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LIFE OF THE RIVERINE FISHERMEN: PRESENT STATUS OF LIVELIHOOD STRATEGIES AND ECONOMIC CONDITIONS AT PAYRA RIVER, BANGLADESH

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ABSTRACT

A study was conducted to find out the livelihood condition of Payra River, located at the Angaria union of Dumki upazila under the district of Patuakhali for twelve months from July, 2012 to June, 2013. In the present study, it was found that highest percentage (40%) of the fishermen is young (21 to 31 years) where about 92% of the fishermen used boat for fishing. By religion, 46% fishermen are Muslims and majority (54%) fishermen are Hindus. In terms of education, 50% had education up to primary level, 12% of fishermen in secondary level, 4% fishermen had education up to SSC level and 6% had no education. About 54% of the fishermen are dependent on upazila health complex for health facilities. Maximum housing condition of the fishermen are Earthen made (52%), 44% are Tin shed building and only 4% are fully furnished cemented building. Service and labor are the main occupation of 4% fishermen. Majority (80%) of fishermen main income source is fishing and among them 54% of the fishermen had 1 to 10 decimal homestead lands and majority (72%) of the fishermen had no agricultural land. In case of other occupation 28% fishermen are involved in agriculture as other occupation, 40% fishermen in day laborer, 8% fishermen in business and 2% fishermen in service. The average monthly income was found to be Tk. 15000 when agriculture is the main occupation. When fishing is the main occupation the monthly income is Tk. 10410. It has been observed that 54% fishermen have training on one or more than one related matter, 46% have no training. So from this study, we can conclude that the livelihood statuses of the riverine fishermen of Payra River were not satisfactory and the fishermen were deprived of many amenities.

KEY WORDS

Payra River, livelihood strategies, riverine fishermen, economic conditions.

According to FAO, Bangladesh is one of the world's most important inland fishing nations. Fish contribution national GDP and agricultural GDP is 3.69% and 23.12%, respectively (Department of Fisheries Report, 2015). Total employment in fisheries sector is for 17.80 million people (11% of total population) and in woman employment in fisheries sector is 1.40 million (8.49% of fisheries sector employment) (Department of Fisheries Report, 2015). But, still fishermen are one of the most vulnerable communities in Bangladesh. The livelihood statuses of these fishermen are not satisfactory; availability of fishes in the river is also declining day by day (Mahmud et al., 2015). Most of them are live

from hand to mouth (Ali *et al.*, 2014). Hossain *et al.*, 2015 stated that fishermen are traditionally poor and fishing is considered as a low-class profession in Bangladesh.

The most critically and sensitive areas for open water aquaculture in Bangladesh is south western coastal area which supplies both fresh water and salt water indigenous fishes (IUCN, 2003). Payra River is a body of running water moving to a lower level in a channel on land in the country of Bangladesh and the river finally falls into the Bay of Bengal by the name of Burishwar River (Islam *et al.*, 2015). This river is an exclusive aquatic ecosystem with diversified species of plants, fish and other organisms and most of the catch of this river is landed by small-scale local fishermen (Islam *et al.*, 2015). This area of the river consisting of fishery plays a very important role in the alleviation of rural poverty and supplying food to the poor fishing community (Mahmud *et al.*, 2015).

The vast majority of the fishing communities of Bangladesh are confronting more or less similar problems that standing the way of increasing catch and hence income from fishing operations and fishermen are one of the most vulnerable communities by any standard and over the years (Hossain *et al.*, 2013). Alam and Bashar (1995) estimated the average per capital annual income of the fishermen families to be BDT 2,442 i.e. about 70% lower than the per capital income of the country as a whole. Being an isolated community fishermen are deprived of many amenities of life. Pollnac (1991) has reported that the relationship between technology and social organization in small-scale fishing communities was regarded as providing the essential contest for the institutional system, where the poor would be helped by equipment's and new technology. For this aim, investigation of social patterns, economic system and some related aspects of the fishermen are to be found as the basic need. So, this study was conducted to evaluate the living condition of fisherman near Payra River to find out their standard of living.

METHODS OF RESEARCH

This study was conducted to find out the fisheries of Payra River, Patuakhali, Bangladesh for 12 months from July, 2012 to June, 2013. The study was based on collection of primary and secondary data. Firstly, a pretesting questionnaire was developed keeping in view the objectives of the study, then a final questionnaire was then developed in logical sequence so that the fishermen could answer chronologically. According to the experience gained in pre-testing, the final questionnaire was improved, rearranged and modified. Secondly, Primary data were collected through personal interview complemented by multiple methodological Participatory Research Approach (PRA) tools such as Focus Group Discussion (FGD) and Crosscheck Interviews (CI) with key informants namely Sub-district Fisheries Officer (UFO), AFO, and relevant NGO workers for the confirmation of relevant information. FGD sessions usually were held at river bank or in a tea stall and CI of respondents were conducted in their office. After collection of data, these were edited and coded. All the collected data were summarized and scrutinized carefully and recorded. Then, finally all of the data were analyzed by using certain statistical tool in the Microsoft Excel.

RESULTS AND DISCUSSION

Human capital. The age structure of the riverine fishermen in Payra River was examined. They are divided into five age groups: 10 to 20 years, 21 to 31 years, 32 to 42 years, 43 to 53 years and above 54 years. The fishermen in the present study are mostly 21 to 31 years (40%) and 32 to 42 years group (30%) who could afford much energy and labor in catching fish. There were no under aged fishermen found during this study. Rabbani (2007) recorded age group of 25-50 years was highest (46.67%) and more than 50 years were the lowest (25%) of the riverine fishermen in the Karatoa river, which is not similar to the present findings.

In the present study, 46% fishermen are Muslims and majority 54% fishermen are Hindus. Rabbani (2007) reported that about 86.67% and 13.33% riverine fishermen are Hindus and Muslims respectively. Mahmud (2007) stated that the highest (74%) number of

fishermen were from Muslim community where as only 26% were from Hindu community. Muslim is coming to this profession in an increasing number through breaking the previous norms and value of the society which are due to the economic hardship and lack of employment scope in other sectors.

Figure 1 – Age distribution of riverine fisherman in the Payra River in the southern Bangladesh

Human resource developments are largely a function of education. In this present study, it was found that 6% fisherman had no education, 28% were capable to write name, 50% fishermen had education up to primary level, 12% Secondary (up to 8 classes) level and only 4% of fishermen had education up to SSC (10 class pass) level. The highest members of fishermen (50%) with primary level education were a remarkable feature for the fishing community in the Payra river system. Shahjahan (2000) 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. Rabbani (2007) reported that 20% of riverine fishermen were illiterate, 71.67% of riverine fishermen were up to primary level of education and 8.33% riverine fishermen had only secondary level of education.

Figure 2 – Educational status of riverine fishermen of the Payra River

In this study, we revealed that 54% fishermen have training on one or more than one related matter, 46% have no training. Hossain (2012) reported that 80% of fishermen, considering all gears were not received any training where as 20% had training experience in the river system of the Purnavaba River.

A family was defined as the total number of persons living together and taking meals from the same house. The family size and composition are related to income. The study reveals that 48% of the fishermen had 2 to 5 persons group, 48% had 6 to 9 persons group and 4% having more than 10 persons group in their families. Haider (2002) recorded the largest family size (6.67 persons) in Cast net fishermen and smallest family size (4.50

persons) in *hogra* fishermen of Doba *beel*. Miah (2004) recorded the largest and the smallest family sizes of Zolkor *beel* fishermen in Cast net (5.67 persons) and in *thela jal* (4.15 persons) respectively.

Figure 3 – Receive any training facilities in the riverine fishermen

Figure 4 – Family size of riverine fishermen family

In the present study, it was found that majorities (80%) of the fishermen are married and remain 20% of fishermen are unmarried. Hossain (2012) found 70% of the fishermen are married and 30% of fishermen are unmarried.

Natural Capital. It was found that only 28% of fishermen had agricultural land and majority (72%) of fishermen had no agricultural land. Agriculture is the second occupation in most of the fishermen but lack of agricultural land they choose others.

Most of the rural household family used pond water for cooking, bathing, washing clothes. It was found that only 36% of fishermen family had pond. The majority (64%) of fishermen family had no pond they used neighbor's pond water. Sometimes fishermen family used river water for household activities.

Figure 6 – Homestead status of riverine fishermen of the Payra river

This study found that 54% of the fishermen had 1 to 10 decimal homestead land, 34% had 11 to 20 decimal, 10% had 21 to 30 decimal and only 2% fishermen had 31 to 40 decimal homestead lands for living. Homestead areas are important key measure to identify other source of family income. Women or children rear chicken, duck, goat, cattle etc. and support family income.

It was found that 82% of fishermen spend all time for fishing, but 18% of fishermen catching fish in part time. Most of the professional fishermen spend full time to catch fish but subsistence fishermen spend part time for catching fish. Rabbani (2007) observed that 70% of fishermen spend full time and 30% of fishermen catching fish in part-time.

Figure 7 – Fishermen spend time for fishing in the Payra River

Physical capital. Three types of housing conditions were observed with the fishermen of Payra river. About 52% of the fishermen had *kacha* houses which reflect the deplorable and distress condition of the fishing community. Rabbani (2007) revealed that 76.67% of housing structures were *kacha*, 15% were half *semi-pucca* and 8.33% were *pucca*. Ahmed (2002) found that 62% of *kacha* housing structure of farmers in Mymensingh area.

Figure 8 – Housing condition of riverine fishermen

Figure 9 – Health service used by the riverine fishermen of Payra River

This study found that 54% of fishermen were dependent on upazila health complex, while 6% and 24% got health service from the village doctor and both village doctor & upazila health complex respectively. Alam (2006) found in his study that only 42% of the farmers in

the Mithapukur upazila under the district Rangpur got the opportunities for medical care by MBBS doctor and Upazila health complex while the rest 58% was dependent on village doctor and others.

92% of fishermen used boat to catch fish, but 8% of fishermen operated fishing gears and caught fish without boat. Most of the professional fishermen use boat to catching fish, but subsistence fishermen catch fish without boat. Jewel (2006) observed that 80% of fishermen used boat and 20% of fishermen caught fish without boat.

Financial capital. It was found that majority (80%) of fishermen's main income source is fishing. Service and labor are the main occupation of 4% fishermen. Only 2% fishermen involve in agriculture and business. Rabbani (2007) observed that *Jhaki jal* fishermen earned 22.50% income from fishing and the lowest (11.09%) average monthly income was found from fishing among the *Khora jal* fishermen.

Table 1 – Main source of income in the riverine fishermen

Main income source	Average monthly income (Taka)	% of total
Fishing	10410	19
Agriculture	15000	27
Service	11500	20
Labor	9250	16
Business	10000	18

Other source of income. This study found that 28% fishermen are involved in agriculture as other occupation, 40% fishermen in labor, 8% in business, 2% in service and remained 10% in other occupation. During off season decrease catch rate and low income from fishing, majority of fishermen gave extra service such as other income source to fulfill their family demands.

Figure 10 – Other sources of income of the riverine fishermen

Average monthly income. It was found that most of the fishermen had five types of main income source. When fishing is the main occupation, the average monthly income was found to be Tk. 10410.

Figure 11 – Average monthly income of the riverine fishermen

When agriculture, service, labor and business were the main occupation the average monthly income were Tk. 15000, 11500, 9250 and 10000 respectively. Hossain (2007) reported that the highest monthly average income was found in the seine net fishermen group and the lowest monthly average income was found in the push net fishermen group in the Mokesh beel, Gazipur.

Facilities received. This study revealed that most of the fishermen (about 90%) receive government facilities. Only 10% of fishermen receive NGOs facilities. Hossain (2012) observed that 60% of fishermen received government facilities, 40% of received NGO's facilities.

CONCLUSION

Livelihood statuses of the riverine fishermen of Payra River were not satisfactory. The fishermen were deprived of many facilities. The education level was so poor and the affordability of education among fisherman is almost zero. So, NGO can play a vital role in here to support their education. Though, the Government is taking some important step by providing some sorts of extra providence during the ban season of the fishing but still this area needs more support to create a sustainable development of the fisherman. Moreover, health facilities must be improved in this area by the help of both NGO's and government. However, more innovative and extensive research are required to prepare better data-base information on biodiversity and fisheries with abundance problems aiming to develop practical rules and regulations.

CONFLICT OF INTERESTS

Authors clearly declare that they have no competing interests.

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