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SOCIO-ECONOMIC CONDITION OF THE FISHERMEN IN JELEPARA UNDER PAHARTOLI OF CHITTAGONG DISTRICT

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Abstract

The investigation was conducted on the socio-economic condition of fishermen in Jelepara under Pahartoli of Chittagong district. Randomly selected 50 were interviewed among 200 fishermen. From the survey it was found that 94% fishermen were male and 6% were female. A large portion was Hindus (88%) and rest was Muslims (12%). About 84% were found married. Single family was much more (94%) than joint families. It was found that the number of school going children was 1.9 per house and 54% were school dropout boy and 46% were girl. Eighty eight percent houses were full katcha, while semi-pacca were12% and all the families have electricity facilities. Different types of net were used viz: the set bagnet, tong jal, current jal, tanajal etc. They used engine boats and engine power ranges from 8 to 22 HP. On average a group of fishermen (4) caught 35-80kg/day using a boat. Maximum fishermen sold their fish after fulfilling their demand. Monthly average income was around BDT. 6000-15000. Fifty six percent of the fishermen borrowed money from money lenders and 44% from the NGO's. They need more institutional, organizational and technical help for the betterment of their socio-economic condition and sustainable livelihood.

Key Words: Livelihood; structural questionnaire; and catch per unit effort (CPUE).

Introduction

Bangladesh is situated in the sub-tropical region has an area of 1, 47,570sq.km. It lies between 2024 to 2638 North latitude and 8801 to 9240 East longitudes. The marine fishery of Bangladesh is one of the most productive resources in the world. Bangladesh being resourceful of fish biodiversity, there are 475 species of marine water fishes (DoF, 2012).

In mid-sixties per capita per day fish consumption was 32g, declined to 20g in mid-eighties (FAO, 1985). During 2010-2011, the total fisheries production in Bangladesh was 30, 61,687 metric tons (MT) in which inland fisheries and marine fisheries comprised 2515345 MT and 506333 MT that were 82.16% and 17.84% of the total production, respectively. This production level reflects per capita per year availability of 18.94 kg (51.89 g per day) of fish where the minimum requirement was about 20.44 kg/year (56 per day) (DoF, 2012).

Human capabilities, assets (material and social resources) and activities which are required for a means of living is livelihood (Chambers & Conway, 1991) and fisheries provide livelihood to about 12 million people of the country directly or indirectly (DoF, 2002). Fisheries sectors contribute around 4.43% to the GDP, 2.73% to foreign exchange earnings through export and 22.21% in agricultural sector. Fish provide 60% of national protein consumption (DoF, 2012).

There is no proper management scheme for capture fishery of the Bay of Bengal. So many species are drastically reducing day by day. Government and non-government organization are not found to take sufficient measures to overcome this problem. That's why proper rules and regulation should be applied in a planned way to increase the production as to save the threatened species as well as to improve the livelihood status of the people in the region.

Marine fisheries contribute at least 20% of total fish production in Bangladesh and >90% of catch comes from artisanal fishing, with approximately 500,000 people are directly dependent on the sector (Ahmad, 2004). The combination of decreased yield and value of catch will almost certainly lead to reduced earnings in the Chittagong and Cox's bazar fishery, therefore, destabilizing the livelihoods of those who are fully dependent on fishing. Full analysis of fishing related livelihood impacts would need to be investigated to make any definitive statements.

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Fishermen villages are mostly located in inaccessible areas where there is no modern communication systems, having a very low developmental and socio-economic impact in community. There is no denying the fact that fishermen and fishing community as a whole the poorest and most disadvantaged group of Bangladesh (Hossain *et al.* 1997). They have no other income generating activities except fishing, which cannot be carried out throughout the year and in idle periods, they lack alternative employment opportunities. Their socio-economic development is negligible.

For the overall planning and development and implementation in fisheries sector, it is necessary to have the sound knowledge about the livelihood pattern of the related people. With this aim in view, the study includes the following objectives: 1) to know the socio-economic condition of involved fishermen; and 2) to find out some possible suggestions to uplift the livelihood status of local fishermen.

Materials and Methods

Design of Experiment

The present study had been undertaken and completed according to random sampling of 50 fishermen out of 200. To understand the socio-economic conditions of fishermen, face to face personal interview with structural questionnaire was done. Design of the research work is depicted in Fig.1.

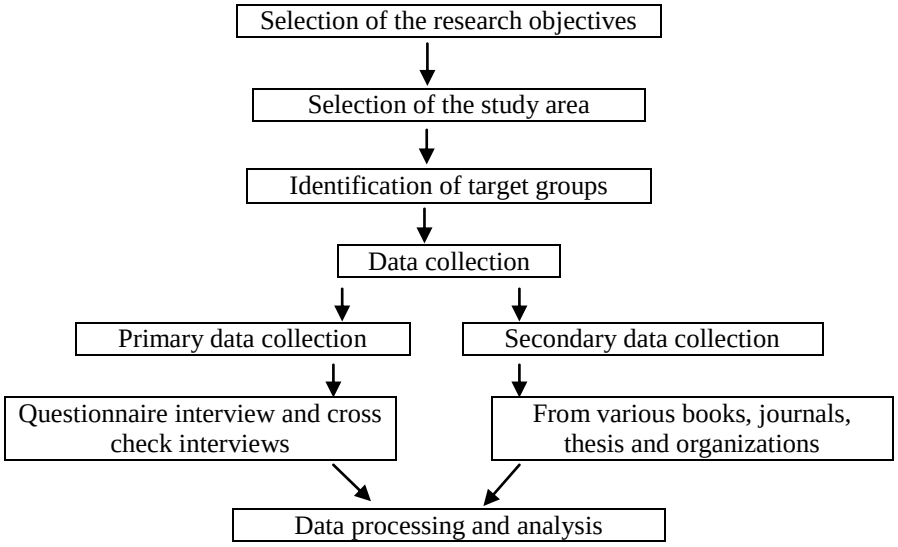


Fig. 1. Design of the research work.

Selection and description of the study area

The study was conducted at Jelepara of South Kattoli ward under Pahartoli very close to Zahur Ahmed Chowdhury Cricket Stadium of Chittagong district during August to October 2012. The area was selected because large scope of fishing and processing would be possible.

Questionnaire survey

The draft questionnaire was developed keeping in view the specific objective of the study and develop it later by conducting interview on a pilot basis to prepare the final questionnaire.

Primary data source

The primary data were assembled through field survey at the village level using a well structural questionnaire. Data were collected both by physical observation and interview with fishermen at house, field, fishing place and market.

Secondary data source

Further relevant information on socio-economic condition of fishermen were collected from books, thesis paper, journal, Govt. and non Govt. organizations like as District Fisheries Office, Central Library, Bangladesh Agricultural University, Mymensingh.

Data analysis

Collected information obtained from the survey was accumulated, grouped and interpreted according to the objectives as well as parameters. Some data contained numeric and some contained narrative facts. The collected data were then edited, summarized and graphical representations were made.

Results

Socio-economic condition of the fishermen

The relevant data were collected on the socio-economic characteristics included sex, age group, religion, marital status, family type, educational status of the fishermen, number of members in their family, use of electricity, yearly income and expenditure per month, the fishing craft and gear ownership, dadon and loan etc.

Sex

The survey was conducted among the fishermen of which 47 (94%) were male and 3 (6%) female (Fig. 2). Generally, women were involved in household works and they could not afford to go out for fishing in a large scale due to trafficking and others social problems. On the other hand, male were free from those barriers and engaged themselves in fishing.

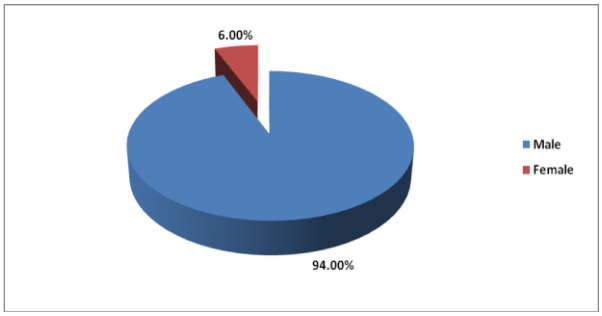


Fig. 2. Proportion of sex of the studied fishermen of Jelepara at Pahartoli.

Age group

Fig. 3 showed that 16%, 24%, 50%, 8%, 2% and 0% of fishermen belonged to age group of 15-30, 31-40, 41-50, 51-60, 61-70 and 71-100 years, respectively. Result showed that the highest number of fishermen was in between 41-50 age group indicating middle age group was the dominant in fishing.

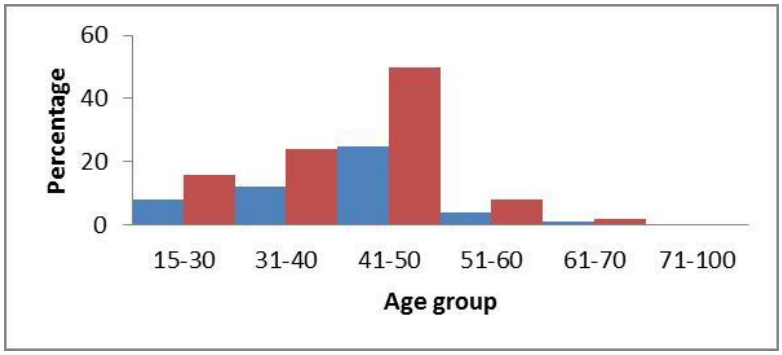


Fig. 3. Age group distribution of the studied fishermen of Jelepara at Pahartoli.

Religion

Religion can play a very important role in the socio-cultural environmental life of people and can act as a notable constraint modifies in social changes. In Chittagong, selected area was mostly dense with lower caste Hindu family and most of them are involved in fishing as a profession of their ancestries. Only 6 Muslim fishermen were found

during the survey out of 50 fishermen. So Muslim fishermen were 12%, Hindu fishermen were 88% and no Buddhist fisherman was found (Fig. 4).

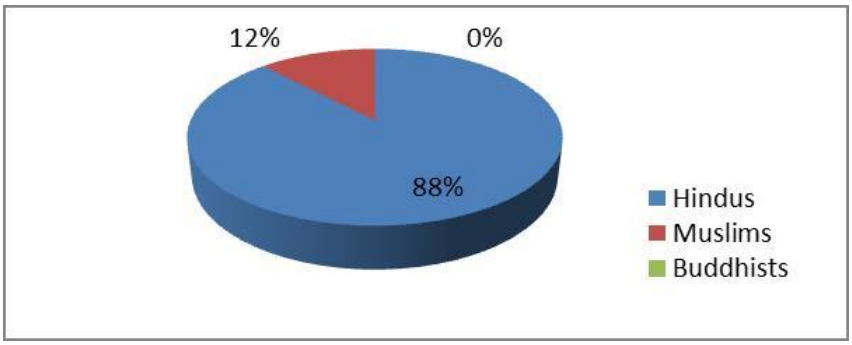


Fig. 4. Religion of the studied fishermen of Jelepara at Pahartoli

Marital status

The study was made to see the marital status of the fishermen. The study revealed that a majority (84%) were married while the unmarried fishermen represented only 16% of the active fishermen (Fig. 5). Divorced and oppressed persons were not found in this survey.

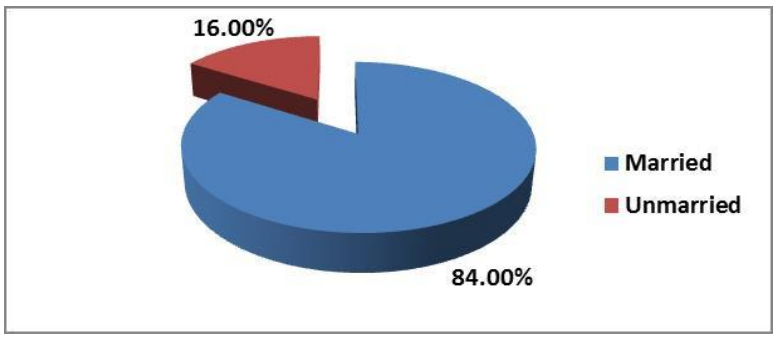


Fig. 5. Showing marital status of the studied fishermen of Jelepara at Pahartoli

Family type

In rural Bangladesh, families are classified into two types: 1) Nuclear family- married couples with children and 2) Joint family- group of people related by blood and/or by law. A nuclear family consists of the members of two generations (parents and children) and joint family with members of three or more generations. The study showed that 47 families were nuclear whereas only 3 were joint families (Fig. 6).

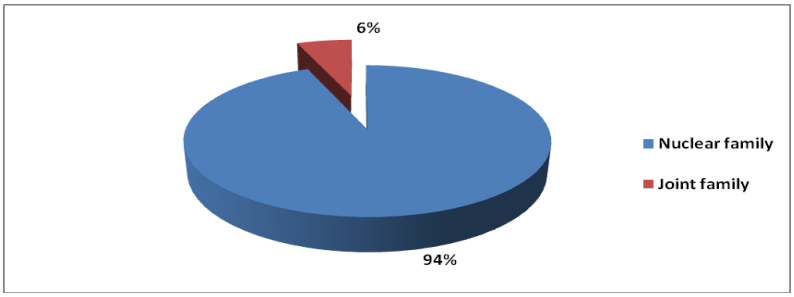


Fig. 6. Family type of the studied fishermen of Jelepara at Pahartoli

Family member's age group

In the study area it was found that there were a total of 320 members in the 50 fishermen family of which 218 were adult (~68%) and 95 were children (~30%) and 7 were old (~2%)

Use of electricity

It was found that the facilities of electricity were comparatively well in the area due to its position (near the city area). The survey indicated that 100% fishermen had the facility of using electricity.

Education level of the fishermen

The environment of education in the study area was not good enough. In the study area it was found that 16% of the fishermen passed class V, about 14% fishermen can sign only and 70% were illiterate (Fig. 7).

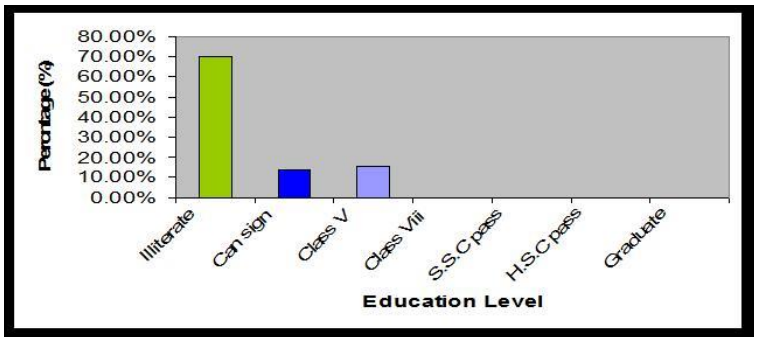


Fig. 7. Educational status of the studied fishermen of Jelepara at Pahartoli.

House type

In the study area, houses of the community were of two main types: 1) Katcha- houses were made of bamboo and talli or tin with mud flooring, 2) Semi pacca- made of wood or/and tin and floor made of concrete. The study revealed that 88% of housing structures were Katcha, 12% were semi pacca and pacca were not found.

School going and dropout children of fishermen

From the study, it was found that the number of school going children were 1.9 per house. It was observed that 54% were school dropout boy and 46% were girl.

Fishing area and duration of fishing trip

Fishing area is an important characteristic especially for commercial fishing due to the habitats of the fish in the sea is not available everywhere. So, fishing area should choose widely which is economically more viable for fishing. Most of the fishermen in the study area were found to go to 40 to 60 Km from sea shore for fishing. Duration of the fishing trip depends on availability of fish and catch. Depending on various factors, duration can be one day to one month.

Fishing Gears operated in the study area

Different kinds of nets were used in the study area. Many fishermen do not possess their own net but carried out fishing by borrowing net. Net used by the fishermen are:-

i. Tong jal

Specific Feature: Used for Hilsha fishing

ii. Set Bagnet (*Behundijal***)**

The set bagnet is a traditional fishing gear widely used in the coastal area of Bangladesh. It is the second most important fishing gear after gillnets

Specific Feature**:** Used for catching small fishes like loitta, chingri etc.

In the study area 100% fishermen were found to use tong jal and behundijal.

Boat used for fishing in the study area

Usually medium size boats were used in the study area. Some small size boats were also used for fishing in the area. There were a few trawlers for deep sea fishing. All of them were operated by engine. Engine power of the boats

ranged from 8HP to 22HP mostly (Fig. 8). Some fishermen's had their own boats, some purchased boat through group ownership and rests were taken from moneylenders through dadon.

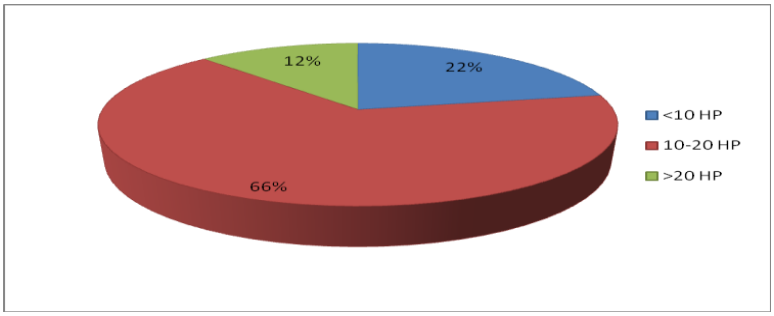


Fig. 8. Boat engine power used by the studied fishermen of Jelepara at Pahartoli.

Species composition of the catch

Most fishermen reported that hilsha catch was dominant and others are loitta, chingri etc. On an average they caught 35-80 kg fish per day in this catch and percent contribution of Hilsha, Loitta and Chingri were 70%, 17% and 13%, respectively.

Price of the fishes

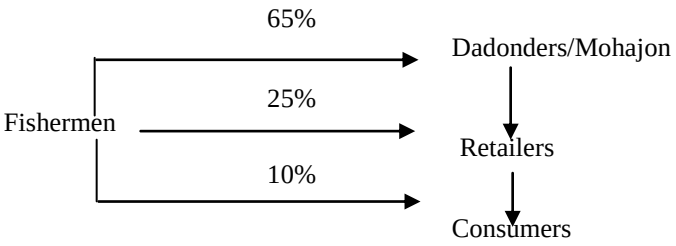
Market prices of the fishes were high but fishermen were paid a little in relation to the market price. Making high interest loan for their food, clothes, house, daughter marriage, medical treatment, making boat and fishing gear during lean fishing period and after fishing to return money they were bound to sell their fishes at a low price to moneylender. According to their data BDT 180-200 kg^{-1} Hilsha, BDT 30-40 kg^{-1} Loitta and BDT 50-60 kg^{-1} Chingri (small size) were paid to them by Dadondar/Mohajon.

Catch per unit effort

In fisheries and conservation biology, the catch per unit effort (CPUE) is an indirect measure of the abundance of a target species. Catch per unit effort (per day/ unit effort or boat) of the fishermen were found between 35 to 80 kg.

Marketing System

From the survey it was found that 65% of the fishermen sold their captured fishes to the dadonders/ mohajon, 25% to retailer and 10% sold their fish to consumers directly. It is shown in the following flow chart-



Yearly income

From the interviews, it was found that the highest income per day of the fishermen from selling fish was BDT 350 and the lowest was BDT 300. Moreover, every year many people are getting involved in fishing as a seasonal or part time occupation. As a result, fishing pressure is continuously increasing in the sea. The study showed that 20% fishermen's yearly income was found BDT 50000-70000, 48% fishermen's yearly income was between BDT. 71,000-1,00,000 and 32% fishermen's yearly income was found above BDT 1,00,000.

Funding sources

Economic condition of the villagers was not so good. The villagers mainly invested their money for buying nets and boats and their repairing and maintenance. As they did not have sufficient capital, they had to borrow for investment. The sources of borrowing were NGO's, Grameen bank and moneylenders. Most of the fishermen had taken money for investment through dadon (64%) and only 36% fishermen invested their own money for purchasing boats and nets.

Money Borrowing

In the survey, it was found that 56% of the fishermen borrowed money from moneylenders, 44% from the NGO's.

Discussion

It was observed that the highest numbers of the fishermen's age were 41 to 50 (50%) and lowest (2%) were above 61. It indicates that the middle age groups are involved in fishing activities. Ahmed (1996) in Tangail and Ahmed (1999) in coastal region reported 66% and 70% under 40 years age, respectively. In our study area the majority of them were Hindus (88%) and minority of them were Muslims (12%). The dominance of Hindus may be understood as fishing is their ancestral profession. Recently, the Muslims are taking fishing as their livelihood on the ground of changing socio-economic structure, lack of employment opportunity and realization of the fishing potential as a source of income. The study of Chantarasri (1998) in Sundarbans Reserve Forest stated that most fishermen were Muslim. Majority of fishermen were Muslim (68%) where Hindu fishermen (32%) were found at Sundarban (Ahamed, 1999). This kind of dissimilarity may happened due to regional variation. From the study it was found that majority of fishermen (84%) of the area were married and only 16% were unmarried. Result by Ahamed (1996) in Tangail, Mannu (1999) in Kuakata and Shamima (2000) in Gallamari observed that the fishermen were dominated by married people (94%, 92% and 70%, respectively) that matched with the present study.

In the study of Jelepara, it was found that 6% fishermen lived in joint families and 94% lived with nuclear family. The nuclear family was very popular through the area because of getting greater freedom of movement and economic opportunities, better dress, better education and woman authority. The average family size 6.4 per family was larger than the national average of 5.6 people per house (BBS, 2011) in case of single family.

BBS, 2011 classifies literate persons as those who can write a letter in any language. In the study area there was no H.S.C and S.S.C passed fishermen and 16% had passed class V, whereas 14% fishermen were can sign only and 70% were illiterate. Shahjahan (2001) reported that 63.33% of riverine fishermen were illiterate, 31.67% had up to primary level of education and 5% of riverine fishermen had only secondary level of education in the Jamuna River. It might be due to the majority of the parents are illiterate and engage the children in fishing. Our study is more or less support the previous findings. In study area 100% fishermen had electricity facility. Shamima (2000) reported that 20% used electricity in Gallamary fishing community, Khulna. Momotaz (2009) reported that 90% fishermen had enjoyed electricity facility and 10% fishermen did not get facilities to use electricity. Hossain (2009) showed that 95% fishermen had electricity facility and 5% fishermen did not get facilities to use electricity. In the present study all the fishermen had the access to the electricity use.

Fish is one of the most essential foods in this region and a whole nation describes itself with the proverb "Rice and fish, that's Bangalee". Over the centuries, little has changed in the lives of the Bangladeshi fishermen - although engines in boats take the traditional small boats. Other changes, however, badly affect the fishermen and their villages. Due to climate change, cyclones are happening more frequently and fiercely, devastating the coastal area and destroying the fishermen's houses, boats and nets. SIDR, for example, hit the coast of Bangladesh on 15 November, 2007, and left a trail of chaos. Thousands died and countless people lost their shelter and their livelihood.

Overfishing and pollution also hamper the fishermen's lives. More and more nets remain empty because of the shrinking population of big fish. In order to survive, the fishermen go for the small, young fish swarming the shallow coastal waters - thus further contributing to the decimation of the fish population.

Fishermen contribute a lot in our economy. So improvement of their social life and economic condition is very important in context of our national economic development and for that proper management of capture fisheries should be done properly.

The following problems had been identified by asking the relevant questions to the fishermen-

- Lack of initiatives among fishermen
- Lack of awareness among fishermen
- Lack of leadership and unity, particularly in challenging situation
- Loose social cohesion
- Low income
- The fishing community had no control over the fish market
- Due to money lending through dadon from mohajon they can't get the legal price of their catch fishes.

The following recommendations could be considered in order to overcome the existing problems-

- Establishing a fishery management unit (a joint venture of the Bangladesh Fisheries Research Institute (BFRI) and Bangladesh Fisheries Development Corporation (BFDC).
- Credit schemes from commercial and rural bank in co-operation with the extension service of Fisheries Department might be an alternative solution to reduce the high rate of interest and proper training provide to the fishermen by GO and NGO's.
- Fishery management authorities, local administration, law enforcing agencies and research organizations should be united to formulate and integrated policy to manage successfully the national resource through harvesting of maximum sustainable yield (MSY).
- Fishermen's livelihood can be improved through controlling/banding dadon and providing bank loan. This is the matter of hope that now fishermen are getting ID card and Govt. has planned to provide incentives for the banned seasons as they can't go for fishing during the seasons.

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