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## Livelihood status of fishers' community of Eshulia Beel at Gouripur upazila under Mymensingh district

**Md. Moshir Rahman, Parvez Chowdhury and Md. Shahidul Islam**

### Abstract

The study was conducted to determine the present status of fisheries and socio-economic conditions of the fishers' community of Eshulia Beel at Gouripur upazila under Mymensingh district for a period from February to November, 2015. Most of the fishermen belonged to the age group of 36-50 years. In case of education, 32.5% were illiterate, 40% can sign only, 15% of the fishers had literacy up to primary level, 7.5% had literacy up to secondary level and 5% had higher secondary and above. 75% of the fishermen's houses are katcha, 17.5% are tinshed and only 7.5% are half building. 50% of the toilets are katcha, 42.5% are semi pucca toilet and the rest are pucca toilet, and 35% of the fishermen have their own tubewell. About 52.5% of the fishermen had high (TK. 100000-TK. 200000) income; 42.5% had medium (TK. 51000-TK. 100000) income and 5% had low (TK. 25000-TK.50000) income. The study revealed that, the fishermen of Eshulia Beel were mostly illiterate, poor income, lack of training exposure and lack of awareness about their health facilities and sanitation. So, provide soft term loan and building people awareness have been suggested to improve the livelihood status of fishermen in Eshulia Beel.

**Keywords:** Socio-Economic Condition, Fishers' Community, Eshulia Beel, Gouripur upazila, Mymensingh district.

### 1. Introduction

The contribution of fisheries sector to national economy has always been important and main source of animal protein, employment opportunities, food and nutritional security, foreign earnings, aquatic biodiversity conservation and socio-economic development. Fisheries sector contributes 4.39% to GDP and 22.76% to agricultural GDP [1]. Fish supplements to about 60% of our daily animal protein intake. About 10% of the population is dependent directly or indirectly on the fisheries for their livelihood [1]. There are 40.24 lakh ha open water bodies in our country. Among them 8.5 lakh ha are rivers and estuaries, 1.8 lakh ha sundarbans, 1.1 lakh ha *beel*, 28.32 lakh ha floodplains and 68,800 ha Kaptai [1]. *Beel* is one of the best natural habitats for the indigenous fishes of different food habits of Bangladesh. Most of the aquatic species especially the fish and prawn enter in the inundated areas of the *beel* from the adjoining rivers and canals to feed and grow during the monsoon months [2]. The '*beel*' a Bengali term is used for large surface water body that accumulates surface runoff water through internal drainage channel [3]. Bangladesh has thousands of *beels*, with the most common names being Chalan *Beel*, Gopalganj-Khulna *Beel*, Meda *Beel*, Aila *Beel*, Dekhar *beel*, Kuri *Beel*, Erali *beel* and Arial*Beel*. The average rate of production from *beel* is 714 kg/ha which can be increased manifold [1].

People living in village around the *beels* harvest the fish almost around the year without any prior investment except catching devices. Perhaps more than any other countries, the population of Bangladesh depend on wild fish for food and the generation of income. A large portion of rural families are engaged in part time fish capture from the floodplains/*beels*. The total fishermen of Bangladesh are 12, 80,000 including 7,70,000 are marine fishermen [4].

Eshulia beel at Gouripur upazila of Mymensingh district has been purposively selected as the study area, because its richness in fisheries resources. It has great influence on fish biodiversity and socio-economic status of fishermen. Many families are directly involved in fishing and earning to maintain their livelihood by fishing throughout the year. For proper development of fishing community, it is essential to understand the baseline information to initiate proper developmental steps and improve the livelihood of fishermen. But, there is no sufficient information about livelihood of fishermen community living around this *beel*. So, the main purpose of this study is to examine the socio-economic conditions of the fishermen of the Eshulia *beel* of Gouripur upazila under Mymensingh district, Bangladesh.

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**2. Materials and Methods**

**2.1 Study area**

Selection of the area is an important step for the study. Based on the problem and potentialities, I selected Eshulia *beel* in Gouripur upazilla under Mymensingh district and lies between 24°45.5'N and 90°34.5'E. Eshulia *beel* is a small *beel* which is 25 km east from the Mymensing town.

**2.2 Period of the data collection**

This study was based on both primary and secondary data. Primary data were collected during the month of February to June, 2015. The secondary data was collected from July to November, 2015.

**2.3 Questionnaire interview**

To collect data with questionnaire interviews, simple random sampling method was followed in 40 fishermen in the Eshulia *beel*. The interview of fishermen was made at home or *beel* sites during fishing. For each interview of fishermen it requires one hour.

**2.4 Questionnaire survey and focus group discussion (FGD)**

Participatory Rural Appraisal (PRA) is a group of methods to collect information from target group in participatory fashion. The advantage of the community, the information method is likely to be more accurate. The participation of fishermen provides opportunity for cross checking individual opinions as well as allowing the community to discuss the issues that they feel important, rather than responding to a questionnaire. For the present study, the PRA tool such as Focus Group Discussion (FGD) was conducted with fishermen. In the study, FGD was used to get an overview of particular issues such as existing fish composition, fishing systems, management of the *beel* and also improving the production of the Eshulia *beel* as well as its fish biodiversity, socio-economic conditions of fishermen etc. A total of three FGD sessions were conducted in the *beel* area where each group size of FGD was 10 to 15 fishermen.

**2.5 Cross-check interview**

After collecting the data through questionnaire interviews and FGDs, it was necessary to check the information for justification of the collected data. If there were any items contradictory, then information's were collected from key informant. Cross-check interviews were conducted with key person such as Upazila Fisheries Officer (UFO) and District Fisheries Officer (DFO), Scientific Officers of BFRI, School teachers, local leaders, NGO workers where information was contradictory or requested for further assessment. The interviews of the respondents were conducted in their office during office hour or in houses.

**2.6 Data processing and analysis**

The collected data were coded, summarized and processed for analysis. These data were verified to eliminate all possible errors and inconsistencies. The analysis of collected data was mainly based on tabular description technique. Tabular technique was applied for the analysis of data by using simple statistical tools like averages and percentages. Collected data has been analyzed by Microsoft Excel.

**3. Results and Discussion**

**Socio-economic condition of fishers**

Socio-economic condition of the fishers comprised of human capital, physical capital, and social capital.

**3.1 Human capital**

Human capital represents the skill, knowledge, ability to work and good health that together enable people to pursue their livelihood strategies.

**3.1.1 Age structure**

The fishers were grouped into 3 age groups based on their age limit. These groups were young (20-35), middle aged (36-50) and old (above 51 years). The structured results are shown in Fig. 01. Different categories of age groups such as young (20-30 years), middle age (31-40 years), old (41-50 years) and the oldest (above 50 years) were considered to examine the age structure. It appeared that young and middle age persons in the range of 20-40 years was the highest (58%) and above 50 years was the lowest (20%). It was found that, most fishermen (50%) belong to the age group of 31-40 years in the district of Mymensingh, Bangladesh [5]. Similar results were also observed in adjacent to the Old Brahmaputra river where people of 50% were ranged between 31-40 years [6]. It was reported that, age group of 35-40 years old was 30% and the largest age class was 40-50 years old (56%) at Birulia and Boroibari region, respectively in the Turag river, Bangladesh [7].

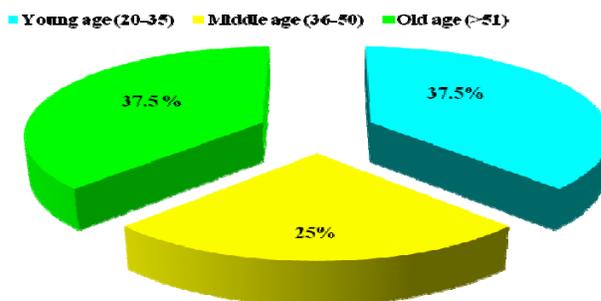


Fig 1: Age distribution of fishers in the study area

**3.1.2 Family size**

The family size defined as the number of persons, either working or not, belonging to same family. The size of family and distribution of family members in study areas are represented in Fig. 02. The fishing communities were divided into 3 groups based on their family member such as, small family (2-4 members), medium family (5-6 members) and large family (above 7 members). It was observed that, most of the fishermen (45%) belonged to the medium family (member 4-5) in Mymensingh district [5]. The highest percentages (47.76%) of family had 7-8 members, the lowest percentage (1.27%) was obtained 1-2 members of Marjat Baor at Kaligonj in Jhenidah district, Bangladesh was found [8]. But Small family (member <5) was found in majority (48%) in fishermen of the Baluhar Baor, Jhenidah, Bangladesh [9].

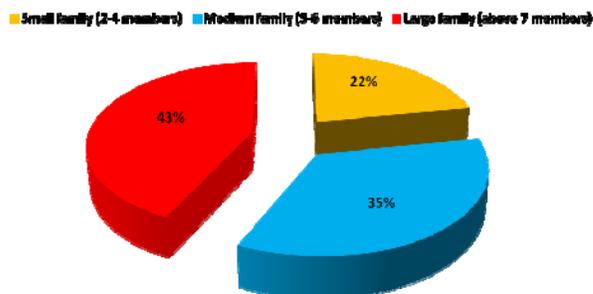


Fig 2: A graphical presentation of family size in the study area

### 3.1.3 Education level

The educational levels of fishers are shown in Fig. 03. The distribution of the fishers varies according to their education level. On the basis of education score of the fishers, they were classified into five categories: Illiterate (32.5%), can sign only (40%), primary level (15%), secondary level (7.5%), and higher secondary and above (5%). In this study, 32.5% peoples were illiterate, 40 % were can sign only, 15% were primary level, 7.5% were secondary level, and higher secondary and 5% above. Most of the fishermen were illiterate (58%), small portion of them can sign only (22%). Some had primary and secondary level of education (10%) and (8%), respectively but very few numbers of fishermen (2%) had SSC level of education [10]. It was found that, majority of fishermen (60%) were illiterate in the Marjat Baor at Kaligonj in Jhenidah district [8]. It was also reported that, 52.78% fish retailers had no formal education while working at Rajoir upazila of Madaripur district in Bangladesh [11].

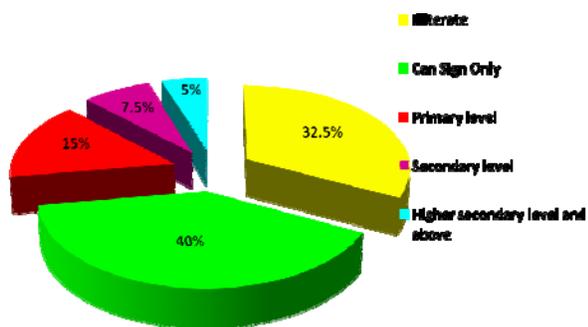


Fig 3: A graphical presentation of educational level in the study area

### 3.1.4 Religious status

Religion can play a very important role in the socio-culture and environmental life of people of a given area and can act as notable constraint or modifies in social change. The results of religious studies are shown in Table-1. It was found that Muslims were featuring as the absolute majority (86%) followed by Hindus (14%) [10]. It was well known that only the lowest caste of the Hindu community was engaged in this sector. Halder *et al.* have found that, most of the respondents were Muslim (83.33%) and rest of them (16.67%) were Hindu at Rajoir upazila of Madaripur district, Bangladesh [11]. Khan *et al.* have observed that, Muslims were represented as absolute majority of fishermen in the study area (70%) in Tista river, Rangpur [12]. Islam *et al.* have studied that, all of the fishermen were belonging to the Hindu religion in Monirampur upazila, Jessore district in Bangladesh [13].

Table 1: Religious status of fishers in the study areas.

Types of Religion	Number of Respondents	% of respondents
Muslims	26	65
Hindus	14	35
Total	40	100

### 3.2 Physical capitals

Housing conditions, sanitary facilities, source of drinking water, fish marketing channel etc. are the physical capital of fishers that enable people to pursue their socio-economic strategies which are described below.

#### 3.2.1 Housing conditions

The housing facilities enjoyed the selected fishers are shown in Fig. 04. It is evident that majority of the respondents (75%)

had kacha house, 17.5% had tin shed and only 7.5% had half building in the study area. It was noted that, 72% and 32% fishermen in Birulia and Boroibari had *kacha* house while 28% and 68% fishermen in Birulia and Boroibari had tin-shed house, respectively [7]. It was found that, housing condition was dominated by *kacha* (74%) [9] where another study revealed that majority of fishermen in old Brahmaputra River (83% ) had *kacha* and 17% had semi *pakka* housing facilities [6]. It explored that the great majority (83%) had *kacha* and 17% had semi *pakka* house [12].

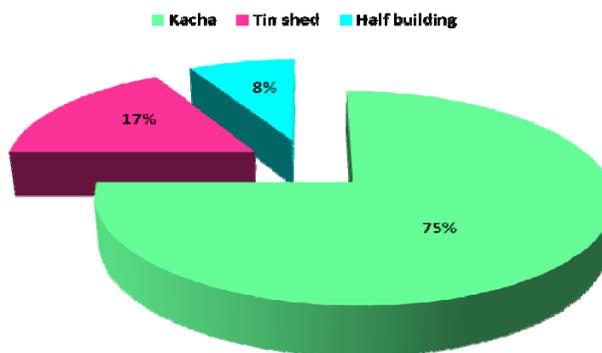


Fig 4: A graphical presentation of educational level in the study area

#### 3.2.2 Sanitary facilities

It was observed that fisher’s sanitary conditions were very poor. Three types of toilet are used by the respondents: 1) Kacha toilet-made of bamboo with leaf shelter and inadequate drainage disposal, 2) Semi-pucca toilet-made of tin or wood with inadequate drainage disposal, and 3) pucca toilet made of brick with good drainage disposal. It was found that 50% of the respondents use kacha toilet, 42.5% of the respondents use semi pucca toilet and 7.5% use pucca toilet (Fig.05). A few fishers noted that the households of fishers often suffered from diarrhea and cholera due to lack of good sanitary facilities. The present study revealed that the sanitary conditions of the fishermen were not satisfactory in the study area where in another study found in their study that 60% of the farmers had semi *pakka*, 30% had *kacha* and 10% had no sanitary facilities in the Old Brahmaputra River fishing community [6]. It was found that 62.5% of the farmers had semi-*pakka*, 25% had *kacha* and 12.5% had no sanitary facilities in the Mymensingh district [5] and in another study also found similar result that, 60% fishermen had *kacha* and 10% had semi-*pakka* toilet and 30% had no sanitary facility in the Tista River fishing community [12].

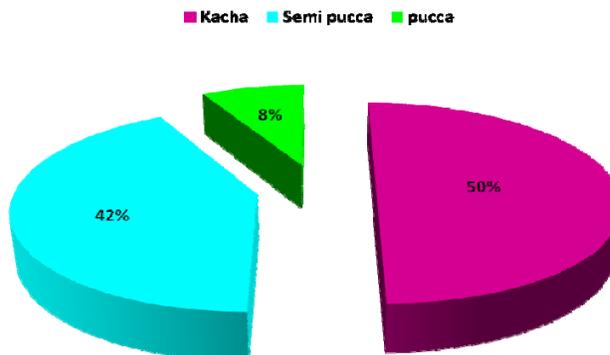


Fig 5: A graphical presentation of educational level in the study area

### 3.2.3 Source of drinking water

The study showed that 35% of the fisher’s household have their own tube-well for drinking water, 45% of the fishers use neighbors tube-wells and 20% use kua due to arsenic and other problems in tube-wells (Table-2). It was revealed in Baluhar Baor, Jhenidah district that household of 100% fishermen used tube-well water for drinking and among them, 96% household used owned tube-well, and remaining 4% used neighbor’s tube-wells [9]. It was found that, 82% fishermen used deep tube-well water while remaining 18% collected water from other sources such as river, canal water etc. in Marjat Baor at Kaligonj in Jhenidah district, Bangladesh [8]. It was found that 40% fishermen had their own tube-well, 50% used shared tube-well and remaining 10% used neighbor’s tubewell [6].

**Table 2:** Source of drinking water in the study area

Source of drinking water	Number of Respondents	% of respondents
Own tube well	8	35
neighbors tube-wells	28	45
Kua	4	20
Total	40	100

### 3.2.4 Fish marketing channel

It was observed that 2 types of fish marketing channel exist in the study area. Of the total (40) interviewed, 75% stated that they sold their fish by using 1st type of marketing channel and 25% used 2nd type of marketing channel (Table-3). It was found that 88% of fishermen sold their catch to the consumer directly in the local market, whereas 8% sold their catch to retailer or whole seller and 4% sold to other fishermen or neighbor [14].

**Table 3:** Fish marketing channel in the study area.

Type of marketing channel	Number of Respondents	% of respondents
Fishers-Arotder-Wholesaler-Retailers-consumers	30	75
Fishers-consumers	10	25
Total	40	100

### 3.3 Social capital

Training, network, social connection, group, trust, accesses to institutions etc. are the social capital for sustainable fish production. In this study training of fishing community have been surveyed which was described below.

#### 3.3.1 Training for fishers

In recent years DoF, NGO’s and other institutes have been providing training to the fishers. The respondents had some access to training and technical assistance (e.g. net making, fishing method, marketing channel etc.). In the present study, 55% of fishers were trained while, 45% fishers were non-trained (Table-4). It was reported that 4% of fishermen had received training about fishing and 96% had not received any training [14].

**Table 4:** Training received by fishers in the study area

Status of Training	Number of Respondents	% of respondents
Trained	22	55
Non-trained	18	45
Total	40	100

### 3.4 Financial capital

Financial capital denotes the financial resources that people use to achieve their livelihood objectives. Financial capital of fishers represents their savings, credit etc. the fishing sector has the potential to generate considerable amount of financial capital relative to the resources of associated groups. However, the study shows that fishers are often disadvantaged due to poor financial resources.

#### 3.4.1 Annual income of the fishermen

The selected fishermen were grouped into three categories according to the level of their annual income. The 1st category included the fishers who had annual income of TK. 25,000-50,000. The 2nd and 3rd categories had income levels of TK.. 51,000-1,00,000; TK.. 1,00000-2,00000; and above respectively (Table-5). It was revealed that about 63% of the fishermen had a moderate annual income and 37% had low incomes, however only 22% had high annual income in the fishing community of Tista River [12]. It was noted found that 63% fishermen in Birulia and 35% fishermen in Boroibari had a moderate annual income (30000-60000 BDT) in the Turag River fishing community [7]. It was revealed that about 60% of the fishermen had annual income between 24000 to 35000 BDT and 30% of the respondent had income in the ranged 35001 to 45000 BDT in the Old Brahmaputra River [6].

**Table 5:** Annual income of the respondent in the study area

Income category	Number of Respondents	% of Respondents
Low income (25,000-50,000)	2	5
Medium income (51,000-1,00,000)	17	42.5
High income (1,00000-2,00000)	21	52.5
Total	40	100

#### 3.4.2 Credit

It was found that 70% of the fishers received loan while the rest 30% of the fishers don’t received loans in the study area respectively (Table-6). Over recent years several institutions such as banks, NGO’s money lenders etc. providing credit to the fishers. It was found in the old Brahmaputra River fishing community that 40% of fishermen were self sufficient and they did not need to financial help but 14% borrow money from their neighbors, 18% from relatives, 22% took loan from NGO’s and 6% from cooperatives for their fishing business which was similar to the present findings [6].

**Table 6:** Loan received by fishers in the study area

Category	Number of Respondents	% of respondents
Received loan	25	70
Don’t received loan	15	30
Total	40	100

### 4. Conclusion

The socio-economic condition of the fishermen in the adjacent area was not satisfactory. The education level of the fishermen was so poor and most of them were illiterate. Due to the lack of awareness as well as the poor income of the fishermen families, the education level of the fishermen children was also very poor. Bank loan and other institutional credit should be made available on easy terms and condition to the fishermen.

Government should take initiative to established educational institute, extended and development of transportation system and sanitary facilities, and to provide the preservation facilities in the study area. NGOs and other organization should come forwarded to supply net and other harvesting and marketing equipment to the fishermen with less fare that may reduce the harvesting and marketing cost. The fishermen should be trained up to build awareness, improve their livelihood status and fishing laws.

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