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Socio-economic condition of the fishermen in Shikharkhan Jelepara under Jaintiapur Upazila of Sylhet district

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Abstract
This study was undertaken to update the livelihood status of fishermen in Sikharkhan Jelepara in Jaintiapur Upazila of Sylhet District from April 2017 to October 2017. The data were collected through the questionnaire, survey, group discussion and public interview. The results of the study revealed some interesting facts and showed that most of involved fishermen were in 16-30 years age group (42%) whereas majority of them were Muslim (88%) and married (79%). About 61% people lived with joint family. About 50% of fishing community was illiterate. Furthermore, it was reported that most of the fishermen received treatment from village doctors. It was found that 52% house were Katcha while 33% house were Semi-pacca and only 15% house were pacca. About 65% people used ring toilet and 6% people used pacca toilet. About 93% households had electricity connections. Most of the fishermen (64%) level of income was within 72000-108000. They usually caught fishes from haors (52%) and beels (34%). Lack of proper knowledge, lack of proper marketing facilities, illiteracy not as much of governmental support was the major constraints. In the present study, educational, organizational, and technical credit support were very crucial to develop their better socio-economic conditions.

Keywords: livelihood, fishermen, socio-economic, Shikharkhan, Jaintiapur

1. Introduction
The fisheries of Bangladesh represent a remarkable natural resources with an intimate connection with the life of the people of the country. Bangladesh is fortunate enough having an extensive water resources scattered with vast waterbodies (5433900 ha) of inland fisheries which consists of small ponds, beels, lakes, rivers, canals, baors (oxbow shape lakes), haors (bowl shape lakes), estuary covering an area about 4.34 million ha [8]. Promise for improvement of human livelihood through land based production system seems quite feeble hence fisheries have a greater promise and attaining a steady rise in contribution to GDP (4.39%). As well as fisheries sector contributes almost 60% of the animal protein to our daily diet. About 10% people are dependent directly or indirectly on the fisheries for their living [9]. It has already been established as a vital income and employment generating sector in Bangladesh as a cheap sources of healthy food for the population of the country [4].
Fish is renewable natural resource and play a great role for the improvement of the socioeconomic condition of the poor fishermen.
Livelihood is made up of the capabilities, activities, assets (including both materials, social resources) that contributes to a mean of living. According to Chambers and Conway, livelihood comprise the capabilities, the assets (natural, physical, human, financial and social), the activities and the accesses to these that together determine the living gained by individual households [5]. Livelihoods of the fishermen mostly depend on fisheries resources. Fishing is the main source of income of the river, haor adjacent fishermen households. But fishermen cannot catch properly due to economic, social, and technical constrains. The socioeconomic condition of fishermen in our country are not so good. They are not capable of earning sufficient amount of money to meet basic needs. Fishermen community is one of the most vulnerable communities in terms of their livelihood opportunities in Bangladesh. They live in hand to mouths and considered as one of the poorest community in the country. For

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sustainable rural development and poverty elimination, different approaches had gradually been expanded with its own core and principles for poverty focused development activities [6].

Sylhet is one of the north-eastern district of Bangladesh. It is situated besides the Meghalay State of India. The area is popular for haors and beels. Haors are bowl shaped shallow waterbody which holds a huge amount of water for 7-8 months of year having a unique ecosystem. There are large number of ponds, canals, rivers, haors and beels in the area. The waterbodies of Sylhet contributes largely to the annual production of the country.

Jaintiapur is situated in the eastern part of the Sylhet district. A long time ago, the present plain land was probably under water and part of a huge waterbody which might have separated Jaintiapur from Sylhet. Jaintiapur was a hilly kingdom of ancient Assam. The area is covered by 240.27 square km, located in between 24'59" and 25'11" north latitudes and in between 92'03" and 92'14" east longitudes.

Purbotul is selected area of Sikarkhan village in Jaintiapur upazila where usually the fishermen lives. They lead a very poor livelihood. The area is so beautiful having a great natural resources. There are various trees like coconut, bamboo, mango, betgach, supari etc and various animals like wild cats, wild hens, monkey, mechubhag, beji, snakes etc in the area. There about 0.5 km pacca road and 4-5 km katcha road in the village. There are 3 schools, 1 madrasha, 2 mosque in the area. The fishermen had no license and did not get any fishing training from Gov't and local NGOs. There is no preservation system due to lack of electricity. As a result, they did not dry fishes usually. The local people says, in previous years about 10-15 years ago, there was a huge abundance of fishes in the area. But now-a-days the fish biodiversity and abundance is not as rich as the previous years.

The aim of the study was to know the updated status and socio-economic conditions of the following fishermen community. Government and NGO's should take necessary actions to improve the livelihood status of the community.

2. Materials and Methods
2.1 Study Site
The study was carried out in a area named Purbotul in Sikarkhan village under Jaintiapur Sadar upazila in Sylhet district. The study was conducted for a period of eight months from June 2017 to January 2018. The village is situated on the bank of the river Kapna. There is a great fish biodiversity and good numbers of fishing community (fishermen) of Purbotul, Sikarkhan lives.
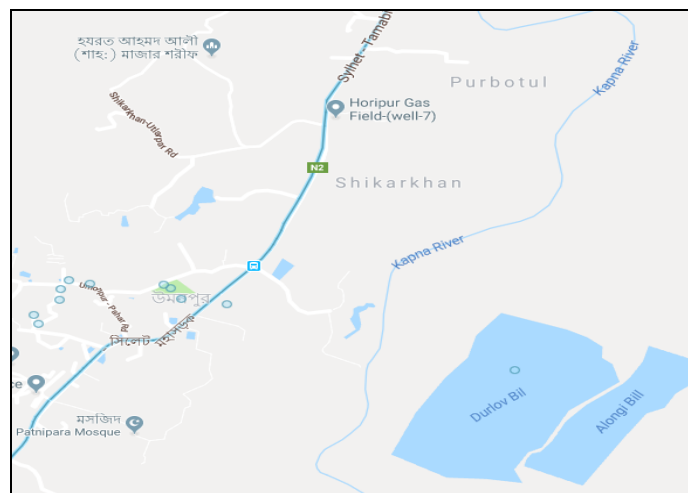

Fig 1: Map showing the study area. (Source: Google map)

2.2 Preparation of Interview Schedule
In order to get a complete picture of livelihood of fishermen and to fulfill the objectives of the study a draft interview schedule was prepared. The draft interview schedule was then used for pre-testing a few sample respondents. In pre-testing, attention was paid to incorporate any new information, which was not designed to asked and filled in the draft interview schedule. The interview schedule was then modified, changed and rearranged according to the experience gathered from pre-test. The final schedule was developed in logical sequence so that the fishermen could answer chronologically. The schedule included various questions related to socio-demographic condition, income of fishermen and family members, factors affecting the livelihood of the respondents and other relevant aspects of local fisheries.

2.3 Data Collection
During collection of data, both primary and secondary sources were considered. Primary data were collected from fishermen. Several visits were made to the study area to collect accurate information related to the objectives. For the study a combination of interview schedule, participatory rural appraisal (PRA) tool such as focus group discussion (FGD), social mapping and cross interviews with key informants were used for fishermen. A total 60 fishermen were randomly selected from the villages surrounding the river. Both professional and subsistence fishermen living around the area of Purbotul was selected for the study. Secondary data were collected from Upazila Fisheries Officer (UFO) of Jaintapur Sadar. The samples and data were collected monthly basis throughout the study period.

2.4 Data Processing, Analysis and Presentation
The collected data were summarized and processed for analysis. These data were verified to eliminate all possible errors and inconsistencies. Tabular technique was applied for the analysis of data by using simple statistical tools like averages and percentages. Finally, the processed data were transferred to a master sheet from which classified tables were prepared revealing the finding of the study. For processing

and analysis purpose, SPSS 16.5, MS Excel and MS word had been used. Tables and pie-charts had been used for data presentation.

3. Results and Discussion
3.1 Age distribution
The fishermen's were categorized into five age groups as 0-15 years, 16-30 years, 31-45 years, 46-60 years and 61-75 years. Most of the fishermen were in age group of 16-30 years and the lowest involvement in fishing 61-75 years. It was found that 66% people in Tangail were under 40 years age [2]. Ahmed found that 70% people in coastal region were under 40 years age respectively [3].
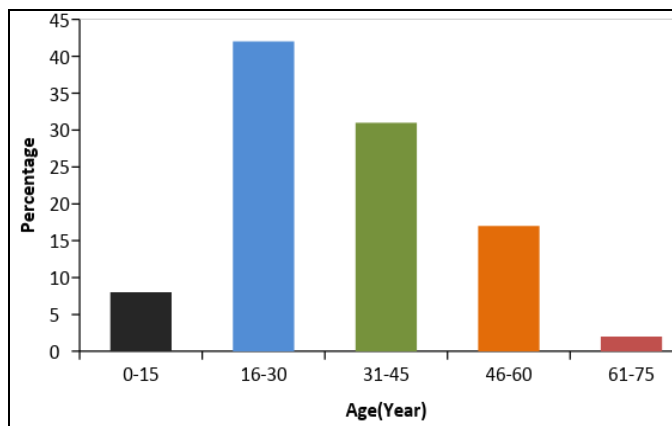

Fig 2: Age distribution of fishermen.

3.2 Religious status
In our study period we have observed that the 88% fishermen were Muslim and 12% fishermen were Hindu. Though there are a majority of muslims, there is a friendly relationship between Hindu and Muslims.
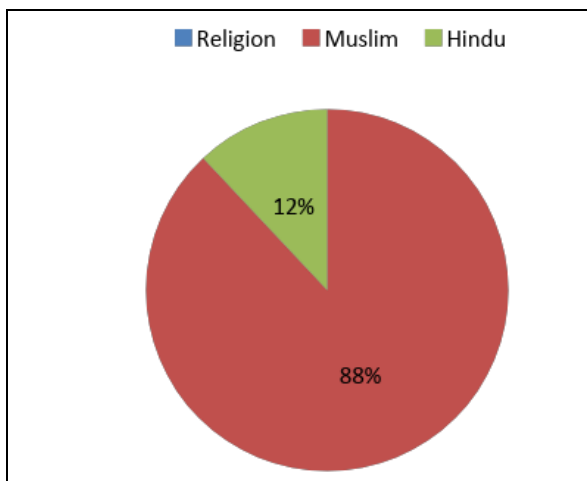

Fig 3: Religious status of Fisherman

3.3 Marital status
About 79% of the fishermen were married and 21% were unmarried in the study area. Early marriage and polygamy usually happens in the study area. There is also a problem of dowry. Ahamed found that 94% fishermen were married in Tangail [2]. Samima found that in Gallamari recorded 70% fishermen were married respectively [12]. So the present result is more and less similar to those results.
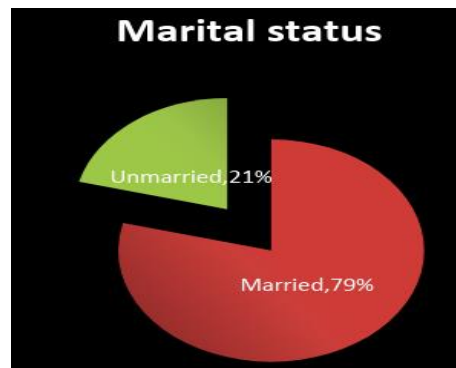

Fig 4: Marital status of selected fishermen.

3.4 Children age
The people of the area have no knowledge of controlling birth. So there is a huge percentage of children in the area. Every family has approximately 5-6 children. We have categorized the children in three age groups as age group of 0-5 years, 6-10 years, and 11-15 years. Most of the children (43%) were in age group of 0-5 years and the lowest value (22%) found in age group of 11-15 years.
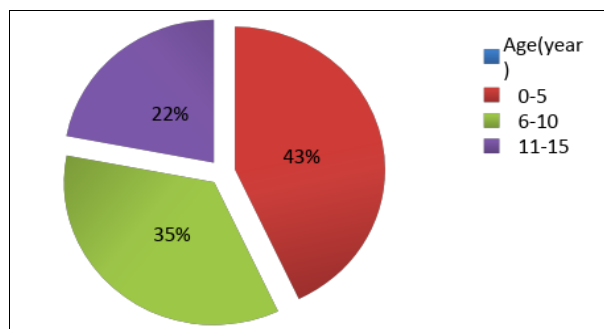

Fig 5: Children age of the area

3.5 Fishermen educational status
Generally in our country most of the fishermen are illiterate. The study area is similar as the other fishing community of Bangladesh. We have categorized the educational status of the fishermen in five categories such as illiterate, can sign only, and class 1-3, class 1-5 and class 1-10.
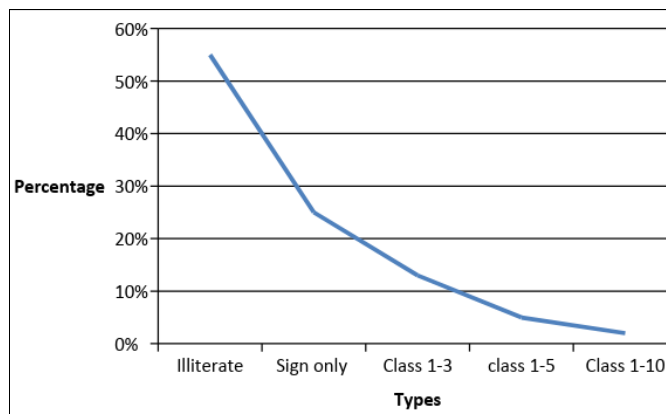

Fig 6: Educational status of fishermen.

It was found that 50% of the fish farmer had education up to S.S.C. level, while 22% had H.S.C. level of education and only 6% fish farmer were illiterate.

3.6 House type

The house condition indicates the social status of the fishermen. There are three types of houses in the study area such as 1) *Katcha* that were made of bamboo and trees leaves with mud floor 2) Semi-*pacca* that were made of brick in one part either floor or wall but the roof was in wood or tin and 3) *pacca* were made of bricks. The percentage of kacha, semi-pacca, pacca 52%, 33% and 15%.
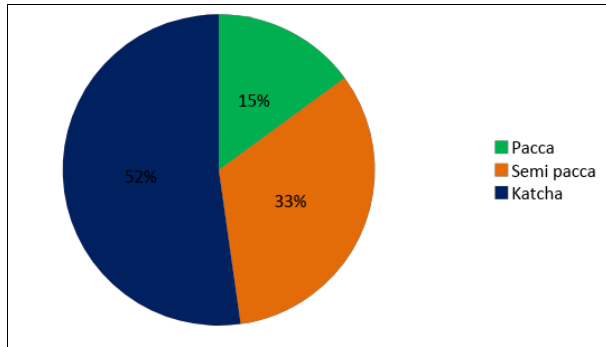

Fig 7: House type of Fisherman

3.7 Fishing areas

The study area is fulfill with haors, beels, river and ponds.The waterbodies of surrounding area have a great availability of various aquatic fauna and flora. The major haors are Boro haor, Shiakuna haor and Ashidag haor. The major beels are Durlov beel, Bahorduar beel, Alongi beel and Heotchara beel. There is a river named Kapna passing besides the village. The haor area contains 52%, beels contain 34%, river contains 11% and ponds contain 3% area of the whole fishing area. It's a great source of aquatic Biodiversity and villagers use the river for navigation and fishing purposes. There are some vegetable fields besides the river bank. The width of the river is decreasing day by day for siltation from the flow of river which comes from Meghalayas hilly region.
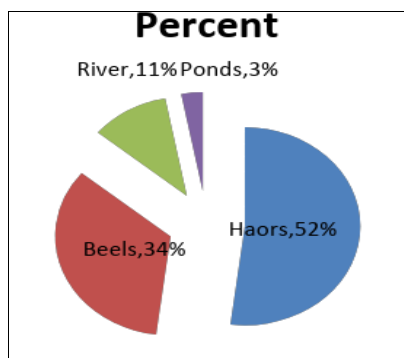

Fig 8: Types of waterbody.

3.8 Fishing gears used in the area

Boats were one of the main fishing gears in the area. Two types of boats were found in the study area; mechanized and non-machanized boat. It is denoted that 60% fishermen had non-machanized boats, 20% had mechanized boats and 20% did not have any boats. Every family had different types of fishing nets. The main fishing nets were jhaki jal (cast net), boro jhaki jal (cast net), dharma jal (lift net), Ber jal (surronding net), thela jal (push net), borshi (hook and line), pharoin jal, bol jal, dungi, current jal.

The pharoin jal and dungi was specially used for catching shrimps. They were made by bamboos and plastics. About 100% families had pharoin nets.

Punti, tengra, mola, bheda, baim, magur, rui, taki, pabda, kholisha, boal, carpio, kuchia etc were the main fishes caught in these area. They never consumed Kuchia for religious causes. They could catch fishes 3-7 kg/day/fisherman.

Table 1: Types of net use during Fishing.

Types	Catch fish
Pharoin jhal	Shrimp
Bell jhal	Rui, catla and other large fishes.
Thela jhal	Mola, dhela, punti, cheng
Moha jhal	Rui, ayre, shol
Jhaki jhal	Shol, gozar, koi, tengra
Current jhal	All kind of fish
Dungi	Shrimp
Hook	Cheng, shol and baim.

3.9 Family condition

The survey found that, most of the fishermen lived with joint family. The percentage of joint family and single family periodically 61% and 39%. In the study area, joint family were very popular because of getting more income, improving food security and having social values. This results indicated that they were not aware about family planning procedure and religious causes. For that reason, the number of joint family was higher in the area.
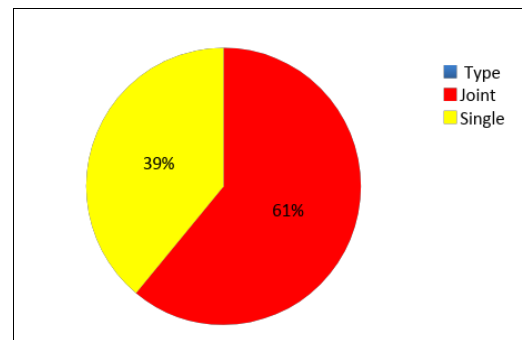

Fig 9: Family condition of the area.

3.10 Land ownership

In the study area, we had found that there were numerous land ownerships types. We had categorized them in 7 types. The people who had only house for living was about 20%, had house with pet animals house 25%, house with agricultural land and ponds 25%, people also had land under 2 Acre 15%, under 3 Acre 6% and under 10 Acre about 2%. It was found that, the average homestead area of the fishers is 0.003 ha in Jamalpur District [13].

Table 2: Land area of Fisherman

Land Area	Percentage of fisherman (%)
Only has house for living	20
House with pet animals house	25
House with Agricultural land/pond	25
Under 2 acre	15
Under 3 acre	7
Under 4 acre	6
Under 10 acre	2

3.11 Toilet Condition

The sanitation condition found poor in the study area. Most of the people about 65% used Ring Toilet which were given by the local Union Porishod. The people used Katcha toilets

made by bamboo, leaves, polythene and inadequate drainage system. About 14% used Katcha toilets and 6% people of the area used Pacca toilet made of tin, bricks, cement and well drainage system. A large number people had no facilities of sanitation. They used to use jungle, haors for sanitation purposes. 15% people had no sanitation facilities.
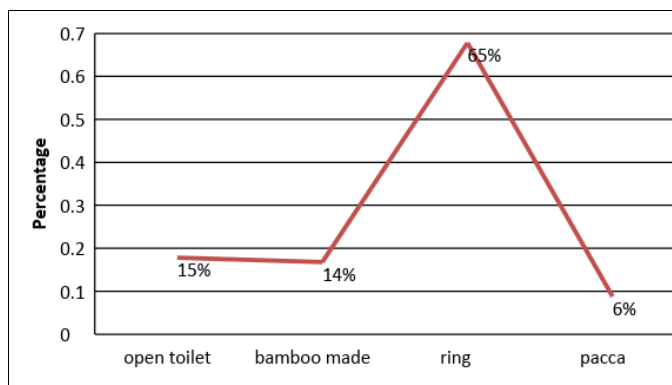

Fig 9: Types of toilet in the area.

3.12 Income status
Level of income of an individual family determines socio-economic status in the society. Annual income of a fisherman came from main occupation as well as secondary profession. Fishing, agriculture, service, daylabour, business, cattle raising, poultry and selling its products, rickshaw pulling is the main occupations of the fishermen. The fishermen were categorized in 3 categories by their daily family income such as 150-200 Tk, 200-300 Tk, 300-350 Tk. Depending upon their daily income we can also categorized them in 3 categories into monthly income and annual income. The monthly income categories were 4500-6000 Tk, 6000-9000 Tk, and 9000-10500 Tk and annul income categories were 54000-72000 Tk, 72000-108000 Tk, and 108000-126000 Tk.

In off season people caught shrimp by pharoin net. Their income in these days were about 1500 Tk. In winter season, the beels were leased for 2-3 months by the local union porishod. People of the area worked there and earned about 500 Tk/day. If they lived in the beels and worked double periods of a day they could earn 1000 Tk/day.

It was found that the income of a fisherman community of the Dahia Beel under Natore district was BDT 51 to 75 daily (annually BDT 18,600 to 27,400) [9]. Shahriar found that annual incomes of the fishermen of Morgangi Beel area under Melandah Upazila of Jamalpur district were varied from BDT 21,000 to 100,000 [13]. According to him, it was found that about 40% of the fishermen had annual income between BDT 24,000 to 36,000 and 32% of the respondent had income in the ranged BDT 36,001 to 48,000. Hossain indicated that fishermen in Kaliakoir Upazila under Mymensingh district had annual income ranging from to BDT 24,000 to 40,000 [10]. Annual income ranges of Baluhar Baor fishermen are slightly higher than that of fishermen of Morgangi Beel and Kalikoir Upazila. This may be due to the higher availability of fish for catching in the Baluhar Baor.

Table 3: Income status of Fisherman.

Level of income(BDT)	No of fisherman (n=60)	% Of total fisherman
54000-72000	8	13
72000-108000	38	64
108000-126000	14	23

3.13 Drinking water sources
The provision of clean and safe drinking water is considered the most valuable elements in the society. The study showed that, 72% fishermen used deep tube wells in their own house, 26% fishermen used deep tube wells from their neighbors house as well as people used water from ponds, rivers canals and haors about 2%.
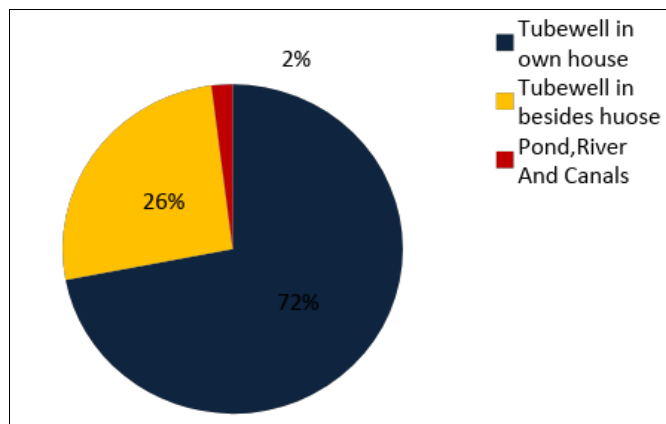

Fig 10: Drinking water sources of the area.

3.14 Source of energy
There are mainly three types of cooking fuel were used in the study area; Cow-dung, tree leaves and wood including tree branches. It was observed that, majority households had electricity facilities. About 7% households had no electricity connections. It was reported that, 20% people used electricity in Gollamari Fishing Community [12]. Due to lack of proper energy, fishermen were not able to preserve fishes.

3.15 Occupational Status
The main occupation of the majority respondents was fishing. A considerable number of respondents were students. Now-a-days they are involving themselves in different types of jobs like agriculture (paddy cultivation, vegetable culture), business (fish related business), shop keeping, job (various day labour, rickshaw puller) etc. As Bangladesh is a agro based country, the majority of the people of the rural area adopt agriculture as their main profession.

3.16 Health facilities
Health facilities were not satisfactory at all in the area. Generally, majority fishermen received suggestions from the village doctors. Some people went to the Upazila Health Complex. In few cases, they went to the Sylhet M A G Osmani Medical College where they could good care from MBBS doctors.

It was found that in Morgangi Beel area health facilities of the fishers were better than the Baluhar Baor area where 64% of the fishermen's HHS were dependent on the village doctors, 24% of the fishermen got health services from Upazila Health Complex and remaining 12% got health services from MBBS doctors [13]. This difference could be due to low income and lack of knowledge of the fishermen concerned.

3.17 Source of money for fishing
Due to religious causes people usually not interested to take any loans from the bank and other NGOs. About 82% fish farmers did not take any loans from any other institutions. About 10% people took loan from Grameen Bank and 8% people took loan from NGOs like ASA, BRAC etc.
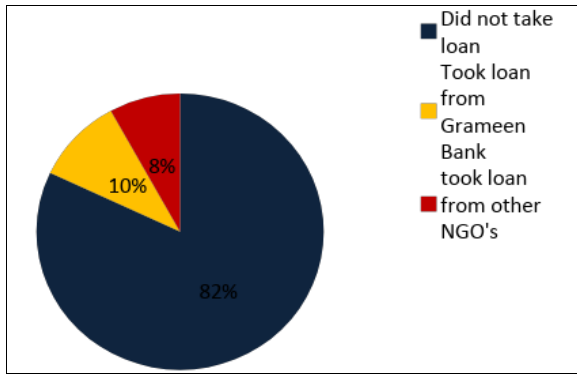
Fig 11: Loan taking activities of Fisherman.

3.18 Livestock and poultry rearing
The study showed an encouraging picture regarding ownership and rearing of livestock and poultry. Most of the families had cow and poultry in their possession. About 79% people who reared Cows and goats, 10% people who reared hens and ducks and 11% people who reared both Cows, goats and hens, ducks. Different result was recorded by Mahbubullah who mentioned that 82.30% fish farmer had no animal and poultry [11]. This result is quite different from present study.

3.19 Food and nutrition intake
Investigation was carried out on intake of some major food items like rice, fish, meat, vegetables, milk, egg etc. If they got large fishes, they did not sell those and used for consumption. They got meat from the live stocks and poultries. They used to cultivate vegetables in the lower land besides the village and bank of the river. The vegetables were consumed by the villagers. They did not sell them.

3.20 Women contribution in various activities
Most of the women in the study area were found home makers. They mainly work at home and homestead agricultural activities. They also engaged in net making, stitching, basket making, sewing and other household activities.

3.21 Diseases
80% of the fishermen were suffered with different types of diseases including rumatic fever, dysentery, jaundice, malnutrition, gastric, diarrhea, fever etc for unhygienic environment where they live. It was also found that, 20% fishermen were not suffered by any kind of diseases last year which was near about one fifth of the total fishermen.
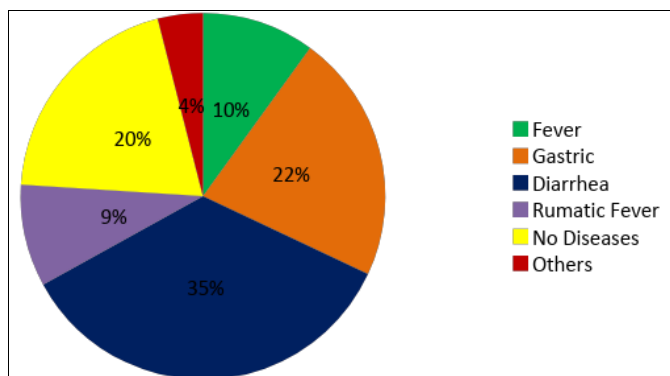

Fig 12: Disease status of Fisherman.

3.22 Recreational status
There were different types of medias for recreation in these fishing community such as radios, mobile phones. But TV was totally restricted in the area for religious causes. People used to play football, cricket, badminton in village fields. Women spend their leisure time by gosspping, visiting neighbours, sewing kathas etc.

3.23 Socio-economic constraints
Livelihoods of a large number of fishermen in the Purbotul area in Sikharkhan were associated with catching fish, transportation and marketing systems. Usually the fishermen did not get good price by selling their fish due to interference of intermediaries, bad transportation system, limited accessibility to the established market place and there was no supply of ice. Fishermen suffered from various problems such as inadequate credit facility, lack of marketing facilities, lack of knowledge of fishing, lack of appropriate gears, lack of fishing boats etc. Being very poor their children often go for fishing rather than going school. As a result, generation after generation they remain illiterate and not being able to contribute to the betterment of their community. Fishermen live below the poverty line and are struggling to survive with health, nutrition, and house buildings materials as their day to day problems. The fishermen want to establishment and reservation of a special fish corner in each market that help them to get good price for their harvested fish. For this purpose institutional support from local government authority and NGOs are required.

3.24 Livelihood outcomes
Livelihood outcomes can be thought of as the inverse of poverty. Contributing to the eradication of poverty and food insecurity depends on equitable access to resources, access of disadvantaged groups to sufficient, safe and nutritionally adequate food. In spite of poor resources livelihood outcomes of fish farming are positive and most of them increased their income, food security and basic needs. The survey found that 65% of fishermen had improved their socio-economic condition through fishing and agriculture. They had better food, clothes, housing conditions and children education. But 35% farmers had not yet been improved their status. Livelihood outcome factors are food security, nutrition, medical facilities, income, education, housing facilities, environment, safety etc. The fishermen community goes under food insecurity for 3-4 months in every year. Reason for the food insecurity was off-season of fish catches. Food crisis become severe in the months of April to June. Only a few fishermen those who had much agricultural land had food security for the whole year. Educational status of the fishermen in the study area was not good and most of the people were illiterate. But the primary education percentage of the children of fishermen was increasing gradually. Girls mainly went to Madrasha (85%), Boys went to the schools (90%), the others went to madrasha or school. Institutional and organizational supports, extension services, more fishing knowledge and marketing were needed for sustainable livelihoods.

4. Conclusion
Fish and fisheries resources in the Purbotul of Sikarkhan village play a great role in providing animal protein in order to meet the problem of malnutrition of the local people. But,

The present socio-economic status of the fishermen of Purbotul at Sikarkhan village was not satisfactory. Most of them were solely depended on fishing for their livelihood. The livelihood circumstance of the people were presented in terms of religion, family sizes and composition, educational status, health and sanitation facilities, housing pattern, monthly average income, etc. The government should take initiative on proper licensing system for the genuine fishermen, involvement of NGOs for training them to improve their socioeconomic condition and incorporation of lion's share for the fishers in the management process. CBFM is needed in the water bodies for sustainable fisheries and livelihoods in the area. Government should take necessary steps by taking some sorts of management policy as well as some extra providence during the ban season of the fishing. Alternative source of income should be introduced in the poor fisher's community so that they can gain financial support outside of fishing. Special training program should be arranged and health facilities should be increased. After all the fishing sector should be promoted in order to get better contribution from this sector to the national economy.

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