

LIVELIHOOD STATUS AND SOCIOECONOMIC CONDITION OF HILSA FISHERS OF LOWER MEGHNA RIVER BASIN, BANGLADESH

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ABSTRACT

A study was conducted to evaluate the livelihood condition of hilsa fishers' of the lower Meghna river basin. Results indicated that 71% fishers were professional and 51.88% were belonged to the young age (below 30 years). Majority was Muslim and average family size was in 6 members. Most of the fishers were illiterate (68%) while 13.25%, 12.25% and 6.50% had signing, primary and secondary level of education, respectively. About 36.25% of fishers represented nuclear family while 63.75% had joint family. About 68% fishers' households were dependent on village doctor where 20.75%, 11.25% received health service from kabiraj and upazila health complex, respectively. Most of the fisher's housing conditions were tin-shed *kacha* (62.25%) house and 17.12% had thatched house. Only 15% used their own tube-well water, 26.75% used neighborhood tube-well and 58.25% used government tube-well. Few fishers' had proper sanitation facilities where 78.25% used *kacha* latrine, 21.75% used ring-slab latrine. About 91.50% fishers took loan from *Mahajan* while 8.50% took loan from NGOs and *Majhi* for their live expenses. The annual income ranges from BDT 60000-80000, 80001-100000, 100001-125000 were observed in 33.25%, 53.25% and 13.50% fishers, respectively. It was also revealed that the fishers' communities were neglected and deprived of many conveniences from the society, and their living status was very poor. The main constraints were identified as extortion by local extortionist, inadequate credit facilities, lack of marketing and preservation facilities. The government, fishery cooperatives, NGOs and other related organizations need to join hands to support the hilsa fishers' for better livelihood conditions.

KEY WORDS: Constraints, hilsa fishers, livelihood, socioeconomic

INTRODUCTION

Hilsa is the national fish and known as 'king of the fishes' in Bangladesh. It is the single fish species which is taken with soaked rice (panta ilish) as a cultural heritage in Bangladesh. The popular and taste fish hilsa plays an important role to contributes national economy, employment opportunity, export earnings and protein food supply. About 60% of total catch comes from Bangladesh considering all over the world. It has the highest contribution in country's fish production as a single fish species, which is about 10.51% and contributes 1.0% to the national GDP (DoF, 2015; FRSS, 2016). The fish has already gained international fame for its high nutritional value, taste and delicacy. The species is an extremely popular food fish for the people of Bangladesh and India. The market demand of this fish is increasing day by day, and it is becoming an export item to other countries (Haldar *et al.*, 2004; Rahman, 2006; Roy *et al.*, 2015). Now the hilsa production was about 0.387 million tonnes and it is expected that the production could be increased sustainable up to 0.50 million tonnes through rational management (DoF, 2015; FRSS, 2016). An estimated 0.50 million fishermen have been maintaining their livelihood by catching hilsa directly and 2.0-2.5 million people are directly or indirectly involved in hilsa fishery for their livelihoods (Roy and Habib, 2013; Roy *et al.*, 2015). But most of the hilsa fishers are poor and their living standards are deteriorating day by day. They are considered as most vulnerable and poorest communities in Bangladesh due to having the income below marginal level (Sharker *et al.*, 2015).

The Meghna river is one of the most important and widest rivers in Bangladesh, where the maximum riverine hilsa catch comes from this river. It covers 12 coastal districts of Bangladesh, where large numbers of people depend on fishing for their livelihoods (Roy and Habib, 2013). A few decades ago, the distribution of hilsa was almost in all the major rivers throughout the country. But according to the recent study, the distribution of hilsa was reduced to 82 upazilas of 16 districts (JCP, 2014). Among them, the main catchment of hilsa fish is concentrated in the 12 coastal districts such as Barisal, Bhola, Patuakhali, Chandpur, Laksmipur, Barguna, Jhalokhati, Pirojpur, Sariatpur, Noakhali, Cox'sbazar and Chittagong. Fish and fisheries are indispensable part in the livelihoods of the people of Bangladesh and it is the part of our cultural heritage (Ali *et al.*, 2008). Livelihood is made up of the capabilities, activities, and assets (including both material and social resources) that contribute to a means of living (Islam *et al.*, 2013). Sustainable

development and livelihoods are the pre-requisites factor for achieving the Millennium Development Goals (MDGs). Information about fisherman of a particular region is important and crucial for the development of economically backward sector (Ofuoku *et al.*, 2008). That's way it is very important for us to know the livelihood and socioeconomic condition of hilsa fishers. Lack of adequate and authentic information on socioeconomic condition of the target population is one of the serious impediments in the successful implementation of developmental program. However, there are very few studies have been done on the socioeconomic condition of the surroundings of the hilsa fishers of Meghna river Bangladesh. Therefore, the present study was carried out to assess the livelihood status and socioeconomic conditions of hilsa fishers with emphasis the main hindrance factor of their social life, and the findings of the study should be recommended to improve the livelihood conditions of the hilsa fishers in Bangladesh.

MATERIALS AND METHODS

The study was conducted in hilsa prone major four districts Bhola, Patuakhali, Chandpur and Lakshmipur along the lower stretch of Meghna river basin of Bangladesh during from January 2013 to June 2014 (Table 1). Twenty one upazilas and 84 villages were included in this study where 200 hilsa fishers were randomly selected from each district. A total number of 800 fishers were interviewed personally. In selected sites, focus-group discussions, key informants interview and problem analysis (PRA) was conducted to collect general information. Semi-structured interview schedule was developed and used to collect data related to livelihood and socioeconomic variables of the fishers.

The collected data was summarized and processed for analysis. These data were verified to eliminate all possible errors and inconsistencies and analyzed with IBM SPSS version 22 to understand the current status of livelihood of hilsa fishers of the studied area.

Table 1. Respondents under different districts and upazilas in the study area

Sl No	Districts	Upazilas (nos.)	Name of the upazilas	Respondents (nos.)
1	Chandpur	4	Chandpur sadar, Haimchar, Matlab uttar, Matlab dakhin	200
2	Lakshmipur	4	Lakshmipur sadar, Raipur, Ramgati, Kamalnagar	200
3	Bhola	7	Bholasadar, Dhaulatkhan, Borhanuddin, Tajumoddin, Lalmohan, Charfashion, Manpura	200
4	Patuakhali	6	Patuakhali sadar, Kalapara, Baufal, Dashomina, Golachipa, Mirzaganj	200

RESULTS AND DISCUSSION

The livelihood and socioeconomic characteristics of the fishers in the study area are presented in the Tables 2, 3 and 4. **Age Structure:** Three categories of age group such as young age (< 30 years), middle age (31-50 years) and old age (>50 years) were considered to examine the age structure. The study revealed that most of the respondents (51.88%) belong to the young age where 40.63% was middle age and 7.5% was old age (Table 2). Ali *et al.* (2015) reported that the highest proportions (38%) of hilsa fishers community were middle aged (31-40 years) and Kamruzzaman & Hakim (2016) also reported 42.86% fishers were observed in 31-40 years age which are more or less similar with the present findings.

Religion: Most of the respondents were Muslim (80.75%) where 19.25% was Hindus (Table 2). Religion can play a very important role in the socio-cultural activities of people. It was well known that only the lowest caste of the Hindu community engaged in this sector (Halder, 2011) and found in their study that most of the respondents were Muslim (83.33%). Ali *et al.* (2014) reported that 75% of fishermen are Muslim in Loalia River, Patuakhali. Similar findings reported by Faruque and Dewan (2014) of the hilsa fishermen of Padma river, Rajshahi.

Table 2. Socio-demographic characteristics of the respondents

Parameters	Frequency	Percentage
Age group (years)		
Young age (<30 years)	415	51.88%
Middle age (31-50 years)	325	40.63%
Old age (> 50 years)	60	7.50%
Religion		
Muslim	646	80.75%
Hindus	154	19.25%
Family type		
Nuclear	290	36.25%
Joint	510	63.75%
Family size (members)		
2-4 members	144	18.00%
5-6 members	430	53.75%
≥7members	226	28.25%
Educational status		
Illiterate	544	68.00%
Signing level	106	13.25%
Primary level	98	12.25%
Secondary level	52	6.50%

Family Size and Type: In the present study, families were categorized into two types as nuclear family and joint family. The great majority of hilsa fishers belong to joint family 63.75% where only 36.25% lived in nuclear family of which 53.75% respondents were in 5-6 members' family (Table 2). Family size is an important socioeconomic indicator as it affects the income, food consumption and socioeconomic wellbeing of the households. Faruque and Dewan (2014) reported that 57.14 to 78.26% of the fishermen had 4-6 members' family of the hilsa fishermen of Padma river, Rajshahi.

Table 3. Housing, health and sanitation facilities of the fishers

Parameters	Frequency	Percentage
Housing condition		
Tin shed with bamboo surroundings	498	62.25%
Tin shed with tinsurroundings	165	20.63%
Thatched (straw) house	137	17.12%
Drinking water facilities		
Own tube-well	120	15.00%
Neighbors tube-well	214	26.75%
Government tube-well	466	58.25%
Health services		
Village quack doctor	544	68.00%
Health services taking from Kabiraj	166	20.75%
Upazila health complex	90	11.25%
Sanitation Facilities		
Kacha latrine (open)	626	78.25%
Semi-pakka (ring-slab)	174	21.75%
Electricity facilities		
Access electricity facilities	490	61.25%
No electricity facilities	310	38.75%

Educational Status: Educational status of the fishermen has been grouped into four categories according to the level of education. In this study the highest percentage (68%) of respondents were illiterate, 13.25% signing level, 12.25% primary level and only 6.50% had secondary level (Table 2) which matches the findings of Ali *et al.* (2014), 65% riverine fishermen were illiterate, 30% were upto primary level and only 5% had secondary level.

Housing Condition: The pattern of house indicates the social status of the people. It was observed that 62.25% of respondent had *kacha* house (tin shed with bamboo surroundings) while 20.63% had tin shed with tin surroundings house and only 17.12% had thatched (straw components) house (Table 3). Similar results reported by Kamruzzaman & Hakim (2016) mentioned while working with the fishing community of Dhaleshwari river in central Bangladesh where 64.28% of respondents had tin shed with bamboo surroundings' house. Mia *et al.* (2015) reported that 75% people lived in *kacha* house where 7.5% had half building house in study area.

Table 4. Socioeconomic characteristics of the fishers

Parameters	Frequency	Percentage
Occupation		
Fishing	568	71.00%
Agriculture	70	8.75%
Daily labour(seasonal catcher)	162	20.25%
Land properties		
Land less	376	47.00%
1-20 decimal land	316	39.50%
>20 decimal land	108	13.50%
Annual income (BDT)		
BDT 60,000-80,000	266	33.25%
BDT 80,001-100,000	426	53.25%
BDT 100,001-125,000	108	13.50%
Credit access (Loan)		
From <i>Mahajan</i>	732	91.50%
From NGOs and <i>Majhi</i>	68	8.50%
Constraints and Problems faced by fishers'		
Marketing and preservation problems	290	36.25%
Inadequate credit facilities	410	51.25%
Extortion by local extortionist	100	12.50%

Drinking Water Facilities: In the study area, it was appeared that 100% hilsa fishers used tube-wells water for drinking purposes which indicates positive sign for sound health. The great majority (58.25%) of hilsa fishers used government tube-well in schools/madrasha/office area and the remaining part used own (15%) and neighbors (26.75%) tube-well (Table 3) to collect drinking water which is almost identical to the findings of Ali *et al.* (2014).

Health & Sanitation Facilities: The health & sanitation facilities of the fishers in the study area were very poor. It was observed that the highest percentage (68%) of the fishermen were dependent on village quack doctors who have no knowledge of medical science (Table 3). On the contrary 20.75% of the fishermen were dependent on kabiraj and only 11.25% getting standardized health service from the Upazila health complex. Sharker *et al.* (2015) observed that 64% fishers were dependent on unskilled village doctors, 24% were depend Kabiraj and 12% getting health service from Upazila health complex which supports to the present study. Most of the fishers (78.25%) were using *kacha* (open) latrine (made of bamboo with leaf and inadequate drainage system) where 21.75% used semi-*pakka* (ring-slab with tin roof) latrine. The present study was revealed that the sanitary conditions of the fishermen were not satisfactory in the study area. Similar findings reported by Sharke *ret al.* 2015) was found that 76% fishers are used *kacha* latrines and rest of the 17% used semi-*pakka* (tin roof with inadequate drainage) and 7% of fisher was used as *pakka* latrine (brick with cement).

Electricity Facilities: It was found that the maximum (61.25%) of surveyed hilsa fisher enjoyed electricity facilities (Table 3). On the other hand only (38.75%) was not able to get electricity facilities. Similar results were found that 64% fishermen had electricity facilities in Mohipur fish landing site, Patuakhali district noted by Sharker *et al.* (2015).

Occupation: Fishing in Meghna river was the main work for the entire fishermen community. Some of them also have other occupation. In the study area, they were found to be involved in catching fish; some of them were engaged in agricultural and day labour activities as their secondary occupation. Most of the fishermen (71%) of all four districts were found to be involved only in fishing for conducting their livelihood (Table 4). Some fishermen (8.75%) were involved in seasonal agriculture and some people go to other areas as day labour (20.25%) for agricultural activities in off season, they were also seasonal catcher. This analysis also revealed that hilsa fishers of four districts were not only found to be involved in catching hilsa fish, many of them have alternative occupation which was more or less similar to the findings of Faruque and Dewan (2014). They stated that 52.17 to 75% were found to be involved only in fishing for conducting their livelihood in Padma river, Rajshahi district.

Land Properties: Land area of the fishers was classified into 3 categories such as (i) landless, (ii) 1-20 decimal, and (iii) above 20 decimal land owner. Around 47% fishers had no land where 39.50% had 1-20 decimal land and 13.50% had above 20 decimal lands. Kamruzzaman & Hakim (2016) reported that majority of the fishermen (46%) had landless, while 38% of them had 1-20 decimal lands and only 16% had above 20 decimal lands, which was partially supported to the present study.

Annual Income: The highest annual income earner was considered above 100,000 BDT where medium and lowest annual income earner was ranged from 80,001-100,000 BDT and 60,000-80,000 BDT, respectively. It was found that most of the fishers (53.25%) were medium income earner where 33.25% were lowest annual income earner and only 13.50% respondents were highest annual income earner (Table 4). Rahman *et al.* (2012) reported that the highest number (46%) of the fishers' annual income ranged between 50,000 and 75,000 BDT in Nijhum Dwip, Noakhali which was more or less similar with the present findings. It was also revealed that the total income is insufficient to provide adequate means of livelihood.

Socioeconomic Constraints of the Fishers: Hilsa fishermen have faced various types of problems. In the study area, inadequate credit facilities was the main constraint identified by 51.25% fishers' where 36.25% fishers reported marketing and preservation problems (lack of icing or no cold storage facility) and 12.50% respondents were identified as extortion by local extortionist. Some fishermen were reported that Government help for their restoration is not adequate for them during the banned period of hilsa catch, which corresponds well with the findings of Kabir *et al.* (2012) and Ali *et al.* (2015).

CONCLUSION

The present livelihood and socioeconomic status of hilsa fishers around lower Meghna river under Bhola, Patuakhali, Chandpur, and Lakshmipur districts were not satisfactory. The fishers were underprivileged of many amenities. They were not aware of education, proper health & sanitation system, housing and savings. If the fishers get proper training programs, credit facilities on easy terms and condition then more profitability would be reflected. It is therefore recommended that Government and other support organizations should take initiatives to uphold their socioeconomic condition.

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