestock
- v. Rise in price of essential goods and commodities

#### 6.4 PRA Exercise

Appendix VI(A) to VI(D) gives the **PRA** maps

Team from RGVN Guwahati carried out PRA exercise in Milonkur village in the month of March2017. The following are the details

Date: 29/03/2017.Location:Near LP School

#### Numbers Present: 30

In Presence of: EDC office bearers, Village Headman, community members, Forest department personnel.

Awareness and orientation programme was conducted at village level before taking up the participatory mapping and transect walk. The main themes covered during awareness and orientation included the following:

- (a) Participatory Planning
- (b) Participatory tools & Methods
- (c) Importance of Microplanning and role of EDC
- (d) Environmental issues
- (e) Climate change and Climate variation
- (f) Ecological balance and Ecosystem management (traditional and scientific)

- (g) Sustainable livelihood Framework
- (h) Livelihood Assets Pentagon and importance of social capital
- (i) Cluster formation & SHG , Financial inclusion
- (j) Marketing and Value addition
- (k) Development agenda and its relationship with environment and ecological balance
- (l) Gender Issues and gender equality

**Observations**: The communities actively participated during the discussions and PRA exercise. The following important points have emerged:

- The EDC has been recently formed i.e. in the month of January 2017.
- There have been very few awareness and orientation programs in the EDC in the past.
- They appreciated the importance of micro planning and were very supportive and cooperated during the micro planning process.
- It was for the first time that Under the APBFC the NGO has come and interacted with the community and created awareness and proper orientation not only about the project but also on the development issues including environmental and ecological aspects to growth and development.
- The communities have good local wisdom and traditional knowledge regarding the environment, forestry and other livelihood issues like pest control, livestock management etc.
- They shared their concern over the climate variation and its ill effects on agriculture and health in the village. They are keen to learn more on the scientific facts about climate change issues.
- A sense of importance was observed among the people as they understood the important role they had towards reducing causes leading to climate variation by protecting the nearby forests and a sense of ownership seems to be gripping them boosting their self esteem.
- The EDC is inhabited by Mising(ST) community. They are rich in traditional customs and traits.
- Most households of the community have tools for weaving and silkworm rearing
- Piggery is very popular among the community. Almost all the household has pigs in their courtyard.

**Community Need Assessment**: Based on the PRA exercise, Focus group discussions, consultations with village community, EDC members, forest staff and other stakeholders the Village Development plan and Livelihood development Plan was prepared for the EDC. Through the participatory approach the community Need Assessment was carried out. The people's needs can be categorized as follows:

#### **1. Structural Needs**

#### 2. Non Structural needs

These needs can be classified further into long term needs and short term needs. The details of the community's needs are given in the village development plan.

The structural needs of the people have direct and indirect linkage with livelihood improvement. These include improvement of infrastructure like roads, school buildings, Health care infrastructure, drinking water supply system, water tanks, ring wells etc. Construction of toilets, community halls and training sheds, market sheds.

The non structural needs of the people include provision for skill training, provision of veterinary services, health care services, mobile doctors team, requirement of teachers for schools in the villages, capacity building through training and awareness on financial inclusion, SHG and cluster formation, provision for raw materials, village maintenance & development fund/ community fund for EDC, Value addition of traditional products and marketing linkages. Exposure visits to best practice sites relating to joint forest management, community participatory project cites, artisans villages and participation in melas, trade fairs etc.

#### 7. Village Development Plan

Considering the long term and short term needs for village development a village development plan was prepared in consultation with the community members as well as the EDC members. The measures planned by the community members for the village development are as follows:

- a) The village is adversely affected by flood and erosion. There is urgent need for flood protection measures. Building of highlands in the village would be beneficial for the villagers during extreme floods.
- b) The village connecting road is very poor. Construction of paved roads and culverts would benefit the villagers in transportation and communication with the main centres of the district.
- c) The village does not have permanent medical facilities. There are very few Anganwadi centre and just one medical sub centre. These centres have very minimal health facilities. These centres are required to be upgraded as the villagers faces severe scarcity of medical facilities arising out of poor communication facilities. This will definitely prove to be useful for the villagers.
- d) There is no proper source of drinking water in the area. The existing water sources are not tested in a long time. Water supply or PHE is to be made available so as to ensure proper source of water in the village and also to test the existing sources of water.
- e) The village do not have proper electricity connection. Provision for solar power would help the villagers to meet the daily power needs. Solar street lights will also be beneficial as the village roads are prone to floods.
- f) The villagers are unaware of the health hazard that occurs from improper sanitation. Most of the villagers prefer open defecation. Proper awareness campaign should be provided among the villagers on the use of sanitary toilets.
- g) Facilities for eco-tourism can be provided in the outskirts of the village like building of cottages, picnic spots and conducting ethnic fairs. Since the village is located at the fringe of Panidihing Bird Sanctuary, it has ample scope to showcase its ethnic traditions and customs to the tourist. It would generate income and promote the eco-tourism which will further bring holistic development of the community.

#### 7.1 Ranking of EPA

For village development, the community proposes to take up a number of Entry Point Activities. The EPA includes infrastructure development and skill development and both are directly linked with other.

### A short term activity

Rank Village EPA as ranked		Details	Budget in Rupees	
1	Construction of Community hall	Length-50 ft Breadth -30ft	14.0 lakhs	
2	Requirement of furniture utensil etc.	Screen 30 nos. Chair 100 nos. Table 3 nos. Tarpaulin 3 nos. Generator set 1 no. Utensils etc. L/s	1.5 lakhs	
3	Installation of solar light	In 10 different place of the village road L/s	3.0 lakhs	
4	Distribution of Tubwell	150 nos, tubwell to the 150 households @ Rs. 15,000/-	22.5 lakhs	
5	Improvement of Village road	3 K.M. @ Rs. 1,00,000/-	3.0 lakhs	

#### B. Long term activity

1	Construction of Boundary wall	i. Around Milonkur L.P School - 200 mtr ii. Around Milonkur M.E school -400 mtr ii. Around Namoni Milonkur L.P. School - 300 mtr iv. Around Nabajyoti L.P. School -300 mtr Total - 1200 mtr	
		@ of Rs. 7000 X 1200 M	84.0 lakhs
2	toilet with running	i. For Milonkur L.P School - 2 nos. ii. For Milonkur M.E school -2 nos. ii. For Namoni Milonkur L.P. School - 2 nos.	

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45

	Boys	iv. For Nabajyoti L.P. School -2 nos.	
		Total - 8 nos. @ of Rs. 1.5 X 8 nos.	12.0 lakhs
3	Construction of Club house	At the Milonkur L.P. School- 1 no. Lenght-40 ft, Breadth -30 ft,	5.0 lakhs
4	Construction of RCC Bridge	3 nos on the road from Ujoni Milonkur to Namoni Milonkur Lenght-33 mtr, Breadth - 4 mtr @ Rs. 38,00000 X 3	114.0 lakhs
5	Construction of Cultural hall	At Milonkur 1 no. Lenght-50 mtr, Breadth – 30 mtr L/s	18.0 lakhs
6	Construction of Road 5 K.M.	From Ujoni Milonkur to Namoni Milonkur @ Rs. 4,00000/- X 5 K.M.	20.0 lakh
7	Improvement of Village Road	i. Ujoni Milonkur Village Road 1 K.M. ii. <u>From Milonkur Tiniali to Panidihing B. S 3 K.M.</u> Total - 4 K.M. @ Rs. 1,00,000/- X 4 K.M.	4.0 lakhs.
8	Construction of Hari Mandir	i.Ujoni Milonkur I no. ii. Namoni Milonkur I no. iii. <u>Bahir Milonkur I no</u> . . Total 3 nos. @ Rs. 15,00000/- X 3 nos.	45.0 lakhs
9	Construction of Rest House	For Visitors 1 no. Lenght-50 mtr, Breadth - 30 mtr L/s	18.0 lakhs
10	Water supply Scheme for Agriculture	At Milonkur 1 no. L/s	6.0 lakhs
1	Construction of Road Shed	3 nos. in different places @ Rs. 50,000/- X 3	15.9 lakhs

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## 8. Livelihood Development Plan

Effective PRA exercises and socio-economic surveys in the fringe and forest villages have been conducted with the help and support ofEDC members and RGVN in order to prepare microplan for the village. Various Income Generating Activities (IGA) were identified through focus group discussions and PRA. Some of the important income generating activities as identified by the communities include:- pisciculture, vegetable farming, poultry, dairy farming, apiculture, mushroom farming, decentralized nursery, tailoring, small crafts, jute crafts, bamboo crafts, candle making, incense stick making, pickle making, etc. Value addition to the products can be made by processing, grading packing/ bottling and labelling professionally. Inputs, equipments, raw materials required for the IGA were identified. A marketing platform, called Van Bazar, is proposed to be established to showcase and sell products from EDCs.

#### 8.1 Ranking

#### **Ranking of Livelihood and Skill Development**

- Weaving& tailoring
- Bamboo craft
- Piggery
- Dairy farming

#### 8.2 Livelihood Opportunities

#### Livelihood were identified as follows:

- a. Agriculture and horticulture
- b. Piggery/Livestock
- c. NTFP
- d. Skill Development in weaving and tailoring
- e. Credit Facility

#### 8.3 Agriculture & Horticulture

The main constraints are:

- (a) Flood prone area
- (b) Elephant & buffalo depredation
- (c) Lack of technical knowledge

(d) Lower local market price

The opportunities are:

- (a) Commercialization of agricultural crops
- (b) Organic farming
- (c) Mushroom cultivation
- (d) Nursery

#### 8.4 Livestock

The main constraints are:

- (a) Flood
- (b) Disease
- (c) Lack of veterinary services
- (d) Lack of scientific technical knowledge of rearing

The opportunities are:

- (a) Piggery
- (b) Dairy farming
- (c) Poultry

#### 8.5 NTFP

Constraints:

a) Lack of processing unit

- b) Lack of knowledge by community about NTFP utility
- c) Poor utility of available NTFP

#### **Opportunities:**

a) Fruits can be used for commercial processing and value addiction

b) Awareness about conservation and judicial uses of NTFP

c) Bamboo crafting can be promoted

#### 8.6 Specialized Skills

The main constraints are:

- (a) Lack of vocational training centers
- (b)Inadequate educational qualifications
- (c) Lack of financial aids
- (d) Lack of tools and machineries

The opportunities are:

- (a)Weaving and tailoring
- (b) Handicraft
- (c) Mushroom farming
- (d) Modern livestock rearing

#### **8.7 Credit Facility**

The main constraints with the reasons are:

- (a) Poor inclusion by Microfinance Institutions
- (b) Higher rate of interest charged by private money lenders

(c) Lack of knowledge about different schemes launched by the government for providing loans

The opportunities are:

- (a) Micro finance Institutions
- (b) Motivation to form SHG
- (c) Provision of coverage under different government schemes

#### 8.8 Strategic Interventions

Summarizing the suggested programmes above as strategic interventions for the Livelihood Development Plan:

- 1.Weaving & Tailoring
- 2. Piggery up gradation
- 3. Dairy farming
- 4. Handicraft development
- 5. Mushroom cultivation

#### **8.9 Income Generating Activities**

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

- 1. Agriculture and allied products
- 2. Livestock rearing(piggery)
- 3. Weaving products
- 4. Dairy farming

#### 8.10 SHG activities

SHGs of the village can plan the following activities:

- 1. Weaving & tailoring
- 2. Piggery
- 3. Dairy farming

#### 8.11 Exposure Trips

The following exposure trips are planned:

1. Good practices of JFMC/ EDC/ Livelihood in North-East and other states of India

2. Participation in melas and fairs like SARAS mela and other melas organised by TRIFED

3. Trips to nearby countries on training on bamboo treatment and handicraft/ furniture making

#### 8.12 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 VikasYojana (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) Prime Minister UjjwalaYojana
- (g) NRLM
- (h) NRHM
- (i) Bamboo Mission
- (j) Other schemes for rural development and livelihoods as found appropriate. The above convergence will yield synergies for the present plan, as well as

help in sustaining the planned works in the post-project periods.

## 9. Forest Development Plan of Milonkur EDC

This Forest Development Plan has been prepared after a detailed PRA exercise at the village level as a part of the Micro-Plan of Milonkur EDC. The objective of this plan is to meet the dual objective of conserving forest and bio-diversity and at the same time meeting the livelihood needs of the community in a sustainable manner.

The micro-plan takes into consideration the following categories of the forest of the Milonkur EDC.

- 1. Forest area assigned to the EDC by the Forest Department and
- 2. Areas to be planted on community lands and other land outside the notified forest and protected area

The status of both the above category of EDC forests is briefly discussed below.

#### i. Forest Village Management in the past.

No systematic Forest Management plan in village. It was based on traditional and indigenous knowledge.

#### ii. 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-1(A): Domestic Requirement of Forest Produce per Household of the Milonkur

Name of Forest Produce	How met at Present	Source	
Firewood	Forest &Homestead	Forest	
Timber for House	Forest & Market area	Forest & Market	
Small timber for	Forest &Homestead &	Forest &Homestead	
Implements	Market	& Market	
Pole / Bamboo	Forest &Homestead	Forest &Homestead	
Fodder from Forest	Forest	Forest & Private land	
NTFP	Forest	Forest	
Other			

EDC

Source: Discussions with Forest Department personnel & Community members

Table-2 (B): Total Domestic Requirement of Forest Produce –250 nos. (Approx)
Households of the Milonkur EDC

Name of Forest Produce	Community	Remarks
	Requirement	
	(Kg per annum)	
Firewood	300000	@ of 100 kg/per month
		for one year
Timber for House	600000	@ of 200 kg/per month
		for one year
Small Timber for	225000	@ of 75 kg/per month for
Implements		one year
Pole / Bamboo	150000	@ of 50 kg/per month for
		one year
Fodder from Forest	900000	@ of 300 kg/per month
		for one year
NTFP	150000	@ of 50 kg/per month for
		one year
Other		

### **9.2 Forest Protection Issues**

## 9.2.1. **Protection Problems**

The protection issues of the forests of Milonkur EDC have been summarized below

<b>Table-2: Protection Pr</b>	roblems of the	Milonkur EDC
-------------------------------	----------------	--------------

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

Accidental Fires	No	No
Encroachment of Forest Lands	Yes	Yes
Others		

Source: Discussions with Forest Department personnel & Community members

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

- (a) Grazing of Local Animals.
- (b) Encroachment of local people.

#### 9.2.2 Reasons for Degradation of the Forest

In the Milonkur EDC, the main reasons for degradation of forest are Grazing, Encroachment & Flood.

#### 9.3 Components of the Forest Development Plan

The following sub-section discuss the main component of the forest development plan of Milonkur EDC viz the plan for protection habited improvement, nursery development, Wetland conservation, man-animal conflict reduction, grazing plan for villagers and ecotourism plan.

#### 9.3.1 Protection Plan

The protection Plan is twofold, namely wildlife protection and secondly Forest protection in terms of control over grazing and illicit felling of trees in the reserve forest and maintenance of status quo in regards of encroachment as well as to over the illegal fishing to be stop in Panidihing Bird Sanctuary.

#### Wildlife Protection:

The Protection Plan given below discusses the measures for the protection of Panidihing Bird Sanctuary. The Forest Department has constituted Local Protection Squad from the youth members belonging to the villages involve in crop protection. They are provided with equipment like crackers, torches and battery. However, there are certain issues such as

- 1. Issue of Uniform and shoes
- 2. Issue of training and skilling
- 3. Lack of scientific methods and inputs

Therefore, in view of the above, the following are prescribed:

1. They should be provided minimum wages/ honorarium

- 2. The squad should be made at par with Village Defence Party (VDP)
- 3. The squad should be well armed with equipments such as boots, raincoat, uniform, torch lights, batteries and other required accessories.
- 4. Regular training and motivational camps to be held for the Local Protection Squad
- 5. EDC to monitor the works and performance of the Local Protection Squad consists by youths of villages every month.

#### **Forest Protection**:

As revealed in the PRA, the communities are dependent upon the Panidihing Bird Sanctuary for their daily requirement of firewood, grazing and timber. Inorder to further degradation of the habitat, the following measures are prescribed

- 1. All the EDC households to be given an alternate source for cooking such as Biogas (gobar gas), solar cooker, other modified fuelwood burner, LPG etc.
- 2. All the EDC household to be supplied with alternate sources of energy for lighting etc. such as solar/ wind/ hybrid energy solutions
- 3. The grazing pressure should be reduced gradually. (Village Grazing Land)
- 4. The EDC should strictly monitor the entry of villagers or any outsiders inside the Wild Life Sanctuary without permission.
- 5. The EDC should create awareness among the people so that fishing is stopped totally within the sanctuary area.
- 6. The EDC should ensure that degradation of the habitat inside the sanctuary should be stopped by creating awareness among the people. Proper authorities are to be informed in case of violation of the rules and sections as per the provision of Indian Wildlife (Protection) Act 1972.
- 7. The EDC should take active part in the restocking of the degraded areas of the Panidihing Bird Sanctuary and habitat improvement plan undertaken by the forest Department. A habitat improvement plan where the communities can participate has also been presented in the next section.

#### Habitat Improvement Plan:

The Panidihing Bird Sanctuary famous for migratory and indigenous birds as well as various species of local fishes and reptiles. It is also the home of verity wild life like Great Crested Grebe, Little Grebe, Spottedbilled Pelican, Rosy Pelican, Cormorant, Little Cormorant, Darter, Grey Heron, Purple Heron, Large Egret, Intermadiate Egret, Little Egret, Pond Heron, Chiness Pond

Heron, Cattle Egret, Night Heron, Chestnut Bittern, Yellow Bittern, Verities of Storks, Ducks & Geese like Barheaded Goose, Greylag Goose, White fronted Goose, Pintail Duck, Common Teal, Spotbilled Duck, Eggles & Vulture, Falcons, Plovers, sandpipers, Pigeons, Doves, Parrots, Cuckoos, Owls, Kingfishers etc. and local fishes like Kuchia, Chenga, Chegeli, Sal, Goroi, Sol, Magur, Bhecheli, Kholihona, Singi, Bhangon, Hingora, Kanduli, Pabho, Chelkona, Dorikona, Gangatoop, Borali, Kawoi etc.

The following Habitat Improvement works are prescribed to be undertaken with the help of the EDC:

- 1. Removal of encroachment beyond the notified village boundaries
- 2. Plantation of Species for wildlife in the degraded area / encroachment area.
- 3. Large Plantation of fuel wood and fodder species in the village area.
- 4. Fuelwood species could be short rotation crops of 10 to 15 years after which the harvest should be shared with the EDC. The intermediate thinning also needs to be shared with the EDC.
- 5. Thinning from other plantations also to be shared with the EDC.
- 6. The EDC should be involved in all habitat improvement works including weed removal and the disiltation works.

#### Nursery Development Plan:

Nursery is an excellent source of livelihood arising out of forestry activities. The following are prescribed:-

- 1. The EDC should develop a 0.25 Ha Nursery for polypots and naked bed seedlings.
- 2. Each seedling could be sold at Rs 5-8 to the department and at slightly higher pieces to other MoU to be entered into by the EDC and DFO/Forest Department in this regards.
- 3. The nursery should be of fruit bearing, important forest species and medicinal plants.

#### Wetland Conservation Plan:

Panidihing Bird Sanctuary is a unique place of wetland ecosystem with diverse flora and fauna. It is the prime habitat for partial habitat of Asiatic Wild Elephant& Wild buffalo. Apart from this it acts as roosting and nesting ground for migratory and indigenous water birds. However this unique wetlands eco system is confronted with several problems such as shrinkage in size and depth of the water bodies due ti heavy siltation and choking of water bodies by water hyacinths. The following prescriptions are made for wetland conservation.

1. The wetlands in the village area to be de-silted thoroughly.

- 2. Local variety of fish alone to be cultured in the village wetlands
- 3. Fishing to be prohibited by the EDC, and all income to be deposited in the EDC account.
- 4. Sprinkler irrigation to be used
- 5. Crops needing less water to be promoted along with organic manuring.
- 6. The wetlands on the north of the embankment to be desilted.
- The EDC should not allow any fishing outside the village areas in the sanctuary. Heavy penalty should be imposed upon the defaulters.
- 8. Conducting extensive research on various aspects of wetland eco-system.
- Motivation of the local farmers on the use of local organic manure/pesticide instead of other harmful chemical pesticides in their paddy fields nearby sanctuary areas.

#### Man -Animal Conflict Reduction Plan:

Depredation from wild elephants and other animals are common. Damage to human life and property is consequent in chance encounters with wildlife. To mitigate the man animal conflict situation, the following are prescribed:-

- Small tongies/ watch towers to be created by the Forest Department to keep watch and ward on stray wildlife. The posts should be manned by people from the village on turn by turn basis.
- 2. Anti Depredation Squad to be created in the EDC
- Torches & search lights, crackers and kerosene should be supplied regularly by the Department to the Anti Depredation Squads.
- 4. The EDC should monitor the functioning of the Anti Depredation Squad
- 5. All the crops should be insured regularly
- 6. All persons should be covered under the Pradhan Mantri Suraksha BimaYojana
- 7. The Forest Department should enhance the ex-gratia grant.
- 8. The process of awarding ex-gratia should be simplified so that the affected families do not have to wait for long to receive compensation.
- 9. The EDC president's certification should be sufficient to certify that the damage has occurred.
- 10. Solar power fencing to be modified by EDC. During flood management committee should remove all the wire insulators.

#### **Grazing Plan for village**

The following prescriptions are made for control of grazing:

- 1. The EDC shall evolve novel methods for grazing control / stall feeding, develop village grazing land and fodder plantation.
- 2. High Yielding Variety cattle should slowly replace the existing cattle population.
- 3. The EDC should impose dis-incentives on families having large number of cattle.
- 4. Stall feeding to be promoted by the Forest Department
- 5. Diary Development activities to be taken up by the EDC using high milk yielding cows.
- 6. There should be a conscious plan by the EDC to stop grazing completely within next 5 years.
- 7. All cattle to be immunized regularly, and the EDC should monitor the same. No unimmunized cattle should be allowed to be grazed.
- 8. ICT could be used to study grazing pattern and suggest corrective measures.

#### **Eco-Tourism Plan**:

Bird Sanctuary is a famous for migratory and indigenous Bird with full of common fishes. The Sanctuary with its rich biodiversity resources is the favoured destination of both domestic and foreign tourists and getting the top priority as tourist destination in the state.

The following prescriptions are made in respect of eco-tourism:

- 1. Educational wildlife tourism has a great potential in Panidihing Bird Sanctuary which should be actively promoted by the Forest Department.
- 2. Home stay should be encouraged from now onwards from amongst the EDC members.
- 3. The Department should provide funding for creating home stay facilities by the village communities
- 4. A number of eco-tourism trails should be developed with the help of Forest Department and the local communities
- 5. Such eco-trails may be actively promoted by the Department.
- 6. Local tourist guides should be trained in tourism and foreign languages
- 7. Commercial tourism should be discouraged.

## **10. Implementation Strategies, Timelines and Budget**

### 10.1 Roles and Responsibility Matrix

For the three sub plans namely Livelihood Development Plan, Village Development Plan and Forest Development Plan, a matrix of roles and responsibilities has been developed. The matrices have been shown below for each of the sub plans separately.

#### Livelihood Development Plan

Stakeholder s	Planning	Manpower	Training	Funding	Production & Value Addition	Marketing	M&E
EDC	,	✓			~	~	
NGO	,	✓			~	~	
Skilling Agencies	,	~			~		
Forest Deptt	,	✓				~	
Line Deptt.	,	$\checkmark$		,			

## Village Development Plan

Stakeholders	EDC	Forest Department	Line Departments	NGO	Training Institution s	Govt of India/Corp
Solar Power		✓	✓			✓
Solar/Hybrid Street Lights		✓	✓			✓
Sprinkler Irrigation		✓	✓		~	$\checkmark$
LPG		✓			~	✓
Power Pumps		✓	✓			✓
Training Center		✓			~	✓
Community Hall cum EDC Office		~	~			
Roads		✓	~			

WATSAN	$\checkmark$	$\checkmark$		$\checkmark$
School	$\checkmark$			
Health Infra	✓	$\checkmark$	~	✓
Organic farming/ vermicompost	√	~	V	✓

### **Forest Development Plan**

Stakeholders	EDC	Forest Department	Line Departments	NGO	Training Institutions	District Admin
Forest Protection		✓				✓
Wildlife Protection		✓	✓		✓	
Habitat Improvement		×	~		~	
Nursery Development		×			~	
Wetland Conservation		✓				~
Man-Animal Conflict		×				
Grazing Control		✓	~			
Eco-Tourism		~	~			

### **10.2Finance and Budget**

The budget for the microplan has been prepared based on annual requirement of the three sub plans namely the Livelihood Plan, Village Development Plan and Forest Development Plan. The consolidated table is given below.

Sl No.	Plan	Amount (Rupees)	Remarks
1.	Livelihood Development Plan		
2.	Village Development Plan		

3.	Forest Development Plan	
	TOTAL	

## Livelihood Development Plan

SI No.	Item of Work	Amount (Rupees)	Remarks
1.	Skill Development & Training		
2.	Dairy Farming		
3.	Poultry/ Fishery/ Duckery		
4.	Computers		
5.	Trades and Callings		
6.	Handicrafts		
7	Kits and Equipment		
8	Value Addition & Certification		
9	Packaging and Marketing		
10	Exposure Visits		
11	SHG/ JLG/ Cluster Formation & Credit		
	TOTAL		

## Annual Village Development Plan:

Sl No.	Item of Work	Amount	Remarks
1.	Solar Power		
2.	Solar/Hybrid Street Lights		
3.	Sprinkler Irrigation		
4.	LPG		
5.	Power Pumps		
6	Training Center		
7	Community Hall cum EDC Office		

8	Roads	
9	WATSAN	
10	School	
11	Health Infra	
12	Organic farming/ vermi-compost	
	TOTAL	

#### **Annual Forest Development Plan**

Sl No.	Item of Work	Amount	Remarks
1.	0.25 Ha Nursery		
2.	10 Ha Fuelwood Plantation Creation		
3.	Desiltation of water bodies		
4.	Anti Depredation Squad		
5.	Crop Insurance		
6.	Life Insurance		
7.	Cattle Insurance		
	TOTAL		

#### **10.3 Action Plans and Strategies**

Each of the **three** plans namely the Village Development Plan, Forest Development Plan and Livelihood Development Plan would require short term and long term action plans strategies in order to realize the prescriptions of the Microplan. Short term strategies should focus on activities to be taken up from 0-5 years, and long term plan should focus on activities to be taken up in 5-10 years of this Plan.

#### **Livelihood Development Action Plan:**

The livelihood action plan may be divided into three parts namely, skilling, production & marketing and value addition. The most immediate want of the population is skilling. The skilling requirements needs to be viewed at basic level and advanced level. Once the trades and skill requirements have been frozen, the basic skills should be imparted within a period

of 1 year for all willing members of the village both men and women in a phased manner. During this period, some of the trainees could also start production. The most marketable outputs need to be channelized to the available markets in order to create the brand effect and assess the marketability of the production in terms of quality and value.

#### Village Development Action Plan:

The village development action plan may be divided into the short term plan and the long term. In the short term plan activities like Solar lighting, Providing LPG connections, construction of Community hall and training centre and water sanitation needs would be addressed. In the long term plan for the village the activities like construction of schools, health care facilities would be taken up. Providing improved tools and equipments for enhancing agriculture production along with water sprinklers, power pumps would be provided.

**Forest Development Action Plan:** The forest development action plan comprises of the short term action plan and the long term plan. The short term plan includes formation and strengthening of forest protection squads, Nursery development, desiltation of water bodies, formation of anti depredation squads, Tongi construction and firewood plantations. In the long term action plan activities like Plantation, Crop improvement and habitat improvement would be taken up.

#### 10.4 Institution Building, Networking and Partnership

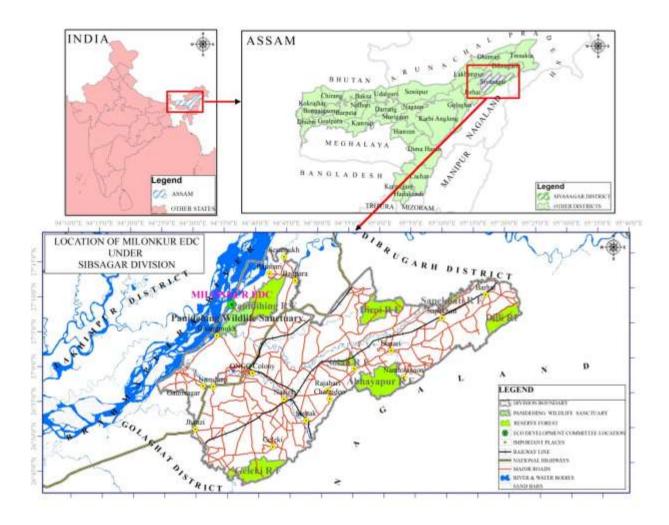
**EDC:** The EDC to be upgraded both in terms of its infrastructure assets and in terms of acting as a resource center for village and forestry development. The proposed EDC office along with the community hall in the entry point activity to be provided with modern equipment like computer/ TV and support equipment like generator etc. Building capacity of EDC members through training programs on use of computers, maintaining and updating records/ accounts keeping and village level/ forestry data on a regular basis. The EDC office to be upgraded as a resource center, an activity and training hub. Improving their networking skills and creating awareness regarding development schemes of other departments and modalities for partnership.

## LIST OF APPENDIX

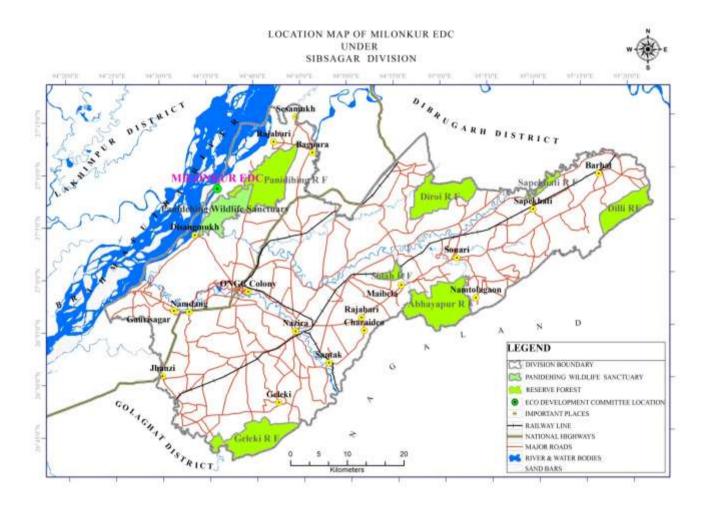
Appendix No.	Title
I(A)	Location Map of EDC in India
I(B)	Location Map of Milonkur EDC
II	Approach map to EDC
III(A)	EDC Registration Certificate
IV	Executive Members of Milonkur EDC
V	Executive Members group Photo of Milonkur EDC
VI	List of members present during PRA & FGD(Signed list)
VII(A)	Community map of Milonkur EDC
VII(B)	Resource map of Milonkur EDC
VII(C)	Hazard map of Milonkur EDC
VII(D)	Venn Diagram
VIII	Entry point Activities
IX(A)	Training list of Milonkur EDC (Proposed)
X	Photographs
XI	GPS Coordinates

# Appendix I(A)

## Location Map of EDC in India

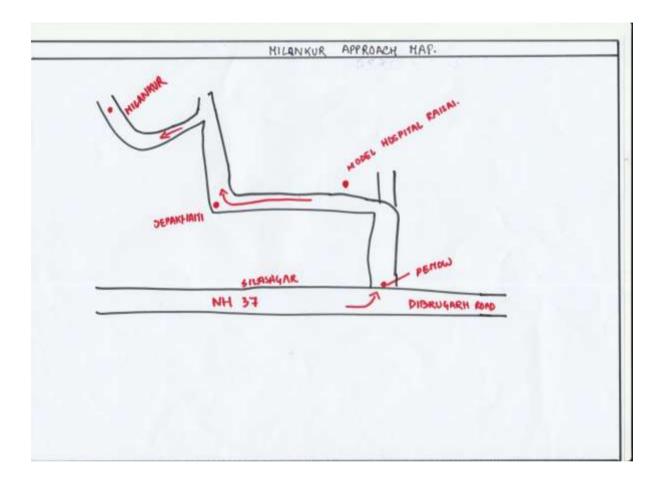


## Appendix I (B)



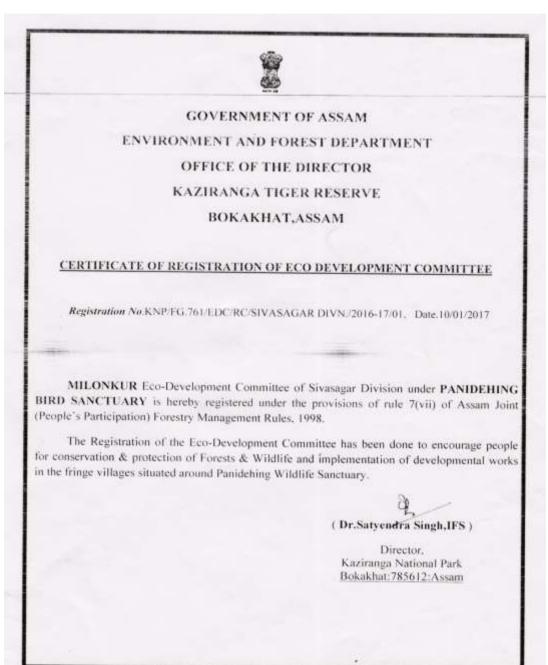
# Appendix II

## Approach map to EDC



## Appendix III (A)

## **EDC Registration Certificate**



# Appendix IV

## **Executive Members of Milonkur EDC**

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## Appendix V

### **Executive Members group Photo of Milonkur EDC**



MILONKUR ECO DEVELOPMENT COMMITTEE GROUP PHOTO Standing(left to right):1.Boben Pegu 2.Arun Jyoti Doley 3.Gobindo Doley Sitting(left to right):4.Bimala Prasad Chungkrang(President) 5. Bonomali Bora(Member Secratary/Beat Officer) 6.Basanta Mili 7. Khagen Khamti \* Some members are not in the photo

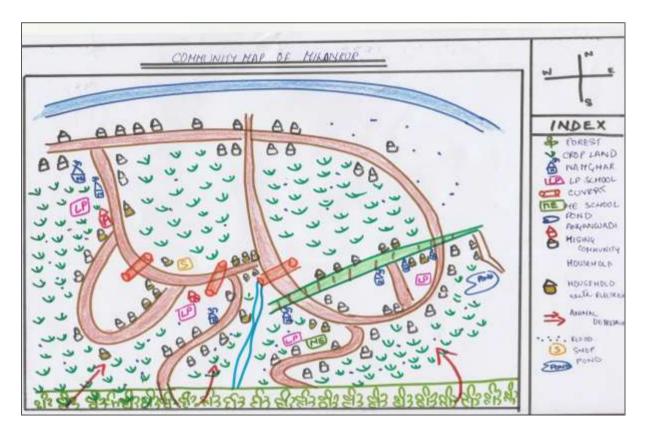
# Appendix VI

## List of members present during PRA & FGD (Signed list)

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3.	4 Birmale Prosofoninger	President	28548089.90	
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# Appendix VII (A)

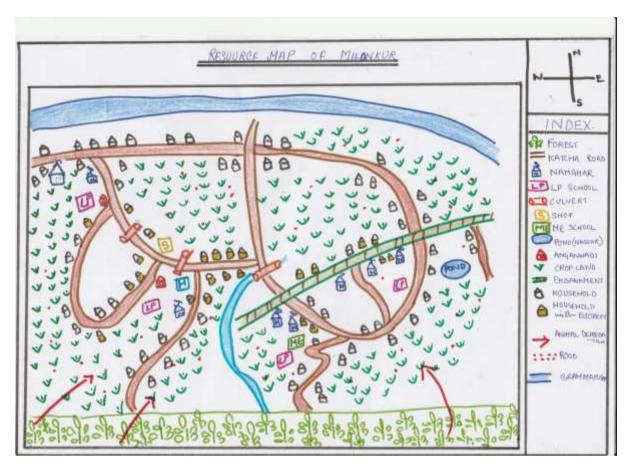
## Community map of Milonkur EDC



SI. No	Name of the Facilitator	Address	Mobile No
1	Bonomali Borah		9678479182
2	Bhaben Pegu		8011362522
3	Gobinda Doley	Milonkur	8133002559
4	Arun Jyoti Doley	Milonkur	8135807945

# Appendix VII (B)

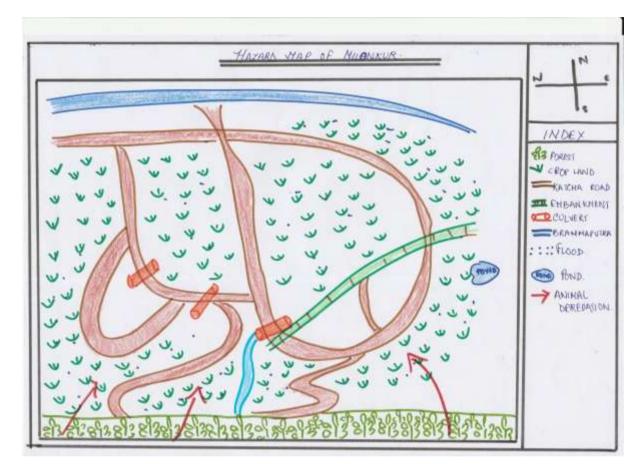
## **Resource map of Milonkur EDC**



SI. No	Name of the Facilitator	Address	Mobile No
1	Bonomali Borah		9678479182
2	Bhaben Pegu		8011362522
3	Gobinda Doley	Milonkur	8133002559
4	Arun Jyoti Doley	Milonkur	8135807945

# **Appendix VII(C)**

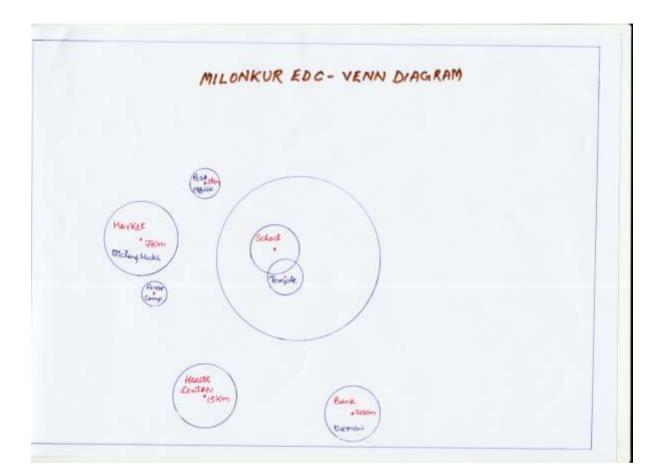
## Hazard map of Milonkur EDC



SI. No	Name of the Facilitator	Address	Mobile No
1	Bonomali Borah		9678479182
2	Bhaben Pegu		8011362522
3	Gobinda Doley	Milonkur	8133002559
4	Arun Jyoti Doley	Milonkur	8135807945

## Appendix VII (D)

Venn Diagram



SI. No	Name of the Facilitator	Address	Mobile No
1	Bonomali Borah		9678479182
2	Bhaben Pegu		8011362522
3	Gobinda Doley	Milonkur	8133002559
4	Arun Jyoti Doley	Milonkur	8135807945

## **Appendix VIII**

## **Entry point Activities**

#### <u>মিলনকৰ</u> <u>EDC</u> সম্রকালীন কামৰ বিবৰণ

হায়িক না	ন্যায়ণ ন্যায়	সবিশেষ বিষৰণ	আনুমানিক টকাৰ মূলা
5	কমিনিউটি হল নির্মাণ	s) ao x ao yo	\$8,00000/-
*	কমিলিউটি হলৰ বাবে আচৰাৰ	১) স্ক্রনি = ৩০ খন। ২) চকী = ১০০ খন। ৩) টেকুল = ৩ খন। ৪) বাচন-বর্ত্তন ৫) ট্রিপাল ৬) জেনেবেটন	3,20,000/-
*	সৌৰ চাকি	<ol> <li>২০ টা মলেকাক</li> </ol>	a.00000/-
	ট্ৰিউবেল বিতৰণ	১) ১৫০ টা পৰিয়াগলৈ চতি ট্ৰিউবেলত ১৫০০০/- x ১৫০	22,10,000/-
e	পথ মেৰামতি	<ul> <li>٥ विग्रविग x ३,०००००</li> </ul>	a.occoo/-

Divisional Forest Officer,

Forest Range Officer

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দিয়িক নাং	কায়ৰ নায	সন্ধিশেষ বিধৰণ	অনুমানিক টকাৰ মূলা
3	সীয়াৰ পৰীবেৰা নিৰ্মাণ	২) মিলনকুৰ প্ৰহা লি জুজন চাৰিওকালে = ২০০ মিটাৰ	
		২) মিলনজুল এম, ই, জুলন চাৰিওবালে = ৪০০ মিটাৰ	-
		৩) ৪৯৩ না নামনী মিলনকুৰ এল, লি, ক্ষুসৰ চাৰিঙকাৰে = ৩০০ মিটাৰ	
		৪) নবজ্যোতি এল পি স্থলৰ চাৰিওবাংহ = ৫০০ মিটাৰ	
		মুঠ = ১২০০মিটাৰ	
		প্ৰতি মিটালত ২০০০/- 🗴 ১২০০ মিটাল	¥8,00000/-
И	শৌচাগাৰ নিৰ্মাণ	<ul> <li>১) মিলমকুৰ গ্ৰল, পি. জুলৰ – ২ টা</li> <li>২) মিলমকুৰ গ্ৰহ, স্থি জুলৰ – ২ টা</li> <li>৬) ৪৯৩ না নামনী মিলমকুৰ গ্ৰল, পি. জুলৰ – ২ টা</li> <li>৬) নবজ্যোতি গ্ৰল, পি. জুলৰ – ২ টা</li> <li>ক) নবজ্যোতি গ্ৰল, পি. জুলৰ – ২ টা</li> <li>মুঠ = ৮ টা</li> <li>মুঠ = ৮ টা</li> </ul>	\$\$,00000/-
0	হ্লারখন নির্মাণ '	১) মিলমাকুৰ এল. পি. জুল প্রায়নাত ৫০ x ৪০ ফুট	@,00000/-
8	পৰ্তী মলং নিৰ্মাণ	১) উত্তমিৰ মিলসকুৰ পৰা নামনি মিলনকুৰলৈ মোহাৰ পথত পত্ৰী মলত ৩ খন ৩৩ x 8 মিঃ দৈন্দ্য	5,58,00000/-

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#### মিলনকুৰ EDC দীৰ্ঘকালীন কামৰ বিবৰণ

হৃমিক নং	তায়ৰ নাম	সবিশেষ বিবৰণ	অনুমানিক টকাৰ মূলা
¢	সাংস্কৃতিক ভৱন নির্মাণ	১) মিলনকুৰত - ১ টা ৩০ X ৫০ ফুট দৈখ্য	35,00000/-
	কাহা হিছেবি	১) উভানিৰ মিলনকুৰ পৰা নামনি মিলনকুৰলৈ ৫ কিঃমিঃ।	20,00000/-
٩	পথ মেৰামন্তি	১) উজনিৰ মিলনকুৰ গাঁৱৰ পথ ১ বিঃমি:। ২) মিলনকুৰ তিনিআলিৰ পৰা পানীদিহিং পক্ষী অভৰাগ্যলৈ ৩ কিঃমি:। মুঠ ৪ কিঃমি:	8,00000/-
2	হৰি মন্দিৰ নিৰ্মাণ	১) উজনিৰ মিলনকুৰ ১ টা ২) নামনি মিলনকুৰ ১ টা ৩) বাহিৰ মিলনকুৰ ১ টা প্ৰতি মন্দিৰত ১৫,০০০০০ টকা x ৩	80,00000/-
à	জিৰণী ঘৰ নিৰ্মাণ	১) পৰ্যন্তকৰ বাবে ১ টা ৩০ x ৫০ ফুট	\$ <del>0</del> ,00000/-
20	পানী যোগান আইনি	১) মিলনকুৰত	8,00000/-
>>	জিৰণী চৰা নিমাণ	১) ৩ ঠাইড (১০ x ১২ ফুট) প্ৰতি ঠাইত ৫০,০০০ জৈ	5,00,000/-

anno-Divisional Forest Officer, Forest Range Officer Sivasager Division, Shearen Sivasagar Range

Apprended Divisional Forest Officer, Sivenager Division, Sivenage

# Appendix IX (A)

## Training list of Milonkur EDC (Proposed)

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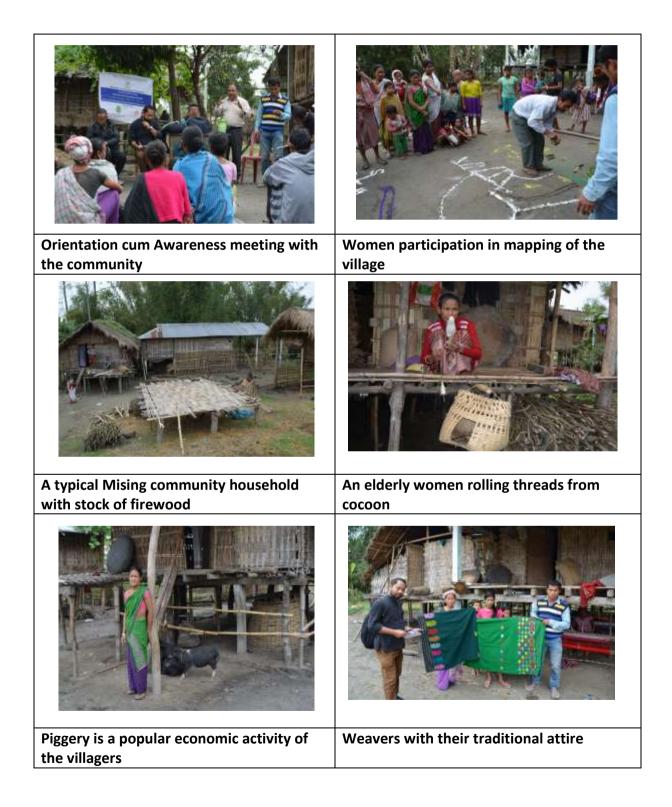
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President / Secretary Marine Economic Comment

Divisional corest Officer (T) Sivasagai Division, Sivasagar

# **Appendix X**

### Photographs



# **Appendix XI**

## **GPS** Coordinates

1. L. P. School	N-27°8'35"
	E-94°36'36.5"
2. M.E. School	N-27°9'10"
	E-94°45'6"
3. Milonkur Tiniali	N-94°36'54"
	E-27°09'18"
4. Shop	N-27°9'02"
	E-94°42'10"

Amendments Suggested	Corrections Done
A	Chapter 7 and Appendix VIII

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Divisional Corest Officer (T) Swasagar Division, Swasagar