


MICRO PLAN OF

RANGALU ECO DEVELOPMENT COMMITTEE

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CHAPTER I: INTRODUCTION

1. Defining Eco-development:

The term eco-development is used to describe an integrated, sustainable approach to environment and development. It is in the UN (1997) Glossary of Environmental Statistics as:

"..... development at regional and local levels, consistent with the potential of the area involved, with attention given to the adequate and rational use of natural resources, technological styles and organisational forms that respect the natural ecosystems and local social and cultural patterns".

Within the context of India's protected areas, eco-development as a strategy recognizes the traditional dependence of people on forest resources for domestic use as well as supplementing livelihoods and seeks to rationalise the demands of communities by facilitating alternative for resources and livelihoods. It is supposed that people would act rationally and utilize the resources sustainably so as to enhance the productivity of rural ecosystem. This entails promoting the adoption of alternative energy sources and resources for livelihoods, thereby reducing forest dependency. In essence eco development aims to strengthen nature conservation through participatory processes that empower local people to take responsibility for their socio-economic well being in ways that do not reduce the biodiversity capital maintained within the PAs.

Eco-development is a strategy for securing support from local communities and other stakeholders for protected areas management. Activities taken up under eco-development should provide a strong linkage between conservation and development; and they may include ecotourism and off-farm activities as well as providing specific alternatives to local biomass dependencies on protected areas.

Micro planning at the village level is the participatory process aimed at an inclusive identification and assessment of potential activities, including ecotourism, for promoting under the eco-development strategy. Such activities should strike a balance between conservation measures and income-generating initiatives. Often conservation measures can be realized in ways that also generate income and vice-versa. For example, villagers may be hired by the protected area management authority to augment fire control and anti-poaching patrols. The output of micro-planning is a plan, popularly called as 'Micro Plan', which explains in simple, plain language the physical, biological, socio-economic and cultural context of the village and its surrounds, together with the various activities proposed for addressing the threats to biodiversity and improving local livelihoods. The outcome of micro planning is likely to be most effective, if those members of a community most dependent of forest resources can be identified through an inclusive, transparent participatory process and prioritized for support in adopting alternative, income generating activities.

2. Micro-planning for purpose of eco-development:

Planning is an act of formulating a programme for a definite course of action. It is a blue print for a definite action within a time frame. Macro planning is a planning for mainstream development at macro level. Micro planning is a location specific planning or grass roots planning. Micro-level

planning (MLP) means detailed planning at a lower level, usually at or below a district, which takes into account the variations in the community.

Micro-planning is a term used to describe the inclusive process of engaging stakeholders in planning at a local level, usually at the smallest unit of community organisation, namely the village. It provides an effective participatory mechanism for planning eco-development within the context of protected area management. A micro-plan is the product of this process.

2.1. Key principles of micro-planning to be followed:

- **Micro-planning is not a one-off exercise:** Proper assessment of felt needs can evolve only in full consultation with all the stakeholders and that too through a multi-stage process.
- **Micro-planning requires patience:** Since villagers have their own prioritization of time and little initial understanding of the tools used during micro-planning, it is necessary for the facilitator to be very patient throughout the process.
- **Micro-planning requires ingenuity:** Sensitive situation may arise that requires a great deal of ingenuity to address, usually best resolved by one-to-one mediation.
- **Micro planning is by nature specific to the local context and cannot be replicated:** Since each village differs from others in terms of socio-economic and other parameters and hence is unique, therefore, cannot be replicated.
- **Micro planning is inclusive:** The strength of a micro plan is its inclusive, grass roots nature. It should represent the sum of the combined wisdom and aspirations of the entire village. Thus, the process of micro planning should reach out to each household to elicit relevant information.
- **Micro planning is never 'in your face':** It is essential that the facilitator is humble, respectful and mindful of the value of the time, privacy and life style of the villagers.

2.2. Micro-planning tools to be used:

- **Social mapping** – It is a group exercise which provides the physical, social and infrastructure information about the village as a whole. It is taken up in a participatory manner and gives a rudimentary sketch of the village as an entity, with each household marked on the map. The purpose of the map is to gain an insight into the existing resources of the village, as well to understand its social complexity.
- **Visioning exercise** – It is a group activity in which villagers share their dreams and aspirations for the future, then identify the main challenges and constraints to achieving their vision, and finally identify measures for removing the impediments in achieving their vision.
- **Households interviews** – This is one-to-one exercise in which the facilitator visits each household to gather basic household level information in an informal manner that is based on structured line of enquiry.

2.3. Steps for preparation of micro-plan:

There are two main steps in the process of preparation of EDC Micro-plans as mentioned below:

Step 1 –

- ✚ Orienting the facilitation team
- ✚ Developing a common vision among the protected area staff and the EDC members
- ✚ Build the Micro-plan facilitation team.

Step 2 –

- ✚ Ice breaking
- ✚ Reaching out to each village
- ✚ Socio-economic profiling of the village
- ✚ Visioning with the entire village
- ✚ Assessing forest dependency
- ✚ Writing Micro-plan

CHAPTER II: BACKGROUND OF THE KAZIRANGA TIGER RESERVE

KAZIRANGA NATIONAL PARK, legally notified as a National Park in the year 1974, is a name known worldwide for its success in the conservation history of one horned Indian Rhinoceros. It also provides a natural habitat for a number of rare, threatened and charismatic species. A symbol of dedication for the conservation of animals and their habitat, Kaziranga, with a National Park status represents the single largest protected area within the North-east Brahmaputra valley Biogeographical Province to provide long term viable conservation.

Kaziranga National Park lies between Latitudes 26°34' N to 26°46' N and Longitudes 93° 08' E to 93° 36' E. It is spread over the civil jurisdictions of Nagaon, Golaghat and Sonitpur districts in Assam with mighty Brahmaputra River on the north and verdant Karbi Anglong hills on the south.

Kaziranga National Park (KNP) is one of the most important protected areas in Assam. Spread over an area of 429.93 Sq.Km in the flood plains of Brhamaputra, it harbors the World's largest population of One horned Rhino with a population of more than 2003, Wild Buffalo (1431 Nos. in 2001) and the Swamp Deer (more than 800 Nos.) presently. Its conservation value was much recognized when it become one of the World Heritage Sites notified in India by UNESCO in the year 1985. The management history dates back to 1st June 1908 when it was first declared as a Reserve Forest. It was subsequently upgraded to a Game Sanctuary in 1916, a Wildlife Sanctuary in 1950 and finally a National Park in 1974.

Since then 6(six) areas have been proposed to be added to the existing National Park. Besides these the R.Fs. of Panbari (7.65 Sq.Km.) and Kukurakata R.F. (15.93 Sq.Km.) are also under the administration of Kaziranga National Park.

Some of the significant conservation values of Kaziranga National Park are enumerated below:

- The largest Undivided and Representative area of Brahmaputra Valley flood plain grassland and forest with associated large herbivores, avifauna and wet land values.
- The World's largest population of Indian one horned Rhinoceros (*Rhinoceros unicornis*) Wild Buffalo (*Bubalus bubalis*) Swamp Deer (*Cervus duvauceli ranjitsinghi*)



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- High ecological density of Tigers (*Panthera tigris*)
- Significant population of Asiatic Elephant (*Elephas maximus*)
- The junction of the Australasia flyway and Indo-Asian flyway exhibits considerable diversity in avifaunal species.
- Provides an entire range of habitat from the floodplains to grassland to hill evergreen forest communities.
- Considerable Research, Education and Recreation values.

Some of the major constraints that have been identified are: Poaching and other illegal activities, domestic livestock grazing, Insect/ Pathological problem, Floods and erosion, invasion by weeds, Siltation of water-bodies and problems related to infrastructure and communication needs of the park. Heavy traffic on the NH-37, growing tourist pressure and the man-animal conflict are some of the problems of lesser magnitude now, with greater implications for the future.

CHAPTER III: STEPS FOLLOWED TOWARDS MICRO-PLANNING

EDC MICRO-PLANNING PROCESS IN KTR

Orienting the facilitation team: This is the very first step of the EDC Micro-planning process in KTR, where the management staff along with the field staff (the member secretaries of the EDCs) of the KTR met with the EDC executive committee members and NGOs members in order to develop the Micro-plan for the existing EDCs.

Developing a common vision among the protected area staff and the EDC members: This is a desirable step for the protected areas which don't have management plans. Since the KTR has an existing management plan, therefore, this step was avoided. Nevertheless, the vision of the KTR was discussed during the orientation workshop among the participants. While different values of the KTR and its identified threats were discussed in the workshop. Opinions were invited from all the stakeholders to mitigate the threats.

Build the Micro-plan facilitation team: The Micro-plan process needs to be facilitated by a team trained in participatory processes and skilled in facilitation techniques. Members of the team should be available to see the entire process through to ensure consistency in approach and, for purposes of building trust, continuity. In the case of KTR, a number of experienced Forest Officers along with organisations like WWF-India, Laokhowa Buhrachapori Wildlife Conservation Society (LBCS), were part of the whole process from the very beginning.

Ice breaking and reaching out to the people: Entry into a village or household should always be undertaken in a spirit of humility, respect and patience in small groups and preferably including a lady. In case of KTR, after the initial discussion with the EDC members a general meeting was convened at the concerned EDC and the villages. All the villagers congregated where the facilitation team talked about the importance of EDC and its importance in realizing the goals of conservation. The importance of socio-economic profiling was discussed in detail in the meeting and was decided to do the socio-economic profiling of the village on a later date.

Socio-economic profiling: Members of the facilitation team split into small groups to visit each household in the village and elicit information on predefined parameters. Such visit also provide an opportunity to engage directly with the entire village at an individual level and therefore, gain a deeper insight into the livelihood concerns and issues of household members, while also accessing the information that can help to consolidate the village social map and validate the assessment of

the forest dependency and wellness ranking. In case of the KTR, as per the date fixed in the ice breaking meeting for socio-economic profiling a team was formed with the WWF members and volunteers from the EDC. An exhaustive questionnaire was prepared for the purpose and the team was given the requisite training how to approach the villagers and collect the required information for the purpose of Micro-planning. The team then entered into the village for socio-economic data collection.

Visioning with the villagers: In this phase of the work each and every person of the village was engaged. After compiling the data collected through the questionnaire, the findings were placed before the villagers for their information. The findings put light on household information, land holdings, sources of livelihood, livelihood skills, level of forest dependency, man-animal conflict, sources of energy, health issues and the like. Problem areas were almost defined, nevertheless, the villagers were asked if they wanted to add or omit some of them. Then suggestions were asked from the villagers for solving such problems. Alternative livelihood options were also discussed on the basis of the available village resources.

Assessing forest dependency and wellness: This is one of the most important steps in the process of preparing the Micro-plan for an EDC. The ultimate objective of the EDC and its micro-plan is to reduce the dependency of the fringe people on the forest by providing them gainful livelihood alternatives inside the village. The villagers were asked, in the light of the findings of the socio-economic survey, to identify the forest dependent households or individuals on their own. The ultimate objective is to be able to target the most forest dependent and poorest households in the village for assistance. The criteria for defining forest dependent and wellness are as follows:

Categories	Criteria
Forest dependency	
High	Graze livestock, collect NTFPs, collect firewood and thatching materials for own use
Medium	Graze livestock, collect firewood and thatching materials for own use
Low	Collect firewood and thatching materials for own use
Wellness	
Very poor	Landless; no regular source of income; widow; separated women; orphaned children.
Poor	Marginal land holder; day-to-day (hand-to-mouth) living.
Manageable	Less land; barely enough for the year with no savings.

Well off	Enough land; well established; government service/ pensioners; running a good business; surplus food and money during the year.
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Writing Micro-plan: The facilitation team worked closely with the EDC executive throughout the preparation of the micro-plan. The team wrote the plan and the draft plan was shared with the villagers for their approval. Though it was written in English it was discussed in vernacular medium for greater understanding of all the people of the village.

CHAPTER IV: DATA SOURCE AND METHODOLOGICAL APPROACH

Methods of data collection: For preparation of the Micro Plan both the Primary and secondary sources of data were consulted and extracted from the villages.

Primary Data Collection: The Micro Plan was prepared on the basis of primary data. To extract primary data various PRA (Participatory Rural Appraisal) techniques were used. Following are the brief discussion of the techniques of PRA that were used in the study and the criteria for selection of the sample for each technique.

For extraction of the information the Micro Plan preparation team adopted different PRA methods like direct observation, followed by time line, PRA mapping, SI (structured interview) and FGD. Prior information was given and the villagers were asked to assemble in a certain common place where they can be interviewed.

Team composition: PRA is basically a team work. The team comprises insiders and outsiders. The members from the outside interact with the insiders and jointly learn and achieve the desired outcome. For the present work the outside members were the KTR officials, WWF and LBCS members.

- 1. Direct Observation:** An understanding of the life and livelihoods of people as well as the resources of different kinds that support and sustain the livelihoods demands a direct observation of the livelihood opportunities and resources. The outsiders cannot have a better, deeper and more comprehensive analysis of the resources by just sitting and interacting with a group of people in a village. The need to leisurely walk in and around the village, walk through the fields, spend a great deal of time in directly observing the resources of various types, interact with the people on the basis of observation and learn gradually.
- 2. Time Line Analysis:** It should be noted that every village has a past and every past is full of events, incidences, happenings, experiments, etc. The past carries a great deal of experience along it and they need to be carefully studied. The best prophet of the future is past and therefore, there is a need to study the past. Time line is an important PRA tool which enables us to peep into the past.
A time line is a key events, changes and landmarks in the past, presented in a chronological order. It is a way of charting trends, showing how past events led to the present situation and illustrating recurring themes.
- 3. PRA mapping:** Rural people are the natives of the area and have a clear perception of the area where they have been living for long. They possess the ability to represent their surroundings very accurately and diagrammatically irrespective of their literary status. People can easily transfer the picture in their mind into maps. Maps are very effective and immediate source of communication.

Mapping refers to maps made or drawn by the members of the community on paper or on the ground. It also entails building three dimensional models on the ground. It is a process by which information is presented in a spatial form.

- 4. **Structured Questionnaire:** Interviewing is one of the major methods of data collection. It is defined as a two-way systematic conversation between an investigator and an informant, initiated for obtaining information relevant to a specific study.

SI is a focused interview. The interviewer under this type attempts to focus the discussion on the actual effects of a given experience. For the present study a number of questions were designed carefully to extract the socio economic condition of the villagers. Each and every household was interviewed and the questionnaire was filled up by the interviewer who was trained up in this regard prior to the household survey.

- 5. **Focus Group Discussion:** It's basically a group interviews. There are a great many uses for focus group discussion in combination with other methods or even as an independent method of qualitative data collection.

Focus group discussion is basically a group interview. A moderator guides the interview while a small group discusses the topics that the interviewer raises. What the participants in the group say during their discussions is the essential data in focus group. In action research focus group discussion has almost become the sole method of data collection.

Sample selection: Since the objective of the study was to collect socio economic data of the village and also to know about various livelihood opportunities in the village, only young adult male and female and old age people were taken as sample. Children were not allowed to participate.

Secondary Data Collection: Secondary information was collected from the following sources:

- 1. Management plan of KTR,
- 2. Books and journals: Different reports, books and journals were consulted to get the knowledge to write the Micro Plan,

CHAPTER V: BACKGROUND OF THE EDC

PRELUDE TO THE RANGALU EDC:

The Rangalu Eco Development Committee was established in the year 2007, Mr Mohan Gowala as its President. Later on Mr Manik Lal Mura became the president of the EDC. There is a general body and an Executive committee having placed Mr Naba Krishna Mahanta, Forester I, as its Member Secretary. One member of each household of the constituting villages is a general member. The executive committee is formed with 11 members who are selected or elected at the general meeting by the general members. It is interesting to note here that the Executive committee has six male members and five female members while 15% female representation are there in the general body.

TIME LINE AND HISTORY OF THE VILLAGES:

Rangalu village -

Rangalu is a village situated at both the sides of the NH – 37. Some people have inhabited the village for several decades and some have been migrated at different point of time from different places. In 1976 there were 10 – 15 households in the village which have been increased later on as a result of family expansion and migration and now there are 118 households. One Nepali family came migrating from Nepal and now there are six Nepali families which has been the result of family expansion. Six families were rehabilitated in the 1st addition of KNP. People from Gakhirakhuti, Nagaon, Silghat, etc. came and settled here in the village at different point of time. One family also migrated from Nagaon long back. The only school at the village was established in the year 1945 at the initiative of three elderly persons. Though the school was established in the year 1945, the developmental works of the school started only after 1985.

Rangalu village is abode to 118 households of different communities like Adivasi tea tribe, Bengali, Nepali, Bihari, Muslim, etc. It is a very old settlement in the area where all the people have been living in peace and tranquility.

Name of the village: Ranglau

Name of the Development Block: Kaliabor

Police Station: Jakhlabandha

Post office: Jakhlabandha

District: Nagaon

Village boundary: North: Kaziranga National Park, Kukurakata Reserve Forest (RF); South: Bagser RF; East: Natun Danga village and West: Chotial Rangalu.

CHAPTER VI: MICRO-PLAN FOR RANGALU EDC

1. **INTRODUCTION:** The Rangalu EDC was formed in the year 2007 under the Forest Development Agency programme of the Government of India.

Mr Mohan Gowala was the president of the EDC and Mr Naba Krishna Mahanta was the Member Secretary at the time of EDC formation. But, later on, Mr Manik Lal Mura and Mr Naba Krishna Mahanta became the President and Member Secretary respectively. At least one member of all the households of the village is a general member of the EDC. The EDC has been taking the cause of conservation and working for the betterment of the Kaziranga Tiger Reserve since its inception. The Executive body is as follows:

Advisor	: Sri Mohan Gowala
President	: Sri Manik Lal Mura
Member Secretary	: Sri Naba Krishna Mahanta
Executive Members	: Lekhnath Sarma
	: Fulnur Amin
	: Ratan Gonju
	: Parimal Ghatowar
	: Lasman Sarma
	: Kalpana Mondol
	: Tygbahadur Dorji
	: Lukumoni Bora
	: Rupa Baruwa.

The village is very not very densely populated but of poor economic background. People primarily depend upon wage earning activities as their prime livelihood followed by agriculture though water is a big obstacle for doing it. Almost all the household have some amount of land except 13 families with no land at all. The crop raiding the agricultural field is very common in the village.

2. **LOCATION, ADMINISTRATION AND FACILITIES:**

Sl no	Information	
1	Name of the village	Rangalu
2	Name of the EDC	Rangalu EDC
3	Forest Beat/ Range	Burapahar
4	Post office	Jakhalabandha
5	Block	Kaliabor
6	Police station/ outpost	Jakhalabandha
7	Total household	118
8	Total population	572
9	Livestock population	1136

Source: Household survey and FGD, PRA.

2.1. Details of human population:

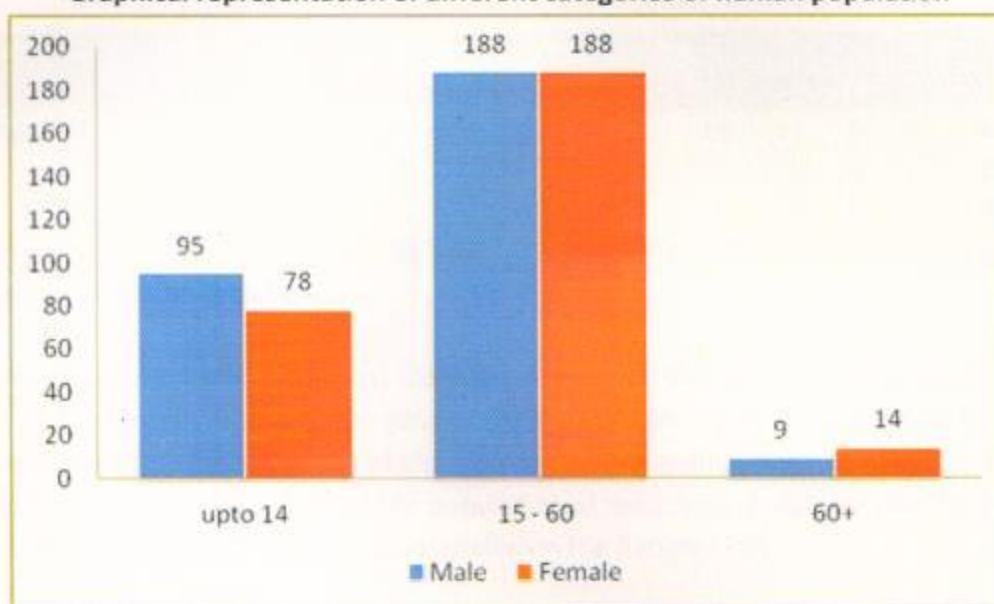
Population of Rangalu village

Category	TH	TP	< 15		Adult		60+	
			M	F	M	F	M	F
All	118	572	95	78	188	188	9	14

Source: Household survey

Human population: Rangalu is a small village accommodating 118 households with a population of 572 nos. out of which 292 nos are male as against 280 female. There are 376 workable people in the village 50% of which are female. The female male ratio in the village as a whole is 958. In the age group of 15 – 60, this ratio is 1000 which is very encouraging. The overall literacy rate in the village is 59.4% which is below the average state literacy. There are rooms for improving the education scenario in the village. The family size can be said to be very moderate in the village as 4.84 per family.

Graphical representation of different categories of human population



2.2. Religious breakup of the households: It is worth noting here that both the Hindu and Muslim community is living together in the village for years in peace and tranquility. Out of 118 households 114 households belong to Hindu and only 14 belong to Muslim religion. The population according to different age category has been presented in the following table:

Religious break up of population of Rangalu EDC

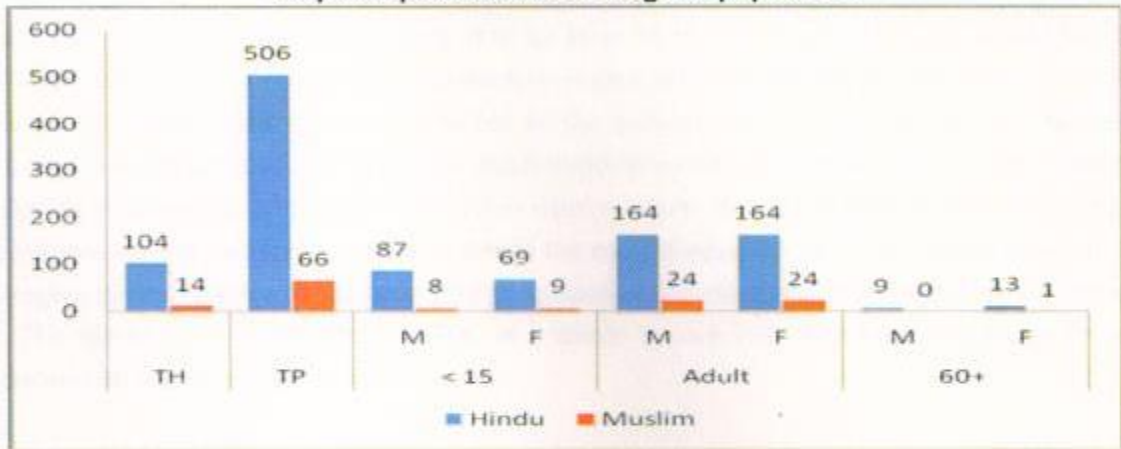
Category	TH	TP	< 15		Adult		60+	
			M	F	M	F	M	F
Hindu	104	506	87	69	164	164	9	13
Muslim	14	66	8	9	24	24	0	1

Source: Household survey.

The family size in the village for both the Hindu and Muslim is not very big as is shown in the table and it is 4.86 and 4.71 respectively for both the community.

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Graphical presentation of religious population

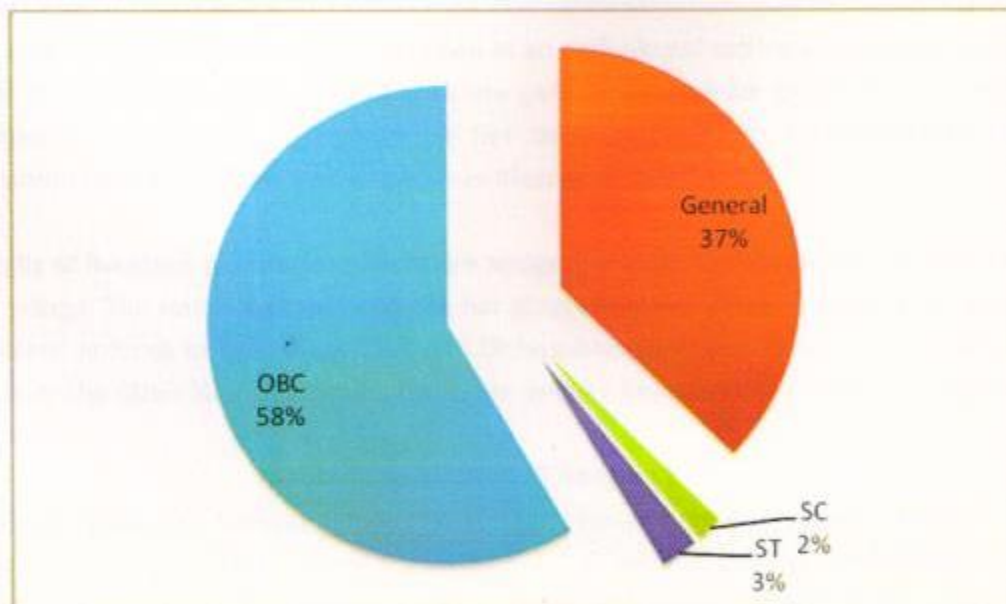


2.3. Caste population: The following table represents the caste population according to their age group in the village:

Category	TH	TP	< 15		Adult		60+	
			M	F	M	F	M	F
General	44	188	25	27	59	68	3	6
SC	2	8	1	1	4	2	0	0
ST	3	6	0	0	3	3	0	0
OBC	69	370	69	50	122	115	6	8

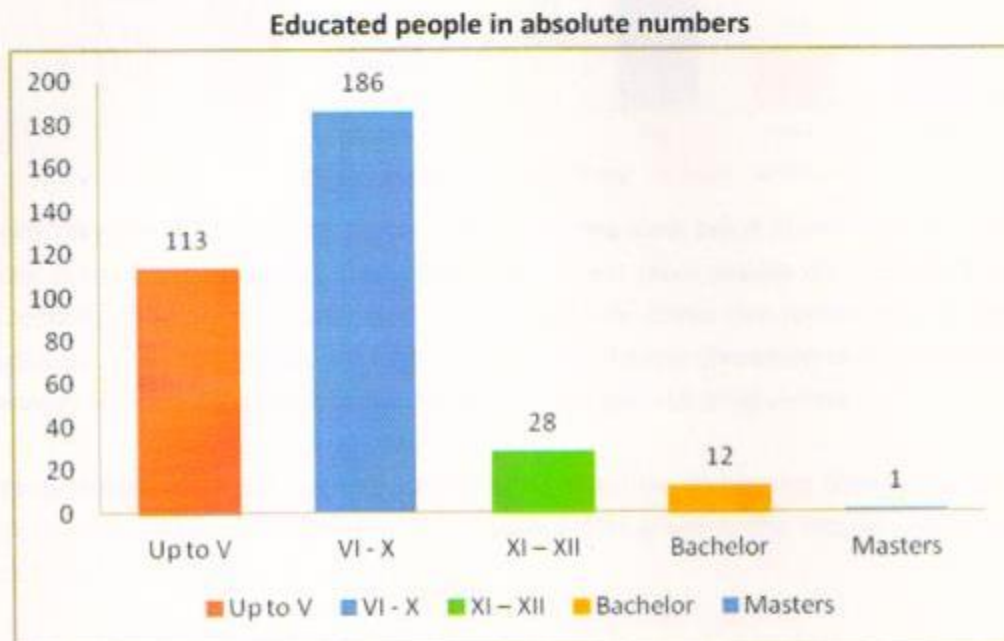
Source: Household survey.

As is clear from the table above that there are a large number of OBC populations in the village. 44 out of 118 households belong to general caste and 69 belong to OBC category. There are only 2 households belonging to SC and 3 belonging to ST caste in the village. Population wise also the OBC comprises the largest share of the population of the village. Following Pie Chart depicts the percentage of different categories of population in the Rangalu EDC.



2.4. Educational Background:

Education is one of the most important parameters of quality human resource. It is a pre-requisite for development of any society. It is an asset to the society and people would like to see all their children well educated. Education increases their employability and thus raises the income of the households which contributes to the welfare of the said society. In a society, particularly in a modern society, where so much depend on the written medium, being illiterate is like being imprisoned, and school education opens a door through which people can escape incarceration. Having said this it can be said that the overall educational achievement is not at all encouraging in our country as a whole. The situations in the rural and interior places are rather tricky. The literacy rate in the Rangalu EDC as a whole is only 59%. The following graph shows the educational status in the Rangalu village:



Source: Household survey.

3. Livestock:

Livestock are domesticated animals raised in an agricultural setting to produce commodities such as food, fiber and labor. Livestock are generally raised for profit. Raising animals is a component of modern agriculture. It has been practiced in many cultures since the transition to farming from hunter-gatherer lifestyles.

3.1. Details of livestock population: There are altogether 1136 different domesticated animals in the village. The following table and the bar diagram give a detail picture of the numbers of different animals in the village. Out of 118 households of the village 101 households own some or the other kind of animals. There are only 17 households who don't possess any kind of cattle.

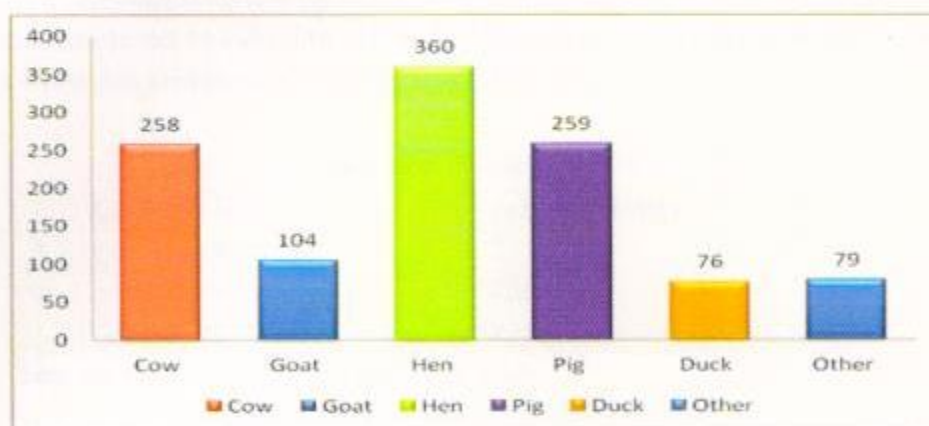
Livestock population of Rangalu EDC

Types of livestock	Total numbers	Stall fed	Household nos having livestock
Cow	258	0	17 households don't have any kind of cattle population
Goat	104	0	
Hen	360	0	

Pig	259	0
Duck	76	0
Other	79	0

Source: Household survey.

Graphical presentation of livestock population



The most important issues with these cattle, from the view point of environment conservation, are two: firstly the cattle graze freely inside the forest since people don't practice stall-feeding and secondly, they are not vaccinated at all. Therefore, these two issues need to be addressed immediately. The cows are of not high milching variety and therefore can be motivated people to get away with those and get some improved and high mulching variety.

- 3.2. Fodder availability:** People are not worried at all about the fodder for their cattle since they are amidst the KNP and Bagser Reserve Forest. The cattle graze in the village agricultural fields as well as the KNP and Bagser Reserve Forest.

Fodder availability round the year at Rangalu

Types	Nos. of month
Crop residues	1
Trees	0
Grasses	0
Green fodder	0
Grazing in village	12
Grazing in the PA	12

Source: FGD, PRA.

The crop residue can cater to the needs of the fodder requirement for a very few days of the year and therefore the only hope is the nearby forests and thus the people are dependent on the forests to a great extent. The livestock feed also are purchased from the market.

- 4. Land and land holding:** Assam is predominantly an agrarian state. About 70 – 80 percent of the people depend on agriculture. The main crops produced are rice, maize, sugarcane, oil seeds, etc. Tea and jute are two of the most important commercial crops of the state. Though, the state is an agrarian state its productivity and production is low in comparison to the other states of

the country. One of the main reasons is the absence of modern methodology which can only be applied where land is consolidated and size of the land holding is big. But, in Assam the size of the land holding is very small and marginal. There are also the problems of landlessness. There is a very high degree of fragmentation of land holding which is untenable and unproductive.

- 4.1. Land in the village:** There are 233 bighas of land in the EDC as a whole as has been shown in the table below. The average landholding in the EDC is 1.97 bighas of land per household. But, it would be grossly incorrect to calculate and value the average land holding of the households of the EDC since there are problems of landlessness in the village.

Total land of Rangalu EDC

	Category of land	Area (in Bighas)
1	Community land	2
2	agricultural land	231
	Total land	233

Source: Household survey and FGD, PRA.

As has been represented by the villagers there are only about 2 bighas of community land which is under various community organisations like the schools, PHC, etc.

- 4.2. Irrigated land:** Agricultural activity is done once in a year and there is no double cropping in the village till four five years back. Agriculture is absolutely weather dependent and there is no artificial irrigation facilities available there. Productivity and production is however low due to non-application of modern agricultural methodology.

		Area (in Bighas)
1	Irrigated by river	No
2	Irrigated by STW/DTW	No
3	Irrigated by other sources	No

Source: FGD, PRA.

- 4.3. Current land use:**

Land under different use

		Area (in Bighas)
1	Agriculture single cropped	144
2	Agriculture double cropped	12
3	Agriculture fallow/no crop	Nil
4	Fruit plantation	Nil
5	Jhum	Nil
6	Small tea gardens	75

Source: FGD, PRA.

Autumn paddy was very common earlier which has been completely stopped now. Now for last 2 /3 years some people have started cultivating bodo paddy. A tiny amount of land is under this paddy. The villagers produce different items for domestic consumption and commercialization has not been popularized yet.

There are people coming out to diversify their agricultural activities and now are doing tea plantation in a small scale. There are nine youths who are planting tea on their land. A complete list of the small tea growers in the village has been given below:

List of small tea growers in Rangalu EDC

Sl no	Name of the growers	Amount of land (in Bighas)	When started
1	Sri Dipak Bora	12	2008
2	Sri Mukunda Karmakar	4	2010-11
3	Sri Chitrabhan Hazarika	10	2012-13
4	Sri Raj Newar	6	2005
5	Sri Suraj Newar	10	2005-06
6	Sri Lakshi Kakaty	5	2006-07
7	Jadav Bora	5	2010-11
8	Ankur Khound	15	2000-01
9	Sri Abdul Haque	8	2008-09

Source: FGD, PRA.

- 4.4. **Agricultural land holding:** Land holding pattern in the state is not encouraging. More than 85% farmers are small and marginal against national average of 81%. Average land holding is 1.11 hectare and average land holding of small and marginal farmers are 0.63 hectares.

Land holding category

	Rangalu	
	TH	Land (in bighas)
Large (> 4 hectares)		
Medium (2 - 4 hectares)	1	16
Small (1 - < 2 hectares)		
Marginal (< 1 hectares)	104	217
No agricultural Land	13	

Source: Household survey.

The land holding scenario is very pathetic in the Rangalu EDC. Except one household all others are marginal land holders. There are also cases of landlessness. 13 families don't possess any agricultural land. Overall the land holding scenario in the village is in a sorry state of affair.

5. **Village resources (infrastructure):** The state of affairs of the infrastructure facilities have been presented in the table above.

Resources of Rangalu EDC

Type of resources	Availability	Distance (in km)	Status	Shortfall
LP School	Yes	0	Inside the village	
ME	No	2	Amguri Chang	Need one at the village
High School / Higher Secondary school	Yes	1	Private	Need one at the village
PHC	Yes	0	Sub centre at the village	Needs improvement
Hospital	No	7	At Jakhlabandha	One
Veterinary hospital	No	10	At Kaliabar	One
GP office	No	7	At Amguri	One
Police station	No	5	At Jakhlabandha	One
Forest office	No	5	Burapahar	One
Post office	No	7	At Amguri	One
Bus facility (Roads)	Yes	0	Beside the village	
Weekly market (Friday)	No	7	At Jakhlabandha	One
Tank/ pond	Yes (2 nos)	0	Inside the village	
Drinking water	Yes	½ km	Sekoni PHE	20 taps

Source: Household survey and FGD, PRA.

Infrastructure facilities are very rudimentary in the village. Only an LP School is there in the village. ME school is situated at Amguri Chang which is about 2 kms from the village. There is also a private high school in order to cater to the needs of the elderly children of the village. There are no improved health facilities available in the village. A sub-centre is there in the village though most of the facilities are not available. Hospital is situated at Jakhlabandha at a distance of 7 kms from the village. For veterinary one has to go to Kaliabar by making a distance of 10 kms.

6. **Market facility:** Market scenario is a bit satisfactory in the village as can be seen from the table below:

Market availability

Nature of facility (purchase/sale)	Location (name)	Distance
Grocery shop	3	0
PDS	1	0
Weekly market (Haat)	7	Jakhlabandha

Source: Household survey and FGD, PRA.

There is a PDS shop and three grocery shops at the village. These shops fulfill the demand for basic requirements of the villagers. The important items can be purchased from these shops

easily inside the village. Apart from the shops a weekly market is also situated at Jakhalabandha at a distance of seven kms for all other transaction.

7. **Institutions:** Institutions are agents of change in both rural and urban set up. The following are some of the institutions the village has and have been working for the betterment of the villagers.

Village institutions

Institutions	Numbers	No of member households
EDC	1	All
SHG	5 female	13 each
VDP	2	All
PYM	1	
SFSC	1	
STF	1	

Source: FGD, PRA.

There is the Rangalu EDC where all households have their representative. Another institution where all the villagers are members is the VDP. There are five female SHGs in the village out of which the Rangali Atmosahayak Got has been doing good work. The members took a loan of Rs. 25,000/- initially and procured hen out of that money. The loan was repaid and the SHG gained faith only to get another loan of Rs 2,00,000/- in the subsequent period. This money was spent on procuring goats to some of the members. The loan has been repaid and goats are remaining with the members as their asset. Rangdhali Atmasahayak Got is simply depositing money and has not embarked upon any productive works. However, the members weave clothes and sell those in the village itself. Apart from the EDC and SHGs there are two NGOs in the village named Swaraj Firm Science Club and Parivartan Yuva Mancha (PYM) both are emphasizing on expansion of quality education in the village.

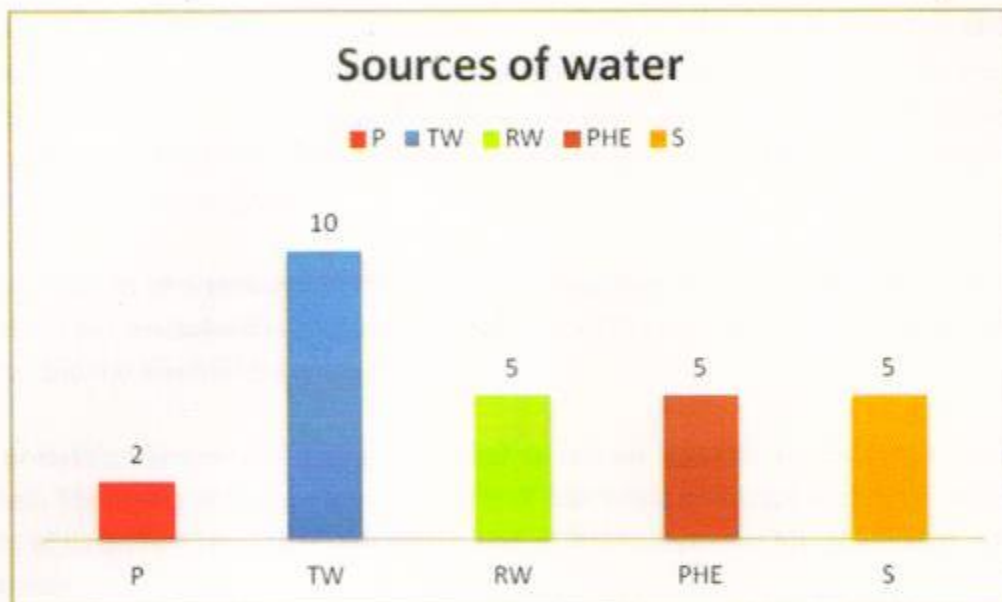
8. **Sources of water:** The state of drinking water is a bit satisfactory in the village in comparison to the neighboring villages. The drinking water scenario of the EDC has been represented through the table below:

Water infrastructure at Rangalu EDC

Sources	Number	B	D	I	L	Status (seasonal/ perennial)
Pond	2	Yes	No	No	Yes	Perennial
Tube well	10	Yes	Yes	No	Yes	After January gets dry
Ring well	5	No	No	No	No	Dying
PHE	5 taps	Yes	Yes	No	No	Perennial
River	0					
Spring	5	Yes		Yes	Yes	Gets dried in winter

*Bathing, Drinking, Irrigation, Livestock

Source: Household survey and FGD, PRA.



P – Pond; TW – Tube Well; RW – Ring Well; PHE – Public Health Taps; S – Stream

Every households collect water from the PHE water taps. Taps are being installed in the public places from where everyone can access water. People also collect water from the tube wells. There are about 60 households who collect water from tube wells. There are five government tube wells installed in public places for everybody's convenience. Installation of tube wells is a tiresome and costly affair as one has to dig as deep as 130 feet to get water. Water is heavily iron mixed and needs proper treatment which the villagers cannot do. About 30 households collect water from the ring wells. There are also households who collect water from the hill streams.

9. **Energy requirements:** There are diverse sources of energy in the village, namely, fire wood, LPG, electricity, kerosene, etc. Though some households have LPG but still needs to depend largely on the firewood collected from nearby forests for stopgap maintenance.

Types of energy used by the villagers

Type of fuel	Applicable	Rangatu	No of months of major dependency	Sources
Fire wood	Yes	All	November to February	Bagser reserve
Crop residue	No	0		
LPG	No	16		
Electricity	No	24		
Bio-gas	Yes	2		
Kerosene	Yes	All	Summer	

Source: Household survey and FGD, PRA.

The villagers are highly dependent on fire wood for different purposes. During winter the dependency becomes higher since fire wood used for multiple purposes. Almost all the households use fire wood for cooking, heating, etc. There are a few LPG connections in the village however due to erratic supply of the refilled cylinder such families also need to depend on fire wood for stopgap maintenance. The demand for fire wood is met by the Bagser reserve

which is to the south of the village. But, the fact of the matter is that Bagser is also a good habitat of the wild animals and needs to be conserved. Therefore the issue of fire wood in the village is to be resolved at the earliest. The demand is the highest in winter. In the winter the fire wood is used in multiple uses. Though there are two bio gas units installed in the village however only one is in working condition.

Kerosene is not at all a problem in the village. It is available in the PDS shop situated inside the village. 4 ltrs per household is procured for a month at the cost of Rs 18/- per liter. However, it falls short and the demand meets by the hawker.

10. **Forest protection issues:** Smuggling of timber is not an issue as far as forest protection is concerned. There are, of course, some amounts of fuel wood collection both for subsistence and commercial purposes. They collect different kind of NTFPs from the forest situated at the Karbi Anglong side.

Issues	Presence	Significant/ insignificant (on the basis of volume and frequency)
Collection of timbers	Yes	Insignificant
Collection of fuel wood	Yes	Significant
Collection of NTFPs	Yes	Insignificant
Poaching of wild animals	No	No
Grazing	Yes	Significant
Encroachment	No	
Others	No	

Source: Household survey and FGD, PRA.

It was divulged in the FGD during the PRA process that there are cases of timber collections by the villagers although they are very insignificant due to their tiny volume. Timber is collected for construction purposes though most of the villagers use bamboo for the purpose. It is noteworthy here to mention that the collection of firewood is very high which is collected primarily from the Bagser reserve. The pressure of grazing is also significantly high in the village since there is no stall feeding practice. Most of the villagers collect different wild vegetables from the forest like Katchu, dhekia, bamboo shoot, kaldil, etc. though shy away from the fact.

It has to be mentioned here that fuel wood collection and selling has been taken up as a livelihood option by about 40% of the villagers. This is a very crucial fact and needs immediate attention and solution. Such persons are to be found out at the earliest and engaged in other gainful employment activities. The hand swing practice of timber is very common in the Bagser reserve. The reserve is under Baghjan beat. This issue is also very tricky and to be addressed immediately.

11. Household dependency on forest and forest products:

Level of dependency	Rangalu
High	50% HH
Medium	Nil
Low	40%

Source: Household survey and FGD, PRA.

As has been discussed above that since the villagers are dependent on the KNP and bagser reserve forest for a variety of reasons it can be concluded that the villagers dependency is very high on the forest. The dependency is very high in case of approximately 50% of the villagers. 40% of the villagers are dependent for one or the other minor items on the forest. It can be said therefore that almost all (not less than 90%) the villagers are dependent on the forest though the degree of their dependency varies household to household.

12. Current income generation activities:

As has been mentioned earlier due to the not so improved quality of human resource the employability of the people is very low.

Current income generating activities in household numbers

Sl no	Livelihood category	Numbers	% of total households
1	Daily wage laborer	76	64%
2	Farmer	23	19%
3	Service	2	.01%
4	Business	8	.06%
5	Weaving	0	
6	Daily wage + Business	0	
7	Business + Farmer	2	.01%
8	Daily wage + Farmer	10	.08%
10	Daily wage + Service	0	
11	Service + farmer	1	
12	Service + Business	0	
13	Weaving + farmer	0	
14	Daily wage + Business + Farmer	0	
15	Other	25	21%

Source: Household survey.

As has been mentioned earlier that members of one family may be engaged into different employment activities and same person may engage in different activities at different point of time in the same year. This happens due to the absence of specialization which is quite common in countries like us. Members of 64% of the total households in the village are engaged in wage earning activities and thus corroborating the fact of the low quality human resources in the village. a miniscule percentage of the households are engaged in both service and business activities.

13. **Economic status:** It is really difficult to measure the economic status of the people of a village. Similar is the case for Rangalu village also. Nevertheless, the following table tries to show some of the conditions of the people of the Rangalu EDC.

Category of house	Nature of house	Households
Kutcha house	Thatched roof, mud floor, etc.	92
Pucca house	RCC/ tin roof, cement floor	30
Electrified		24
Owning livestock		101
Owning tractors		0
Owning mechanized farm implements		1 power tiller

Source: Household survey.

It is apparent from the above table that most of the villagers live in kutcha houses. There are 30 pucca houses out of which a number of houses have been constructed under the IAY scheme. Only 24 households are connected through electricity. 17 out of 118 households don't possess any livestock. There is only one power tiller in the village.

14. **Wellness status:**

Wellness is a difficult word to define. Traditionally wellness has meant the opposite of illness and the absence of disease and disability. Wellness is now a word used to describe living the best possible life you can regardless of whether you have a disease or disability. There is no single set standard for wellness and wellness is a difficult thing to quantify. Wellness here means the economic wellness of the people.

Wellness status	Rangalu
Well off	
Manageable	10
Poor	95
Very poor	13

Source: FGD, PRA.

It is really a difficult task to attribute a wellness status upon the household since wellness of the people depends upon various parameters. Agricultural land, which is one of the most important assets of the rural people, employment opportunity, house structure, availability of mode of energy, education, health, family size are some of the important parameters of wellness. Considering all these aspects and in consultation with the villagers in the FGD the wellness status for the Rangalu village has been attributed as above. All the landless households have been termed as very poor by the other villagers in FGD.

15. Human – animal conflict in Rangalu EDC:

15.1. Crop raiding by wild animals:

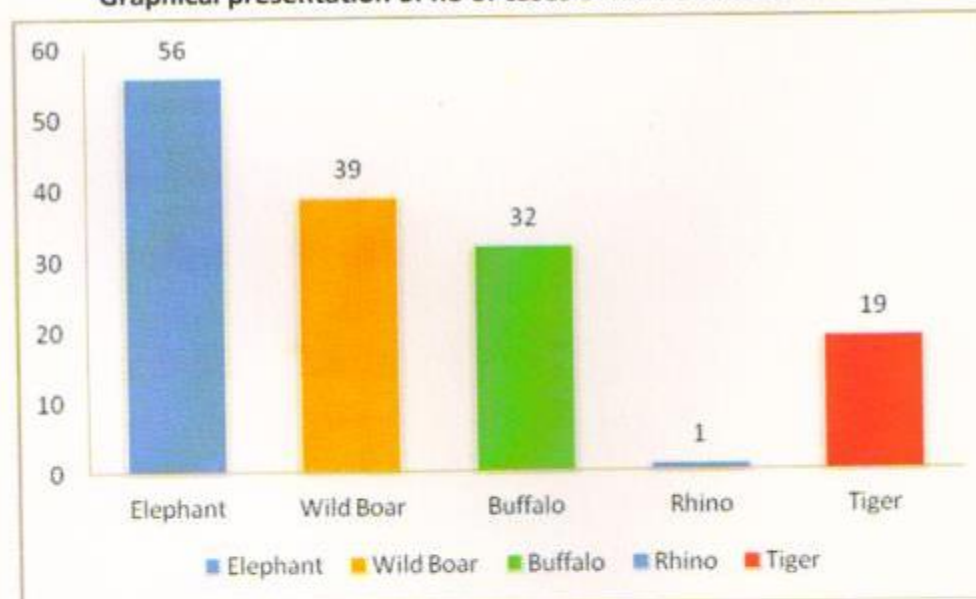
Man animal conflict is very prominent in the village as has been discussed above. Though, there are no casualties in terms of man or animal, but animals like elephant, wild boars, buffalo and monkeys quite frequently raid crops and croplands causing huge damage to the people. Apart from the crop raids by these wild animals picking up of domestic animals like cow, pig, goat, etc. by tiger is also a common problem in the village. The cumulative damage in terms of money would be very high.

No of cases of man-animal confrontation

Names of animals	Frequency of crop raid	Seasons	Nos killed/ injured by villagers	No of HHs afflicted
Elephant	Very High	During crop season	NIL	56
Wild boars	High	Round the year	NIL	39
Buffalo	High	Crop season	NIL	32
Rhino	Low	Round the year	NIL	1
Tiger (Picks domestic animals)	Medium	Round the year	NIL	19

Source: Household survey and FGD, PRA.

Graphical presentation of no of cases of man-animal confrontation



The frequency of crop raid by elephants is very high followed by wild boars and buffalos. All these animals come during the cropping season. Elephants come in herd and destroy the household property apart from damaging the crops. Picking up of domestic animals by Tiger is also common in the village.

Despite sustaining such huge damage to the crop and croplands along with destruction of houses and household materials people are not being compensated properly by the forest department, (though the department has provisions for compensation payment, formation of crop protection committees, construction of vigilance camps and fencing) and other NGOs

working in KTR area. This is a very tricky issue from the view point of conservation of forest and its ecosystem and needs to be addressed urgently by all concerned.

15.2. Household impacted by crop raiding animals:

Crop damage during last 3 years	Rangalu
High (> 70% crop damage)	All
Medium (50 - 70 %)	
Low (< 50%)	

Source: FGD, PRA.

All the households of the Rangalu EDC are impacted by the attack of the wild animals. The cumulative damage would be not less than 70% as has been told by the villagers during the PRA exercise. But, for their relief power fencing, stretching a length of 3 kms, was built up to the south of the village for the protection of the crops. It was given by the local MLA and crop raid as a result of the construction of the power fence has gone down significantly. There are also some parts where power fence needs to be built up for further protection of the crops.

CHAPTER VI: VILLAGE DEVELOPMENT

Village development generally refers to the process of improving the quality of life and economic well-being of people living in a village. It is traditionally centered on the exploitation of land-intensive natural resources such as agriculture, water, fish, forestry, etc. Education, entrepreneurship, physical infrastructure, capacity building and social infrastructure all play an important role in developing a village. Village development is also characterized by its emphasis on locally produced economic development strategies. We need separate plan for each and every village since one is highly distinctive from another.

The Micro-plan facilitation team consulted the Executive committee of the EDC for identifying and prioritizing their problems. Care was taken to incorporate the interests of the forest dependent households. It was tried to ensure that the identified activities should not adversely impact the biodiversity of the forest. Since fund is limited emphasis was given to affordable activities that could be completed from the available resources.

Priority setting: There are many problems to be solved in a village. But each and every problem cannot be given an equal credence due to paucity of funds and therefore needs to be prioritized. The most urgent needs are to be solved first and so on. It is the villagers who know best about their problems and which need to be solved first. The following list of activities and priority ranking was done in consultation with the EDC executive and other selected members of the EDC in an FGD.

The priority list of entry point activities is as below:

Sl no	Name of activity	Priority ranking
1	Community Hall	1
2	Weaving centre	2
3	Livelihood (poultry, piggery, goatery, etc.)	3
4	Education	4
5	Fishery	5
6	Drinking water	6
7	Health facility	7
8	School development	8
9	Construction of all weather roads	9
10	Fire wood/ LPG	10
11	Irrigation	11
12	Veterinary	12
13	Electricity	13
14	Skill development	14

Community hall is the first priority since it helps conducting the coaching class for the school going students. All the SHGs are weaving clothes and therefore need a weaving centre, a common place, where they can have the concentrated congenial facilities for weaving.

Livelihood like piggery, goatery, poultry, is the third priority since the women of the village have been doing this for last couple of years through their SHGs. Now they want to produce it in a large

scale. Improvement of education is another priority. In talking education they mean providing the furniture like desk and benches, table, book shelf, etc. in the school and special coaching classes for the students.

There are two fisheries in the village yet remain unutilized. The villagers want it to utilize up to its full capacity. It needs some kind of improvement.

Drinking water comes in a later number. Since there is provision of piped drinking water and each household can avail the facility, though from a distance, this urgent need comes in a later position. Also tube wells fulfill their demand of drinking water though with heavy iron.

The bare minimum health facility is there in the village. There is a sub centre. One nurse stays the whole day. Some kinds of medicines are also available. But, this needs some amount of improvement. At least two nurses, a doctor and required medicines are needed. A culvert needs to be built in the approach for better accessibility to the centre. Health check up at regular intervals would be a better option for the villagers.

In school development they talk about the school infrastructure and some amount of plantation of fruit trees of local variety. If some amount of financial help for taking up admission at the college can be provided.

Construction of all weather roads is also an urgent need of the villagers. During summer entering the village from the highway gets difficult.

To minimize the wood cutting and collection of fire wood from the forests the urgent need is to procure the LPG connections in each and every household.

Irrigation onto the agricultural fields is a necessary. STW can be provided for the purpose.

Regular veterinary camps should be held. But, since all the villagers are dependent on agriculture to a large extent which is done in a very conventional mode, there is an urgent need to address the issue of cattle population. The month of May to August is the high time for agriculture and during this period the cattle suffer from various diseases. Inasmuch as the veterinary hospital is located distantly there is a need of attending the livestock for diseases from which they suffer. Therefore, it is suggested that at least a vaccination camp can be organised instantly for giving temporary relief to the livestock of the village.

Electricity connection is a must. In fact, the solar lights can be provided.

Skill development training for taking up self entrepreneurship is also a priority of the villagers. This will create an environment of risk taking and investment and generate income.

Income generation activities:

Income generation activities which are both farm and non-farm based but don't adversely affect the biodiversity of the area. The beneficiaries of these activities may be both the individual and organisation. The activities had been identified by the EDC executive members and were approved by the general body on a later date. The highly forest dependent individual households were selected as the beneficiaries of the EPA. A time frame has been fixed for completion of the work. The activities are listed below:

Sl no	Activities	Beneficiaries	Year of implementation	Nature of support required
1	Fishery	SHGs/ individuals	2015	Both technical & financial
2	Goat, poultry, piggery, etc.	SHGs/ individuals	2015	Both technical & financial

	farming			
3	Supply of farm equipments	Individuals	2015	Both technical & financial

Since the people have no specific expertise therefore they prefer to get engaged in the primary sector. Fishery, goat, poultry, piggery, etc. farming, weaving, etc. have been selected by the villagers as major income generating activities. The rationale for selecting these activities are two: the first is the market for such products and the second is the expertise the women in weaving. The beneficiaries would be both the individuals and the SHGs. What requires at the very initial stage is some kind of technical assistance to the entrepreneurs and a handsome amount of seed money.

Moreover, people also of the opinion that if proper irrigation can be provided summer paddy can be promoted in the villages since the productivity of this crop is very high. It will result into less reliance on daily wage activities as a prime source of livelihood and people will have enough time to concentrate on household welfare activities. For this STW and some kind of technical support is needed.

CAPACITY BUILDING:

Awareness creation:

Type of programme	Year	Frequency	Targeted nos of participants
Awareness	2014	Quarterly	School children and the EDC members

Awareness regarding various issues of nature and nature conservation is of utmost importance in the village. Since, the EDC is located in the fringe of the Kaziranga Tiger Reserve therefore there is a need of generating awareness regarding forest and its ecosystem conservation. The school children could, thus, be groomed for future stewards for conservation in and around the Kaziranga Tiger Reserve.

Capacity building/ skill development potential IGA

Target groups	Activities	Year of training	No of participants	Place of training/ training institutions
SHG and interested individuals	Fishery and farming	2105	50	Village premise
Drop out youths	Mechanical training (carpentry, driving, etc.)	2015	50	Village premise

Since, the farming would be done in a scientific manner, there is a need of capacity building for the people who would be involved in such kind of activities. The experts of the concerned field could be invited to the villages and the youths could be motivated for doing it in a scientific manner so as to get maximum benefit out of a tiny investment.

COMMUNITY BASED ECOTOURISM:

Promotion of ecotourism as an income generation activity in the village may be promoted. One should not confuse in using the term 'ecotourism' in a very liberal manner. It is not just about green destination but is much more about green behavior in reaching and exploring such destinations. The International Ecotourism Society defines ecotourism as:

Responsible travel to natural areas that conserve the environment and improve the welfare of the local people.

The IUCN defines it as:

Environmentally responsible travel to natural areas, in order to enjoy and appreciate nature that promote conservation, have a low visitor impact and provide for beneficially active socio-economic involvement of local people.

Community based ecotourism is a growing phenomenon in developing world. The community has substantial control and involvement in the ecotourism initiatives and majority of benefits accrue directly to the community.

Eco-tourists typically look for experiences that provide a sense of closeness to the natural features and local communities that attracted them to visit the destination. Any destination, therefore, must protect its resources while facilitating a sense of integration with the local community. An important ingredient of any tourism destination is accommodation, which is often a decisive factor in the choice of destination. Eco-tourists prefer a clean, well managed small hotel located in a quite natural area that is built of wood and bamboo. They prefer to eat local food and sleep in a room decorated with local handicrafts and furnishing. Also, most international tourists are very environmentally conscious and want to stay in a place that does not negatively affect the environment.

CHAPTER VII: PROJECT ACTIVITIES, BUDGET AND ANNUAL PLANNING

The micro-plan will prescribe various developmental activities and provide approximate estimate of funds and period for implementation. The activities listed here are on the basis of household data collected and prioritized in the EDC meeting as has been mentioned above. The fund requirement would be met by the KTR welfare fund and other sources that can be tapped by the park authority or the EDC itself. The activities include man-animal conflict mitigation, village development, capacity building, etc.

This is basically a one year budget for the EDC. It could be prepared for a long term also subject to the availability of fund. This is shown as below:

Activities	Year		Duration of work	
	Unit	Cost (Rs.)	Starting (month)	End (month)
Man-animal conflict mitigation				
Compensation for crop raid		2,00,000	August, 2015	March, 2016
Compensation for livestock		1,00,000	August, 2015	March, 2016
Power fencing	1.5 km	3,00,000		
Torch light	10	20,000		
Village development				
EPA				
Tube well	10 nos	2,50,000	August, 2015	March, 2016
Desk, benches, book shelf, etc.		1,00,000		
Umbrella for the LP School students	100	15,000	August, 2015	
Weaving shed	3 no	3,00,000	October, 2015	Nov, 2015
Community Hall		4,00,000	October, 2015	2016
LPG	100 no	4,50,000	August, 2015	March, 2016
Coaching class for IX & X standard students		50,000	July each year	
Electricity connection (to request the electricity department)				
Plantation				
Locally available fruit trees at the roadside like Lemon, Litchi, Mango, Kordoi, Amlokhi, Amora etc.	200 Nos	50,000	April - July, 2015	
Valuable tree at household premise like Agar, etc.	200 Nos	50,000	April - July, 2015	
Common interest activity				
Road (to request for PMGSY)				
Improvement of Sub-		50,000		

centre: construction of a culvert.				
Livelihood improvement				
Human health camp	2 Nos	1,00,000	August – Oct, 2015	Dec, 2015
Animal health camp	2 Nos	80,000	August – Oct, 2015	Dec, 2015
IGA				
Fishery	2 Nos	3,00,000	August - Nov, 2015	March, 2016
Goatery, piggery, poultry, etc.	2 Nos	5,00,000	August - Nov, 2015	March, 2016
Procurement of STW	10 nos	3,00,000	August - Nov, 2015	March, 2016
Capacity building programme				
Awareness education	4 Nos	1,00,000	August, 2015	March 2016
Training in specific activity like carpentry, tailoring, electrical repairing, driving, computer training, mobile repairing, etc.	6 Nos	2,00,000	August - Nov, 2015	March, 2016
Exposure visit	1 Nos	1,00,000	December, 2015	March, 2016

MONITOTING AND EVALUATION:

Monitoring and evaluation is part of the Micro Plan. If not properly monitored there is every possibility that the Micro Plan may not be implemented to achieve its desired goals of overall village development. Therefore, there should be some agencies that will look after the works to be implemented and point out the lacunae at accurate time so as to rectify for the greater benefit of the villages. Review of implementation of the Micro Plan may be carried out in the following manner:

Sl no	Reviewing agencies	Minimum frequency
1	EDC executive	Every month
2	KTR, WWF, LBCS	Quarterly
3	EDC general body	Half yearly

The EDC executive will be in charge of implementation of all kinds of schemes that have been outlines in the Micro Plan. Therefore, all the executive members have been proposed to sit and review the progress of the work monthly. The KTR, WWF and LBCS will meet quarterly and sit together with the executive members of the EDC and review whether the work is progressing towards desired direction. Finally, it is the EDC general members who will review and approve the work.

The reviewing agencies mentioned in Col.2 of the above table will also ensure necessary corrective steps as brought out by the review.

ROLE OF THE LINE AGENCIES AND SUGGESTIONS:

It has been realized that all the problems / issues cannot be addressed and solved by the forest department or the KTR authority. It is not always possible and also desirable on the part of the department or the KTR authority to bring panacea for all sorts of constraints of village development. It would be a gross mistake if somebody thinks so. Therefore, it would be proper for the park authority to negotiate with other line agencies like the department of Agriculture, Panchayat and Rural Development, Assam State Electricity Board, Public Health department, Veterinary department, PWD, etc. for overall socio-economic development of the concerned EDC. A proper coordination, indeed, would ensure desired development of villages and thereby guarantee nature conservation to a large extent. The roles that could be played by the line agencies in the overall socio-economic development of the Rangalu (village) EDC have been summarized below:

THE DEPARTMENT OF AGRICULTURE: The agriculture sector employs 52.9% of the total workforce and 46% of the total geographical area, making it a vital element for the inclusive and sustainable growth of Indian economy. Almost 41.8% of rural populations live in abject poverty and these poverty ridden people primarily depend on agriculture for their livelihood. For most of the farmers a noble thought of applying the modern and scientific technology in agriculture is a great luxury though there are no dearths of agricultural schemes. Rangalu village is no exception. The small and marginal farmers don't even realize that a small dose of the green revolution package will improve their lifestyle to a great extent. Therefore, an endeavor should be made on the part of the park authority to invite the officials concerned in order to give them some kind of technical and other assistance so as to increase the productivity of the land and thereby improving the village economy.

THE DEPARTMENT OF VETERINARY: Since the farmers are small and marginal having a small holding, application of modern technology is a distant dream for them. They do agriculture in a very traditional way by bullocks and other equipments. It is worth noting here that the bullocks during the farming season suffer from many diseases and people cannot attend to any doctor owing to no veterinary hospital nearby. It leads serious hardship and huge loss on the part of the villagers and therefore, there is an utmost need of attending the cattle and vaccinate it. On the other hand, inasmuch as the cattle are left free into the KTR and other nearby forests there is every possibility that the diseases may caught the wild animals. Therefore, vaccinating the livestock of the fringe villages should be the topmost priority. This will help both the poor farmers on the one hand and the wild lives of the KTR and other adjacent forests on the other.

THE DEPARTMENT OF P&RD: The department of Panchayat and Rural Development can be requested to deliver all kinds of facilities meant for the poor villagers in the fringe area of the KTR.

THE ASEB: There is a noble scheme of rural electrification named Rajib Gandhi Rural Electrification Programme under which the BPL households of the village are given free electricity connection. The modalities of the scheme are that the concerned development block will prepare the list of the BPL families and handed over to the ASEB department and the department on their part would give the necessary connection. Therefore, the KTR authority may discuss with the concerned officials of both the development blocks and the ASEB for delivering the services in the fringe area of the KTR.

THE DEPARTMENT OF PWD: It has been mentioned above that the villagers are not connected with all weathered roads and therefore suffer a lot especially during monsoon. It has been realized at the same time that it would not be possible for the KTR authority, owing to paucity of funds, to build an all weathered road, which involves huge cost, for the villagers. Therefore, the department of PWD can be brought into the scenario at this juncture. It is the PWD department who is looking into the construction of the PMGSY (Prime Minister's Gram Sadak Yojna). Our suggestion is that the KTR authority should sit and discuss with the PWD for their intervention in this regard.

CHAPTER IX: CONCLUSION AND SUGGESTIONS:

By the mid 1970s, wildlife conservation in India had become conflict ridden in many places. Conflicts and clashes between PA managers and local communities were on the rise. Also, in many PAs, it was proving to be a struggle for the park managers to safeguard their charge to the levels prescribed by law. In a few places, resource managers began to come up with innovative, ameliorative measures that began to yield results, which went beyond mere protection. Consequently, the mid 70s through to the 80s and 90s of the last century saw the emergence of new thoughts and practices in the realm of forest and wildlife management in the country. Driven primarily by the realisation that the needs and aspirations of forest dependent communities had to go hand in hand with the demands of nature conservation, practices like the Joint Forest Management were adopted. This, in turn, led to innovative experiments by a few resource managers in different parts of the country. In the case of the management of protected areas (PA), a government of India document (1983) titled 'Eliciting public support for wildlife conservation' sowed the seed of a philosophy and practice which finally came to be called 'eco-development'. This had clearly arisen out of a felt need.

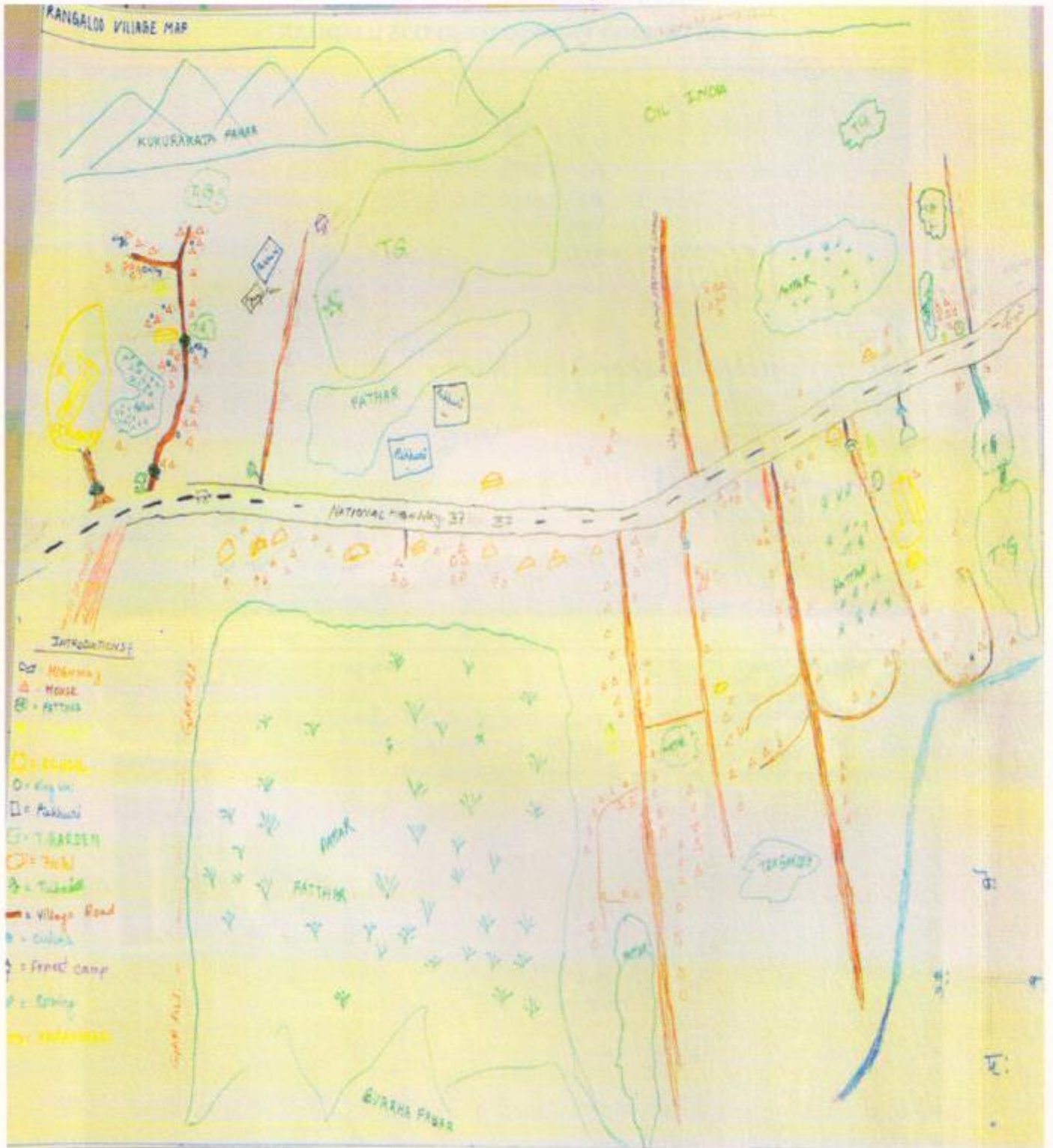
A prior baseline survey profiling demographic and socio-economic features of the fringe villages where the EDC is to be established is a *pre-requisite*. The aim of such a venture is economic upliftment of the underprivileged as well as better conservation of biodiversity.

Robust micro planning in full participation with all community sections, specially the SNGs (special need groups), has emerged as another critical ingredient of all round success. The nature of micro planning process necessitates devotion of substantial time and expert facilitation. Hastening of the micro planning process can rob it of its real value and usefulness. Appropriate capacity building of the different players e.g. PA staff, NGOs and members of EDC/EC is a *sin qua non* of success. Similarly, skill enhancement of SHGs in IGAs is essential.

Rangalu EDC has been constituted by Rangalu village and is situated in between the KTR on the North and the Bagser reserve on the south. The village is inhabited by a mixed population and some of them had been migrated long back but living together for year in peace and tranquility. Agriculture is monsoon dependent and the age old methods of farming have been followed till date culminating into low productivity and production. It has been realized that there are many important issues to be addressed immediately. Livelihood is a major issue to be resolved, of course though they have different priorities altogether. Compensation for crop raiding by the wild animals, irrigation, etc. are some of the issues related to agriculture resolution of which, indeed, will strengthen the village economy. From the view point of the environment conservation the most important issue is fuel wood collection from the nearby reserve forests which needs a complete standstill. All weather roads, electrification, etc. are some of the most urgent needs to be resolved at the earliest. Therefore, the KTR authority may have a talk with all the concerned line agencies and request them to implement the government schemes for all kinds of socio-economic development of the villages.

ANNEXURE

PRA Map of Rangalu EDC



**PARTICIPATORY RURAL APPRAISAL FOR
RANGALU ECO DEVELOPMENT COMMITTEE**



কাজিৰঙা ৰাষ্ট্ৰীয় উদ্যানৰ দাঁতিকাষৰীয়া
গাঁওসমূহৰ আৰ্থ-সামাজিক অৱস্থাৰ তথ্য সংগ্ৰহ
২০১৩-২০১৪

তথ্য সংগ্ৰহ :

স্থানীয় 'ইক' ডেভেল'পমেন্ট কমিটি
এল. বি. চি. এছ.
ডব্লিউ. ডব্লিউ. এফ.

পৰিচালনা :

এল. বি. চি. এছ. নগাঁও
ডব্লিউ. ডব্লিউ. এফ (ভাৰত)
কাজিৰঙা ৰাষ্ট্ৰীয় উদ্যান কৰ্তৃপক্ষ

উদ্যোক্তা :

ৰাজ্যিক বন বিভাগ, অসম

তথ্য সংগ্ৰহৰ প্ৰশ্ন আৰ্হি প্ৰস্তুতকাৰী :

শ্ৰীকুলেন চন্দ্ৰ দাস, সহ-অধ্যাপক (অৰ্থনীতি), নগাঁও ছোৱালী মহাবিদ্যালয়
শ্ৰীদিলৰাব হুছেইন, এল. বি. চি. এছ

গৃহৰ তথ্য সংগ্ৰহৰ প্ৰশ্নসূচী

গাঁৱৰ ক'ড নং-						
প্ৰশ্নসূচী নং-						

তথ্য সংগ্ৰহৰ তাৰিখ : 16-6-14

সময় :

তথ্য সংগ্ৰহকাৰীৰ নাম :

১। Md. Fuznar Amin

২।

৩।

৪।

৫।

তথ্য সংগ্ৰহকাৰীৰ চহী/ফোন নং :

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ক) সাধাৰণ তথ্য :

- ১। গৃহৰ নম্বৰ ১১০ বার্ড নং ৮
- ২। তথ্য দিওঁতাৰ নাম বি. বি. বৰা নিজে।
- ৩। ঘৰৰ মুৰব্বীৰ নাম বি. বি. বৰা নিজে।
- ৪। ঘৰৰ মুৰব্বীৰ লগত তথ্য দিওঁতাৰ সম্পৰ্ক নিজে।
- ৫। ডাকঘৰ কামৰূপ
- ৬। পিন নং ৭৮২৬৬৬
- ৭। থানা কামৰূপ
- ৮। পঞ্চায়ত আমগুৰি
- ৯। উন্নয়ন খণ্ড বমিনমাৰা
- ১০। জিলা নগাঁও

খ) গৃহৰ তথ্য :

- ১। পৰিয়ালৰ গাঁঠনি : একক যৌথ ।
- ২। ধৰ্ম : হিন্দু খৃষ্টীয়ান মুছলিম অন্যান্য ।
- ৩। জাতি : সাধাৰণ অনুসূচীত জাতি অনুসূচীত জনজাতি অন্যান্য পিছপৰা সম্প্ৰদায় অন্যান্য ।
- ৪। কি ভাষা কয় : অসমীয়া
- ৫। স্থায়ী বাসিন্দা নে : হয় নহয় ।
- ৬। যদি হয়, কিমান বছৰৰ পৰা বাস কৰি আছে? ৪০ বছৰ
- ৭। ঘৰৰ গাঁঠনি : কেঁচা পকী অন্যান্য ।
- ৮। ঘৰৰ তলত দিয়া অংশবোৰ কিহেৰে নিৰ্মিত :
 ক) মজিয়া : চিমেন্ট ইটা মাটি অন্যান্য ।
 খ) বেৰ : চিমেন্ট ইটা মাটি ইকৰা অন্যান্য ।
 গ) চাল : টিন খেৰ অন্যান্য ।
- ৯। ঘৰৰ মুঠ সংখ্যা : ১
- ১০। ঘৰৰ মুঠতে কিমান কোঠা আছে? ১
- ১১। ঘৰৰ লগতে গাধোৱা ঘৰ সংলগ্ননে : হয় নহয় ।
- ১২। ঘৰৰ লগতে পায়খানা সংলগ্ননে : হয় নহয় ।
- ১৩। ঘৰৰ লগতে পাকঘৰ বেলেগে অৱস্থিত নেকি? : হয় নহয় ।
- ১৪। বন্ধা-বঢ়াত কি ব্যৱহাৰ কৰে : খৰি কেৰাচিন এল.পি.জি. বিজুলী অন্যান্য ।

২৫। কৃষিজাত সঁজুলি :

২৬। ভূমিৰ গুণাগুণ : প্ৰশস্ত মাটি ।

২৭। মাটিৰ অৱস্থিতি : ক) একেলগে অৱস্থিত খ) পৃথকে অৱস্থিত ।

২৮। যোৱা ৫ বছৰত কৃষিক্ষেত্ৰত পৰিলক্ষিত হোৱা লক্ষণীয় পৰিবৰ্তন :

ক) কেইবিধমান শস্য বেছিকৈ খেতি কৰা হৈছে।

খ) খেতি কৰা শস্যৰ বৈচিত্ৰতা আৰু ভিন্নতা বাঢ়িছে।

গ) পৰিমাণ আৰু ভিন্নতা দুয়োটাই বাঢ়িছে/কমিছে।

২৯। এই পৰিবৰ্তনৰ কাৰণ :

৩০। কৃষি ক্ষেত্ৰত শ্ৰমিক নিয়োগৰ তথ্য :

শস্যৰ নাম	নিজৰ শ্ৰম			ভাৰতীয়া শ্ৰম			
	কি কাম*	দিনে কিমান ঘণ্টা	কিমান দিন	কি কাম	দিনে কিমান ঘণ্টা	কিমান দিন	মজুৰি কিমান

*কামৰ প্ৰকাৰ : শস্য চিকুণোৱা, শস্য ৰোপন, জলসিঞ্চন, শস্য চপোৱা, বজাৰ ইত্যাদি।

৩১। কৃষিত ৰাসায়নিক উপাদানৰ ব্যৱহাৰ :

শস্যৰ নাম	কীটনাশক		ৰাসায়নিক মাৰ	
	পৰিমাণ (প্ৰতি বিঘা)	বায় (প্ৰতি কেজি/লিটাৰ)	পৰিমাণ (প্ৰতি বিঘা)	বায় (প্ৰতি কেজি)

৩২। কেতিয়াৰ পৰা এই ৰাসায়নিক উপাদান ব্যৱহাৰ কৰিছে :

৩৩। এই উপাদানবোৰ ক'ৰ পৰা ক্ৰয় কৰে ?

৩৪। উৎপাদন বৃদ্ধিত ইয়াৰ বৰঙণি কি : বাঢ়িছে কমিছে একেই আছে ।

৩৫। প্ৰশ্নধন :

জন্তুৰ নাম	চিকিৎসালয়লৈ নিয়নে	উদ্দেশ্য	মুঠ সংখ্যা (পোৱালি)		মুঠ সংখ্যা (প্ৰাপ্ত বয়স্ক)		মন্তব্য
			মতা	মাইকী	মতা	মাইকী	
গৰু				২		২	
মহ							
ঘোঁৰা							
গাহৰি							
কুকুৰা							
হাঁহ							
ছাগলী							
ভেড়া							
অন্যান্য							

৩৬। প্রতিদিনে প্রয়োজন হোৱা পশু খাদ্যৰ পৰিমাণ

জন্তুৰ নাম	খাদ্যৰ পৰিমাণ	উৎস			বজাৰৰ নাম	বজাৰ দাম	মন্তব্য
		ঘৰুৱা	বজাৰ	অভয়াবশ্য			
গৰু		✓		✓			
মহ							
ঘোঁৰা							
গাহৰি							
কুকুৰা							
হাঁহ							
ছাগলী							
ভেড়া							
অন্যান্য							

৩৭। পৰিয়ালৰ সম্পত্তিৰ তালিকা :

সামগ্ৰীৰ তালিকা	পৰিমাণ	ব্যৱহাৰ (ঘৰুৱা/ব্যৱসায়িক)	বৰ্তমানৰ সাম্ভাৱ্য বিক্ৰী দাম (টকা)
বেডিঅ'	২	৫৫০০	
টেলিভিছন			
টেপৰেকৰ্ডাৰ			
চিডি প্লায়াৰ			
ঘড়ী	২	৫৫০০	
কেমেৰা			
টেলিফোন	২	✓	
তিনি/চাৰিচকীয়া বাহন			
মটৰ চাইকেল			
বাই চাইকেল	২	✓	
গৰু/মহ/ঘোঁৰা গাড়ী			
ঠেলা			
চ'লাৰ বেটাৰী			
পাম্পচেট			

- ১২ -

সামগ্ৰীৰ তালিকা	পৰিমাণ	ব্যৱহাৰ (ঘৰুৱা/ব্যৱসায়িক)	বৰ্তমানৰ সন্ত্ৰাৰ্য বিক্ৰী দাম (টকা)
টেস্কৰ/পাৰাৰ টিলাৰ			
বেফ্ৰিজাৰেটৰ			
এল পি জি			
ফেন			
ইস্ক্ৰী			
প্ৰেচাৰ কুকাৰ			
চিলাই মেচিন			
কম্পিউটাৰ			
অন্যান্য			

৩৮। যৌথ সম্পত্তিৰ তালিকা :

সামগ্ৰীৰ তালিকা	পৰিমাণ	ব্যৱহাৰ (ঘৰুৱা/ব্যৱসায়িক)	বৰ্তমানৰ সন্ত্ৰাৰ্য বিক্ৰী দাম (টকা)
টেস্কৰ/পাৰাৰ টিলাৰ			
পাম্প চেট			
পুখুৰী			
মাটি			
ধান বনা মিল			
চাকি মিল			
ঘানী			
অন্যান্য			

৩৯। বিভিন্ন সামগ্ৰীৰ উপভোগৰ শেহতীয়া সপ্তাহৰ তথ্য :

সামগ্ৰীৰ তালিকা	নিজৰ উৎপাদন	বজাৰৰ পৰা ক্ৰয় কৰা	বজাৰ দৰ
চাউল		✓	
আটা/ময়দা		✓	
দাইল		✓	
আলু		✓	
পিয়াজ		✓	
বিলাহী		✓	

- ১৩ -

সামগ্ৰীৰ তালিকা	নিজৰ উৎপাদন	বজাৰৰ পৰা ক্ৰয় কৰা	বজাৰ দৰ
জনকীয়া		✓	
চয়াবিন		✓	
মাংস		✓	
মাছ		✓	
শুকান মাছ		✓	
গাখীৰ		✓	
চেনী		✓	
নিমখ		✓	
মছলা		✓	
চাহপাত		✓	
কেৰাচিন তেল		✓	
খৰি	✓		
চিগাৰেট/বিড়ি		✓	
সূৰা		✓	
ফলমূল		✓	
শাক-পাহুলি		✓	
অন্যান্য			

৪০। লঘু বনৌপজ সংগ্ৰহৰ তথ্য :

সামগ্ৰীৰ তালিকা	ব্যৱহাৰ	কোনে সংগ্ৰহ কৰে	সংগ্ৰহত কিমান দিন	কিমান মাহ	কিমান বিক্ৰী কৰে	বজাৰ দৰ	বৰ্তমানৰ স্থিতি
শুকান ডাল	খৰি	স্বয়ং	৪ দিন	৩ মাহ	লক্ষ্যে		৪/৪/১৫
গছৰ পাত	পশু খাদ্য						
শিপা, বাকলি	দৰৱ, বিক্ৰী						
ফল-মূল	খাদ্য বিক্ৰী						
শাক	খাদ্য বিক্ৰী						
শিমলু তুলা	উপভোগ বিক্ৰী						
খেৰ	ঘৰুৱা						

৪০। লঘু বনৌপজ সংগ্রহৰ তথ্য :

সামগ্ৰীৰ তালিকা	ব্যৱহাৰ	কোনে সংগ্ৰহ কৰে	সপ্তাহত কিমান দিন	কিমান মাহ	কিমান বিক্ৰী কৰে	বজাৰ দৰ	বৰ্তমানৰ স্থিতি
নল, খাগৰি	ঘৰুৱা						
বিৰিণা, কাণ্ড	ঘৰুৱা						
মাছ	খাদ্য বিক্ৰী						
অন্যান্য							

৪১। পৰিয়ালৰ মুঠ আয় (বছৰেকীয়া) : ২০,০০০/-

৪২। আয়ৰ উৎস :

ক) কৃষি কৰ্ম

খ) মজুৰীকৃত শ্রম

গ) ব্যৱসায়

ঘ) কুটীৰ উদ্যোগ

ঙ) ঔদ্যোগিক শ্রমিক

চ) মাছ মৰা

ছ) সেৱা খণ্ড (পিচিঅ', ঠেলা, গৰু-ঘোঁৰা-মহ গাড়ী, অট'ৰিজা, টাটা ম'বাইল, মিনি ট্ৰাক, নাৱৰীয়া, গেৰেজ, ড্ৰাইভাৰ ইত্যাদি)

৪৩। দৰিদ্ৰ সীমাবেখাৰ তলত পৰে নেকি : হয় নহয় ।

৪৪। যদি হয়, এতিয়ালৈ কি কি চৰকাৰী সাহায্য লাভ কৰিছে।

১) ইন্দিৰা গান্ধী পুষ্টি

২) পুষ্টিৰ ক্ষেত্ৰত অৰ্থনৈতিক সহায়তা লাভ কৰিছে,

৪৫। বেচন কাৰ্ড নম্বৰ : ০৬-৫২০৬২

৪৬। যোৱা ৫ বছৰত গছ ৰুইছে নেকি : হয় নহয় ।

৪৭। যদি ৰুইছে কি গছ ৰুইছে ?

৪৮। গছ ৰোৱাৰ কাৰণ কি ?

৪৯। বনাঞ্চলৰ পৰা হোৱা আয় যোৱা ১০ বছৰত কমিছে নে বাঢ়িছে : বাঢ়িছে কমিছে ।

৫০। অবৈধ কার্যকলাপ বাঢ়িছে নে কমিছে : বাঢ়িছে কমিছে ।

৫১। যদি বাঢ়িছে ইয়াৰ কাৰণ কি : বনবিভাগ- জটিল ক্ষেত্ৰৰ প্ৰশ্নৰ প্ৰতিবেদন -।

ক) ব্যৱসায়ী গৰিলৈ আহে :

খ) সামগ্ৰীৰ পৰিমাণ বৃদ্ধি হৈছে :

গ) বে-চৰকাৰী সংস্থাৰ দ্বাৰা মূল্য সংযোজন কৰা হৈছে :

ঘ) চৰকাৰী-বে-চৰকাৰী সংস্থাই বজাৰৰ ক্ষেত্ৰত সহায় কৰিছে :

ঙ) বন বিভাগত নিয়োগৰ সুবিধা কমিছে :

চ) বিকল্প জীৱিকাৰ সুবিধাৰ অভাৱ হৈছে :

ছ) অন্যান্য :

৫২। উৎসৱ পাৰ্বন :

নাম	কেতিয়া পালন কৰা হয়	মন্তব্য
শিৱ পূজা হুৱাৰ পূজা		

৫৩। ধৰ্মীয় বিশ্বাস :

৫৪। কিবা বিশেষ বাধা নিষেধ :

৫৫। খাদ্যাভাৱ : নিৰামিষ আমিষ

৫৬। মাছ মৰা কাৰ্য :

পুখুৰী মাটিৰ পৰিমাণ	নিজৰ/বন্ধকত লোৱা	কি কি মাছ ৰেছে	উৎপাদিকা	বজাৰ দৰ	মাছৰ আন্যান্য উৎস	অন্য উৎসৰ পৰা কিমান সঘনাই মাছ মাৰে

৫৭। বন্যপ্ৰাণীয়ে কৰা ক্ষতিৰ তথ্য :

ক) বন্যপ্ৰাণীয়ে কেতিয়াবা আপোনাৰ ক্ষতি কৰিছে নেকি : কৰিছে নাই কৰা

খ) যদি কৰিছে কি প্ৰাণীয়ে ক্ষতি কৰিছে : গঁড় / হাতী / ম'হ / বাঘ / গাহৰি / হৰিণা

গ) কেনেধৰণৰ ক্ষতি কৰিছে :

কৃষি পশুধন ঘৰ-দুৱাৰ শাৰীৰিক আঘাত জীৱন হানি

ঘ) যোৱা তিনি বছৰত হোৱা ক্ষতিৰ বিৱৰণ আৰু ক্ষতিৰ আনুমানিক পৰিমাণ :

ঙ) এই ক্ষতিৰ বাবে চৰকাৰ বা বেচৰকাৰী সংস্থাৰ পৰা কিবা ক্ষতি পূৰণ পাইছে নেকি :

পাইছে পোৱা নাই

চ) 'ক্ষতিপূৰণ'ৰ বৰ্তমান চৰকাৰী ব্যৱস্থাত সন্তুষ্ট হয়নে : হয় নহয়

ছ) যদি নহয় এই বিষয়ে আপোনাৰ সংক্ষিপ্ত মতামত, পৰামৰ্শ

একো সুবিধাও নাই লাগে নোহোৱা, বৰ্তমান ক্ষতিয়ে বহুতো উপায় আছে। যেনে- হাতী, বাঘ, গাহৰি, হৰিণা - - -

জ) আপোনাৰ অঞ্চলত বন্যপ্ৰাণীৰ সুৰক্ষাৰ বাবে সক্ষমভাৱে জড়িত হৈ থকা ব্যক্তি/স্বৈচ্ছাসেৱী সংগঠনৰ নাম

W.W.F

B T. Raj

গৃহস্থৰ স্বাক্ষৰ

Md. Rezaen Amin
তথা সংগ্ৰহকাৰীৰ স্বাক্ষৰ