



Livelihood Assessment of Kaptai Lake fishermen community, Rangamati.

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Abstract

The area selected for livelihood assessment of Kaptai Lake fishermen community is adjacent to the Kaptai Lake in Rangamati. The data were collected from five areas such as Golachari, Depphychara, Bhasannyaahdam, Chitmorong and 7no Langadu.

A questionnaire survey was made to collect information related to livelihood assessment of the Kaptai lake fishermen community. Secondary data also collected from BFDC & DOF (Rangamati). A total of 43 fishermen were selected and interviewed. Generally there are two groups of the community, this are Indigenous (95%) and Bangali (5%). About 93% (Fig-20) fishermen were found as married. There are includes different occupation such as fishermen, shopkeeper, fish traders, drivers etc.

Most of them had the primary educational background and some of them with different levels of higher education (Fig-6). Most of the villagers have nets 72% (Fig-25) & boats 60% (Fig-26) of their own. The overall literacy rate is about 63%. Most of the house is made of straw bamboo and tin bamboo. The poorest fishermen have only plastic made house. People use tubes-well for their household task. The people don't receive any training facilities from any agencies.

Regarding health and sanitation, about 79% of the fishermen were suffered with different types of diseases including rumatic fever, dysentery, jaundice, mal nutrition, gastric, diarrhea, fever and 21% fishermen did not suffered by any types of diseases last year. They can't consult with doctors about their health. Villagers can't support of their nutritional needs.

In the off season, the poor fishermen take loan from money lenders that interest rate is so high. When fishing is less it cope with the situation by working as a day labor. Taking loan from "mohajon" (local name) & doing other works.

The alternative livelihood opportunities should be given them. And proper training facilities should be given to their livelihood.

Keywords: Livelihood; capital; fishermen; Kaptai; species.

1. Introduction

1.1. Background

Bangladesh is situated in the sub-tropical region has an area of 1,47,570 sq.km. It is an ago-based riverine country. The inland fishery of Bangladesh is one of the productive resources of the world The inland water bodies are rich in freshwater fish species comprising 260 indigenous, 12 exotic and percent of the total world fish catch(FAO,1997).

24 fresh water prawn species (DoF,2008). The fisheries resources of Bangladesh represents one In Bangladesh, fish and fishery resources play a vital role in improving livelihood conditions of the fishermen and related people who are involved with its business. It also plays important combating mal-nourishment, earning foreign currency and creating employment opportunities in Bangladesh. This country is blessed with huge water bodies in the form of rivers, canals, natural depressions, reservoir Kaptai Lake, Ox-boy lakes, tanks, seasonally flooded areas and Bay of Bengal. Kaptai Lake is one of the most important

freshwater body which is the largest man-made freshwater resource in the South-East Asia as well as in Bangladesh. The Kaptai Lake was created by damming the river Karnaphuli near Kaptai of Rangamati district in 1961. It has 'H' shaped structure and two arms of this lake is joined near Shuvalong which is a part of Karnaphuli-river. Total surface area of Kaptai Lake is 68,800 hectare and average depth of 32 meters. The shoreline and basin of this water body are very irregular. South-Eastern Bangladesh lies between latitude !! 29"N and longitudes 9213'45" E. Average depth 100 ft. (30m) and maximum depth is 495 ft. (151m) (Ahmed, BFRI, Rangamati, 2009).

Kaptai Lake was primarily created for hydro-electrical power generation. At the end of the monsoon area found to be about 68,800 hectares and the average water reserve of 524.7 x 107 m³. The land that went under water as a result of the dam construction was 40% of the total arable land in the area. Along with that, 29 square miles (75 km²) of the Government-owned forest, and 234 square miles (610 km²) of other forest land went under water. The lake has a rich fish fauna and so far 72 species of fish (67 indigenous and 5 exotic species) and prawn were identified from the reservoir of them 36 species were found to be commercially important. Since 1964, it has been managed by the BFDC which directs the exploitation and management of the lake reservoir.

The fishermen are only depended on their livelihood by catching fish in Kaptai Lake. Their livelihood conditions change day by day. The land that went under water as a result of the dam construction was 40% of the total arable land in the area. Along with that, 29 square miles (75) of the Government owned forest, and 234 square miles (610) of other forest land went under water; About 18,000 families with a total of almost 100 thousand people were also displaced. The palace of the king of the Chakma was also flooded and is now under water.

During water logging, the fishery, agriculture, livelihood and socio-economic structure of the area began to collapse. People lost their land under water. In the true sense, the whole agro based community becomes land less and financially shattered. But now several culture practice like pen culture and cage culture are seen in this area. Agriculture, fishery and livelihood status are quite different from the water logging period. On the other hand, there are two phases in income earning activities of the people in Kaptai Lake. One before 1960-61 when people based on the cultivation of agricultural product and another

is after 1960-61 when people switchover their income earning activities in fishing The present study was conducted the Kaptai Lake fisherman community at Rangamati to understand the livelihood condition of fisherman. Their catch mainly comprises fish such as Rui,Catla, Mrigel, Kalbaus, Gonia,Boal, Shol, Magur,aiye, Kazoli, Chapila,Kachki and different types of fishes. The peak season for fishing usually start from August and start ban for fishing is from May- July.

In the life span fisherman demands are very limited. They do not feel the need to put by something. Of course, their condition does not provide much of the scope for saving. All income primarily spent on the essential food stuffs and boat repairing and maintain cost. They cannot afford new cloths till the cloths worm are torn, chiefly they wear lungis (local peoples tend to wear-like garment, the lungi, which is tied around the waist) and shirts. Nevertheless in time of work they only wear genzis and towel.

The main aim of this research work is to find out the present livelihood conditions of the Kaptai Lake fisherman community at Rangamati. Little information about the livelihood condition of the study area is available. The author thinks that this work will be helpful in determining policy options (fishery policy) and in the improvement of the economic conditions of the fisherman community as well as the development of national economy.

1.2 Objectives of the study

- * To find out some possible suggestions to uplift the livelihood status of local fisherman community.
- * To assess the livelihood of fisherman of the seasonally, vulnerability, assets, credit, alternative livelihood opportunities.
- * To identify their livelihood strategic.

1.3 Rationale of the study

A study of the livelihood assessment of fisherman community at Kaptai-lake in Rangamati can help us to understand the characteristic of the socio economic status of that place. So livelihood assessment of Kaptai Lake fisherman community will be helpful in the improvement of the economic condition of the fisherman community as well as the development of national economy.

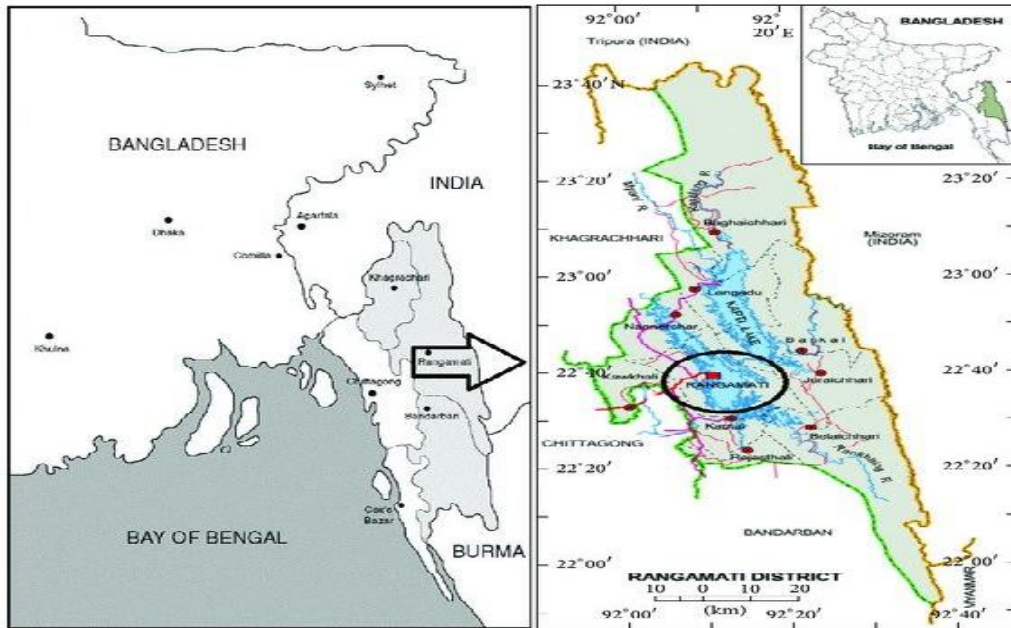
2 Methodology

2.1 Study Area

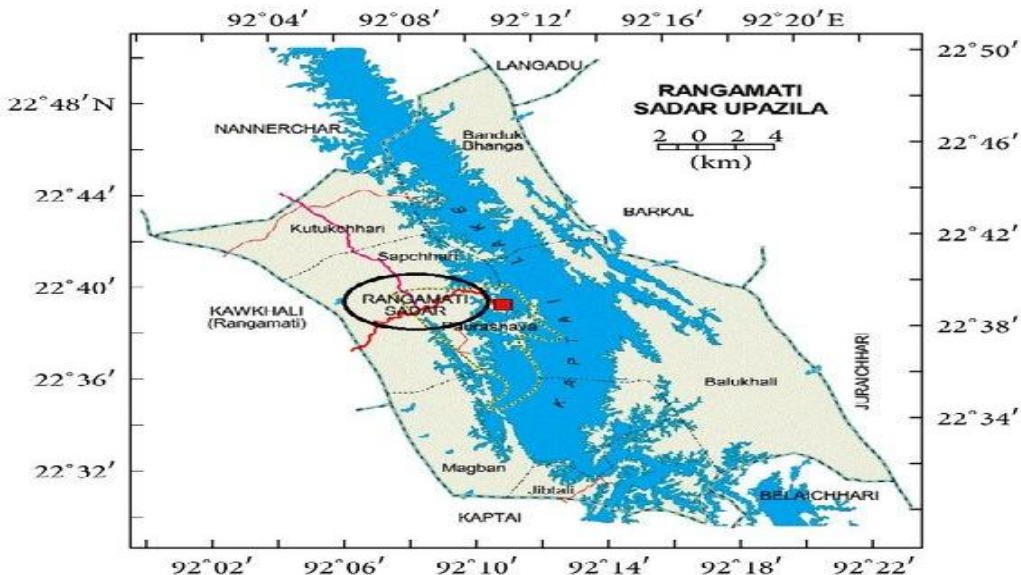
The study was conducted on the fishermen of Kaptai Lake. A total of 43 fishermen of 5 areas were interviewed during the survey.

The study was carried out in five villages. These are Golachari, Dephychara, Bhasannya adham, Chitmorong and 7 no Langadu in Kaptai lake of the Rangamati district. These areas were selected to carry out the survey on the livelihood assessment of fishermen. The fishermen were selected randomly from kaptai lake area. (Fig-01)

Figure-01: Map of the study area (Rangamati and Kaptai Lake)



(a)



(b)

2.3 Collection of data:

Data were collected by using two methods: a) Questionnaire survey (6) Focus Group Discussion. Data was collected by personal interviews through questionnaire form. The other techniques used for supplementing the survey data were seasonal calendar, daily activity, mobility chart, social mapping, key informer interview etc. The fishermen were selected through random sampling and the total numbers were forty-three. The collected data were also compared with other information received from DOF, BFDC, local leaders and other owners. The selected parameters were as follows:

- Family size, education and culture related information;
- Identification of the occupation of the fishermen;
- Various assets including agricultural land, livestock, poultry and fishing;
- Health and sanitation; etc

2.4 Focus Group Discussion (FGD):

FGD were conducted to collect data on livelihood activities of the fishermen village, seasonally, vulnerably, assets, credits, environmental awareness and environmental impact of the livelihood activities. After organizing the data one wrap up session was conducted with the villagers to comment on the collected information. Then the final FGD report is prepared.

2.5 Sampling of FGD respondents:

The plan was to conduct a group meeting with the experienced fishermen who has living here till the beginning of the village. The sampling technique was purposive because it was necessary to select those persons who be able to provide most useful information on the question. Each group consists of 3-6 persons.

2.6 Data Analysis:

The Collected information from the survey was accumulated, grouped and interpreted according to the objective as well as parameters. Some data contained numeric and some contained narrative facts. The collected data were then edited, summarized and graphical analyses were followed during this study.

2.7 Wealth Ranking:

First on the basis of social map every household was identified with serial number. Name of each household head with fathers name/husbands name was written on the card, from these cards was separated and was asked to identify this two husband on the basis of wealth to poor and rich. Rest of the households were identified on the basis of first two households. Any household didn't match with two categories was identified as other wealth ranking group.

2.8 Seasonal Calendar:

A seasonal calendar was prepared for knowing the method of different livelihood activities. Participates of this methods of different livelihood activities. Participates of this exercise were the lean season and peak season.

2.9 Daily activities:

Fisshermen and knowledgeable person from different occupation. This exercise helps to know about this exercise were fishermen & women.

2.10 Mobility Chart:

Daily activities chart is needed for knowing the types of activity done in peak season. Participants of different occupation.

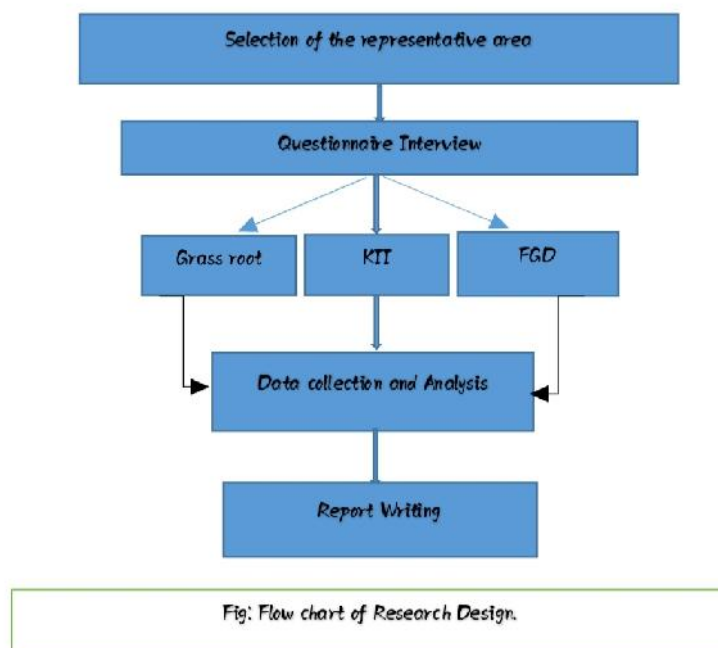
2.11 Social mapping:

It was prepared for knowing the areas when the peoples goes for their needs and also where they go frequently and their connection with the urban areas. Participants of this exercise were from and trees. It was prepared to know about the density of households and the surrounding environment, the infrastructures, assets, social organizations govt. org. etc and different facilities like roads, ponds.

2.12 Key information Interview:

It was done to know important informat in education, family planning & other important information. Also about business and it's present and past history. Selected key are: Sub-manager(BFDC,DOF,RANGAMATI).

2.13 Research Design:



Results and Discussion

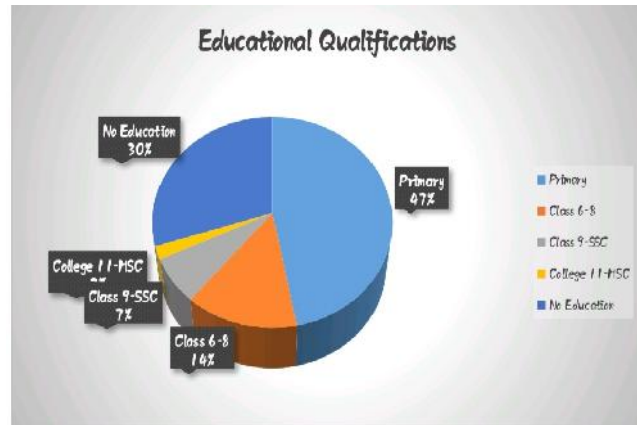
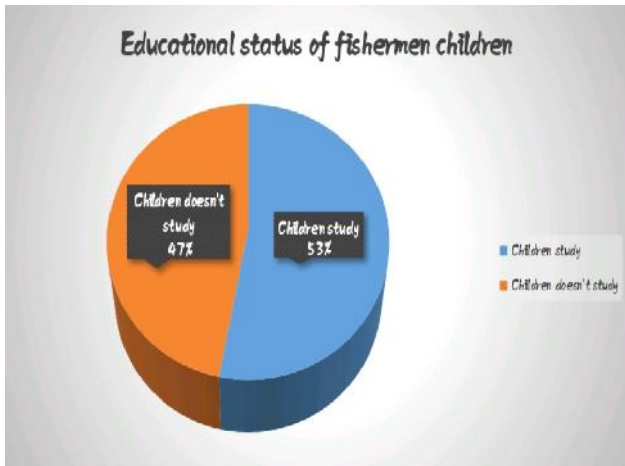
3.1 Livelihood Contexts:

Bhasannya ahdam, 7 no are situated at Langadu Upazila, Dheppyachari & Golachari at Rangamati of them are indigenou, others are hindus & muslims. There are various types of occupation peoples sadar, Chitmorong at Kaptai in Rangamati. The total population of these areas are above 5000. Most live in the community. There is no training institute in these villages. As a result the village people don't get any training facilities. Besides any trainer from agencies or government come in the village is very rear for instruction. For this reason the village people does not aware of PL collectors, natural environment & their livelihoods.

3.2 Livelihood assets:

3.2.1 Human Capital (labor, education, training, health):

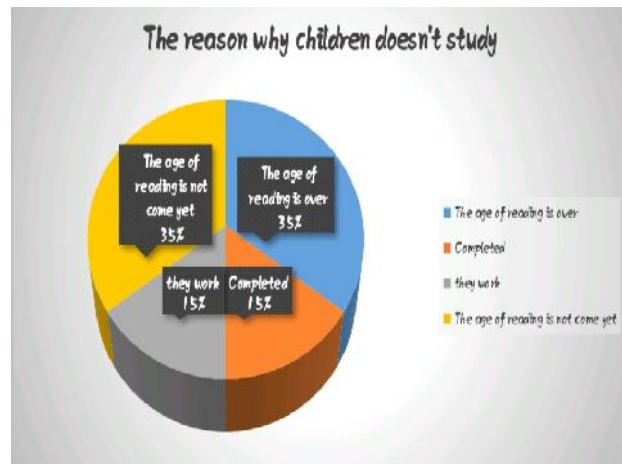
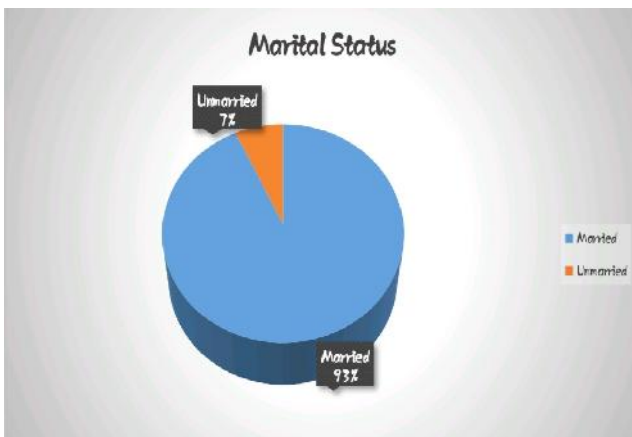
We get know total population numbers by according to FGD participant. In Kaptai lake area community, there are 53% are male and 47% are female out of 5000 population. Most of the people of this area, the main occupation are fishing. Working opportunity for women are limited to household work, handicrafts, shopkeeper etc. During off season most villagers with day laboring, small business like (vegetable business) etc. There is no training facility. In this fishing community, most of the fishermen suffer from gastric problem. Skin diseases and seasonal fever, which hinders their work capacity. The rate of literacy is 60%. Educational status of their children is 53%. No graduate in these area. The economic present on poor household take their children out of school than other groups.



Children for lacking to stay in school. There are govt. tube-well in these area. Some of rich family have own tube-well. Some peoples have sanitary latrines and better access to safe drinking water. The poor health makes it difficult to work as daily labors. The educational qualification of the fishermen are primary 47%, class 6-8 are 14%, class 9-ssc are 7% , collage 11-HSC are 2% and 30% are uneducated.

3.2.2 Social Capital:

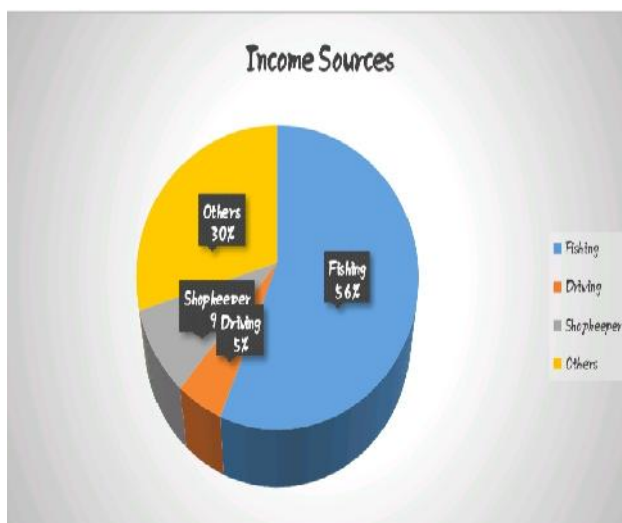
The indigenous social-households social relations are strong. They help each other in their need and in natural climates. They celebrate their own cultural & religious festivals. If any dispute arises it is solve with in the community itself through "Shalish". Most of the respondent are married (93%).



3.2.3 Physical Capital:

Most of the house are tin structure, with a few straw made structure. There is land for cultivation but most the fishermen don't have cultivation land. A limited amount of vegetables production is going on the fishermen's homestead land. Some fishermen do

Jhoom cultivation. Most of the peoples have own tube-well. They use water from tube-well for their household purposes. The tube-well are free from arsenic. The middlemen have a few net and villagers take loan from money lenders. The poor have no nets or boats. Others community have to connect on water way.They pass their life miserably.



3.2.4 Natural Capital

The community is besides the Kaptai Lake which is full of natural resources. It is a source of flora & fauna

Table: List of fish species available in Kaptai Lake:

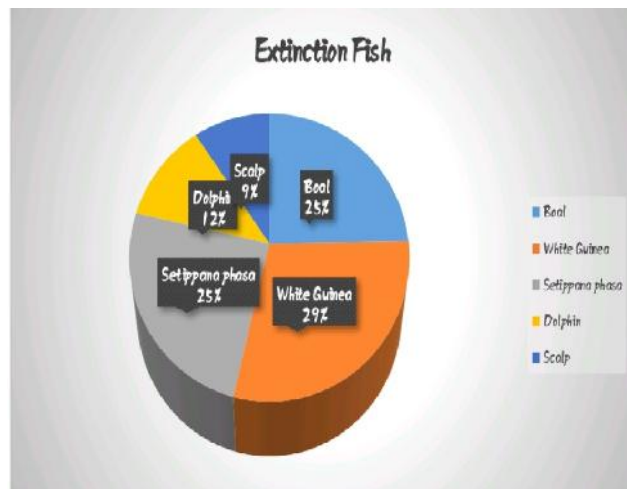
Fish species	Scientific Name	Remarks
Rui	Labeo rohita	Common
Catla	Catla catla	Common
Mrigal	Cirrhinius cirrhosus	Common
Calbaus	Labeo calbasu	Common
Mohashol	Tor tor	Rare
Chitol	Notopterus chitala	Rare
Bata	Labeo bata	Rare
Sorputi	Puntius sorana	Abundant
Rajputi	Puntius sophore	Common
Punti	Puntius sp.	Common
Carpio	Cyprinius carpio	Common
Silver carp	Hypophthalmichthys molitrix	Common
Grasscarp	Ctenopharyngodon idella	Common
Ghonia	Labeo gonius	Rare
Boal	Wallago attu	Common
Aor	Arichthys aor	Common
Gojar	Channa marulius	Rare
Shol	Channa striatus	Common
Taki	Channa punctatus	Common
Magur	Clarius batrachus	Common
Koi	Anbas testudinicus	Common
Foli	Notopterus notopterus	Rare
Poa	Johnius coitor	Abundant
Bain	Mastacembelius sp.	Rare
Kakila	Xenentodon cacila	Rare
Kachki	Corica soborna	Common
Gura	Amblyphryngodon mola	Rare
Chapila	Gudisa sp.	Common
Tangra	Mystus cavasius	Rare

Bacha	Eutropiichthus vacha	Rare
Faisa	Stepinna phasa	Rare
Kata	Rohtee cotio	Common
Pabda	Ompok pabda	Rare
Bashpata	Oxygaster gora/bacalola	Rare
Kajoli	Ailia coila	Rare
Chella	Salmostoma sp.	Common
Chanda	Chanda sp.	Common
Telapia	Oreochromis sp.	Common
Batashi	Pserdeutropius athernoides	Rare

The respondent said that the amount of fishes are decreasing day by day. It was less amount than past.



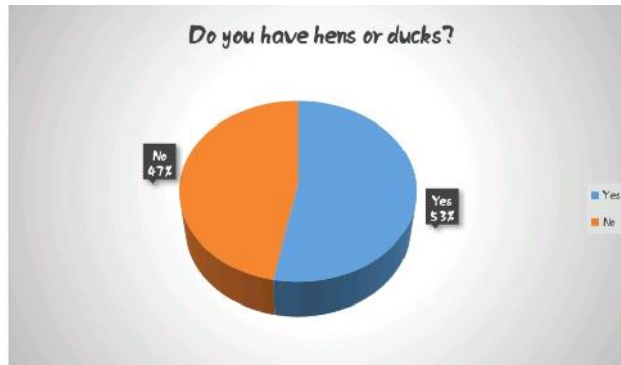
They said that boal, white guinea, setippana phasa, dolphin and scalp are extinction fishes.



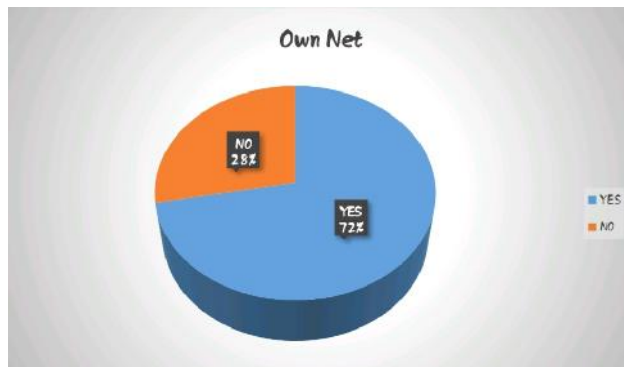
3.2.5 Economic Capital:

The marketing system for collecting fish is not good. Fishermen don't have access in good market because of mohajon. They take loan from mohajon with the condition that they will sell the catch to them. Mohajon don't give them appropriate price. The

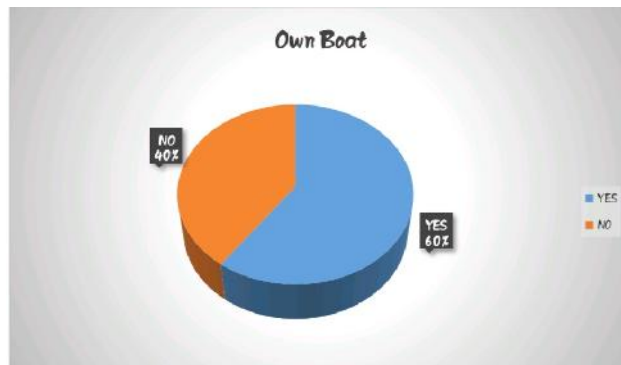
fishermen take loan from mohajon because of, they don't have other alternatives. People have a tendency to migrate outside of the community to seek work opportunities. The poor people take loan from the money lender with high interests. 53% of fishermen have ducks or hens. 47% of fishermen don't have ducks or hens.



Most of fishermen have their own net.

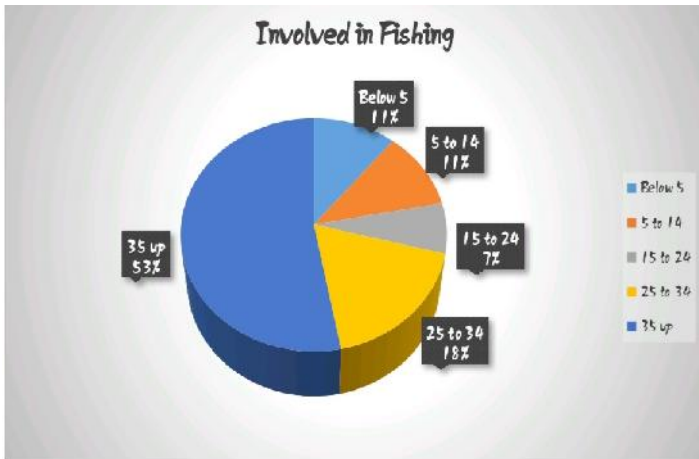


The respondent told me that they have own boat (60%). Other fishermen don't have boat.



Most of the fishermen are involved in fishing at least 10 years. 35% of fishermen are involved in fishing more than 35 years. Below 5 years are 11%, 5 to 14

years are 11% , 15 to 24 years are 7% and 25 to 34 years are 18%.



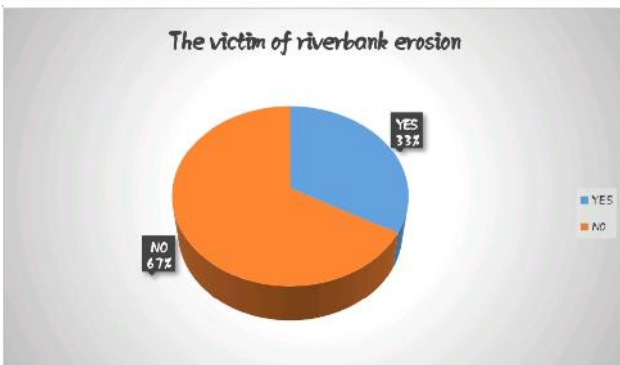
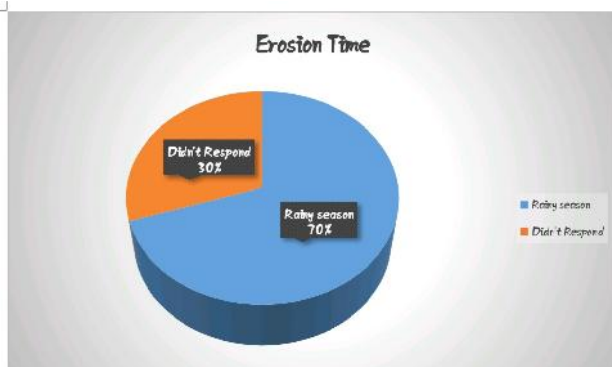
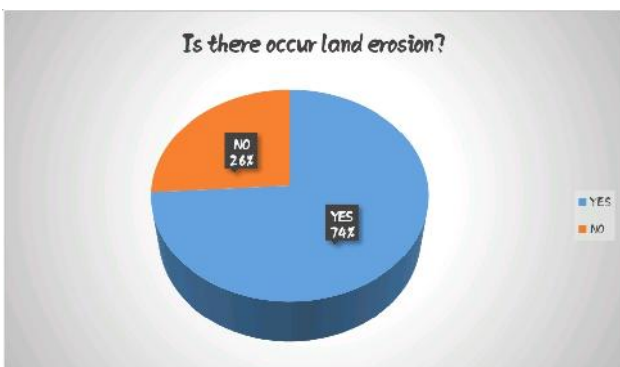
3.3 Catastrophes

There is a close proximity between livelihood and of the fishermen and catastrophes. Although after natural catastrophes are flood earthquakes etc are common for all but coping with these are different different class of people, as the coping capacity is a function of the assets base is weak and among scanty.

Catastrophes can be categorized into two i.e. 1. Natural and 2. Men made.

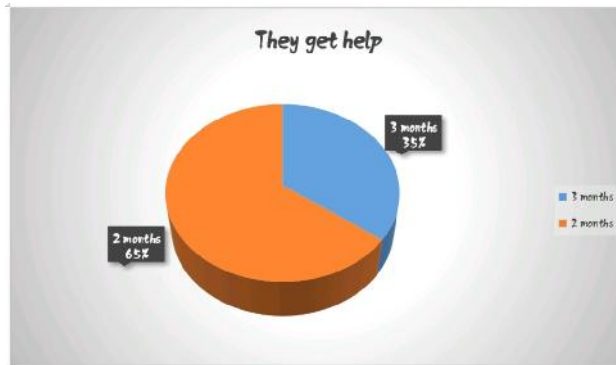
1. Natural (land erosion, earthquakes)
2. Conflicts

74% of fishermen said that there are occur land erosion and 26% of fishermen weren't agree with that. They said that there was not occur land erosion. The respondent answered that land erosion happened in the rainy season. The participate respondent said that they were the victim of land erosion. It is about 33%.

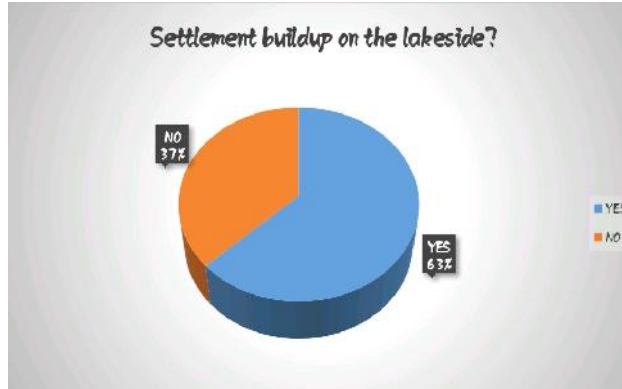
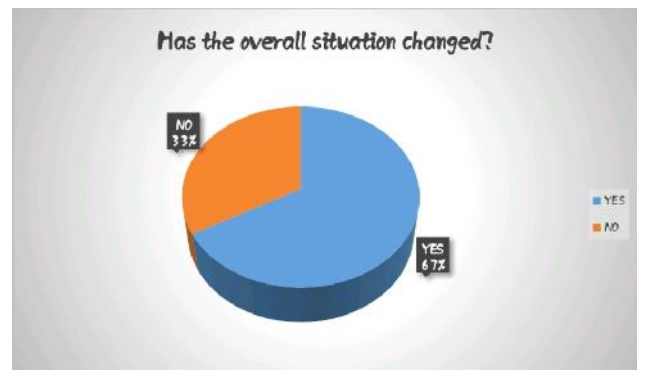
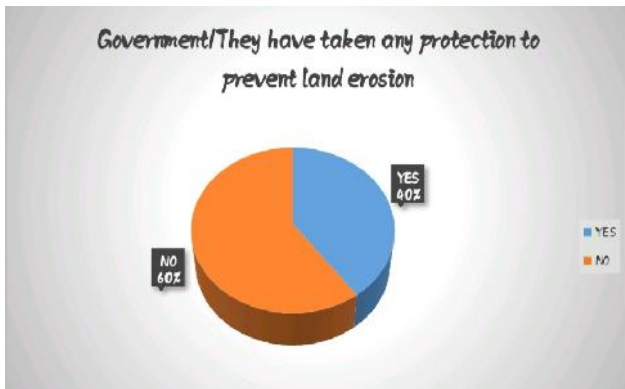


They get help from govt. only three (35% respondent said). 2 months(65% respondent said). 67% peoples

said that the overall situation is changed.



60% respondent said that govt. don't take any protection to prevent land erosion. 63% respondent answered that outsider peoples are settling buildup on the lakeside.



3.4 Structure & Process

3.4.1 Structure:

3.4.1.1 Govt. agencies:

There is also no govt. offices in the village. The only programs that they likely to involved in are social welfare, health and education.

3.4.1.2 NGO's:

A number of N.G.O's working in the village but most of the activities carried by Brac.

They mostly help in education sector. Some of them giving loan. UNDP works in sanitation services.

3.4.1.3 Private Sectors:

Fish traders lend money to the poor. Some fishermen better farmers act as middlemen fish for selling.

3.4.1.4 Health care center:

There is no health care center. The children mentality rate has been reduced, due to Govt. and NGO's initiated immunization program.

3.4.1.5 Training:

There is no training institute. There has been increase in the number of children from the present families attending school.

3.3.2 Process:

3.4.2.1 Law:

There has been various kind of law on fish activity. Fined mesh size of nets and boats, trawlers etc.

3.4.2.2 Policies:

The laws are not followed by the fishermen. The govt. don't implement the law.

3.2.3 Culture:

The indigenous peoples have their own culture which they Organized & Cohesive. Others religious people also organised their own culture.

3.5 LIVELIHOOD STRATEGIES:

3.5.1 Major livelihood strategy:

The main source of income is fishing. There is less land available for agriculture work.

3.5.2 Source of income 'On-farm':

Principal occupation is fishing. They used to collect fish throughout the year but peak season May to July. Decrease fish gradually. Due to over fishing by trawlers and increase the amount of fish decrease.

3.5.3 Mutual Support:

Community member for help each other, extending mutual support for marriage ceremonies and funeral function, house maintains and repair.

3.6 Livelihood outcome

3.6.1 Food Security:

The poor families are food insecure for about 6 months in a year. They often eat one meal a day, The diversity of their diets is limited and they rarely eat meat (i.e, two to three-months interval). The other good households are food secure for most of the year.

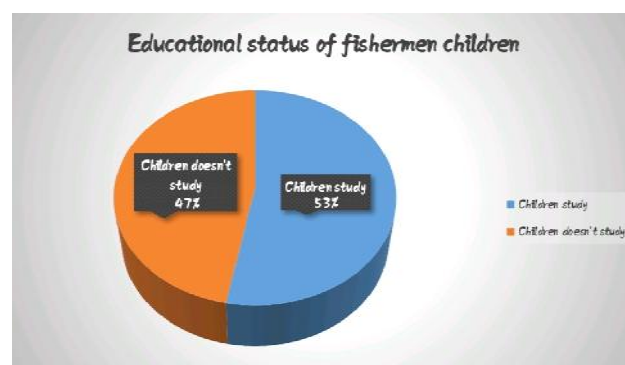
3.6.2 Health:

Most of the people use tube-well water drinking, cooking & washing purposes. Tube-well are arsenic free.

Acute malnutrition is seen among women's and old peoples. About (20-25) % of the poorest households suffer from serious diseases every year. In these area 35% said that water are being contaminating. 28% are not agree with that answer. And 37% didn't answer. 77% respondent have sanitation system. 23% respondent didn't answered that question. 86% said that the closet mixed with lake water.

3.6.3 Education

Children of maximum families go to primary school. The dropped rate among males at the secondary level is particularly high because at age they begin to engage in income for earning activities. The poorer families are forced to pull their children out of school largely because economic crisis. The overall literacy rate of their children's stands about 53%.



3.6.4 Environment:

Environmental degradation has increased. Bio-diversity has declaimed. Number of fish species declining. Because of garbage dumping close to the village, the environment of the village is polluted. The poor drainagesystem, heavy rainfall causes environmental degradation and hazard

3.6.5 Social:

The country is characterized by social & ethnic harmony. In the village, sometimes there are small intra & inter household conflicts are settle at the age level through dialogue and in "Shalish" by the village karbari (local name).

3.6.6 Safety:

Sometimes thief problems are seen in this community. There is no reported trafficking of children or women. Awareness about health safety is evident throughout the year.

3.6.7 Nutrition:

The fishing community consume fish not enough due to decrease of fish catch. The villagers are aware of nutrition needs but it follows a few.

3.6.8 Outcomes of women's focus group discussion:

Women are the most vulnerable member of the community. Males make major households decisions. Women are aware of the nutrition program. They also aware of the family planning program. During the times of food shortage, women suffer the most.

3.7 Wealth Ranking:

There are three group of wealth ranking & they are middle class, poor class and extreme poor. The middle class has tin shed house. They have boats, nets and rear hens, ducks. They eat three times in a day. They arrange improve food occasionally. The poor have no land, boat, net. They have little tin shed house. Few have rear hens. They don't get proper meal thrice daily. The extreme poor house is straw made house. They eat food one or two times in a day. They live from hand to mouth. Their health is thin and suffer in various diseases.

3.8 LIVELIHOOD OPPORTUNITIES IN THE VILLAGE:

The poor should be provided the opportunity to gain secure ownership of the khas land that they are living on so that they will have greater incentive to improve their livelihood. People can culture fish in their pond in scientific way & can rear hens, ducks, on their better livelihood. Vocational training these village for increasing education and awareness among people.

Loan programs need to be designed that are flexible and adopted to the conditions of poor households.

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