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Livelihood of the fishermen in Monirampur Upazila of Jessore district, Bangladesh

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Abstract

The study was conducted to assess the livelihood of fishermen in Monirampur Upazila of Jessore district from July to December, 2012. The mean age and fishing experience of fishermen were 35.22±9.67 and 17.9±7.12 years, respectively. Primary occupation for majority fishermen (90%) was fishing. The mean monthly income of the household (HH) was BDT 9470±4806.89. Only 2% fishermen were landless. 4% fishermen had training on fishing/fish culture. 46% fishermen involved in NGOs for loan and savings. 52% fishermen cultivated paddy during *boro* (summer) season whereas only 18% cultivated paddy during *aman* (rainy) season. Major protein sources to the HHs (monthly) were- small indigenous species (SIS) (4.60±2.64 kg), non-SIS (6.31±4.18 kg), meat (3.54±1.67 kg), eggs (18.73±22.20 pieces), and milk (11.10±15.54 liter). The major HH expenditures were- food, education, health, furniture, cloths and others. All fishermen were vulnerable to *vabadaha*, a situation when water logging takes place during monsoon due to lack of sufficient water drainage system.

Keywords: Fishermen, livelihood, fishing community, *vabadaha*

INTRODUCTION

A livelihood is made up of the capabilities, activities, and assets (including both material and social resource) that contribute to a means of living. According to Chambers and Conway (1992) livelihood comprises the capabilities, the assets (natural, physical, human, financial and social), the activities and the accesses to these that together determine the living gained by the individual household. Fisheries, especially in developing countries, contribute to livelihood in a range of ways; directly as food as a source of income and through other social benefits, such as reduced vulnerability to poverty. Fisheries provides livelihood to about 1.2 million people of the country directly or indirectly and other ancillary fishery activities (DoF 2013).

Fishing in Bangladesh has traditionally been an occupation of members of particular lower caste Hindu (such as *Ragbansi*, *Malo*, *Halder*, *Jaladash* and *Kaibsrto*). Fishermen community is deemed to be one of the most vulnerable communities in terms of their livelihood opportunities in Bangladesh (Farhana and Naser 2006). Fishing is main occupation for them which cannot be carried out throughout the year; also they lack alternative job opportunities. For proper development in any place it is essential to improve the livelihood of people of all categories, especially the vulnerable one. Fishermen community belongs to this category. Baseline information is essential to initiate proper developmental steps and there is no sufficient information about livelihood of fishermen community in Bangladesh. However, few studies on socio-economic conditions of fishermen were carried out by Kostori (2012), Flowra *et al.* (2009) and Joadder (2008) but all these efforts lack specific

information of livelihood like access to organizations, livelihood vulnerabilities and outcomes. In this study these components of livelihood were included in addition to other common parameters. Thus the present study was conducted with the following specific objectives- to know about: basic profile of the fishermen household (HH) like educational status, sexes, experience, income etc.; utilization of land resources; access to different organizations; HH nutrition, and livelihood vulnerabilities and outcomes.

METHODOLOGY

Study area and duration: The study was carried out in Monirampur Upazila (sub-district) of Jessore district (between 23°06' to 22°54' north and 88°04' to 89°22' east) (Figure 1) for a period of 6 months from July to December, 2012.

Figure 1: Map showing the study area (source: Banglapedia)

Sampling framework: Weekly field survey was carried out to collect the necessary information. Random selection method was employed to select fishermen in order to avoid any biasness in selection of the fishermen. A total of 50 fishermen households were surveyed.

Various participatory rural appraisal (PRA) tools, especially interview and focus group discussion (FGD), were employed to collect necessary data from the respondents. Interviews were taken with a prepared questionnaire which was purposively developed and pre-tested under field situation. After necessary modifications final version of questionnaire was used to collect data. However, all the data were cross-checked for ensuring the accuracy of data collected from the respondents. The FGDs were conducted to identify the problems and to collect fishermen's recommendations regarding the problems identified so that effective solution to the problems would develop.

Statistical analyses: Collected data were analyzed by computer software Microsoft Excel 2007 and Statistical Package for Social Sciences (SPSS) 15.00. Chi-square test was employed to measure the differences between sexes among household (HH) members (expected ratio was 1:1).

RESULTS AND DISCUSSIONS

Basic profile of the fishermen

Age and sex of the respondents: The mean age of the respondents was 35.22±9.67 years (20 to 80 years). All the respondents were male. Halder *et al.* (2011) reported that most of the fish retailers (54.17%) were belonging to the age group 31 to 40 years. In another study by Kostori (2012) majority (36%) fishermen of the Chalan Beel were belonging to age group of 20 to 30 years.

Religion: All the respondents were belonging to the Hindus religion. However, it is a common trend in Bangladesh that almost all the by-born fishermen or fishing community are belonging to the Hindus religion.

Experience in fishing: Mean experience in fishing was found 17.9±7.12 years (2-32 years). Similar findings also reported Mohsin and Haque (2009) and Chaki (2011) who mentioned that experience and training on fish culture affects the final fish production and their production was found 47% high than that of non-trained farmer's production.

Occupations: All the respondents had more than two occupations. Major primary occupation (in terms of income) was fishing and this was found for 90% respondents (Figure 2). This indicates that majority respondents did not give up the profession of their ancestors. Three types of secondary occupations were also recorded. The most common secondary occupation was crop farming (88%) followed by fishing (10%), and service (2%). Occupation like service indicates that the by-born fishing community was diverting from their traditional occupations (fishing). Kostori (2012) mentioned that this tendency of involving into a different occupation is high during off-fishing season.

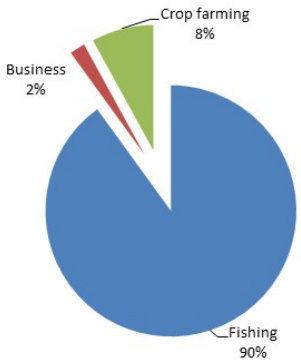

Figure 2: Primary occupation of the respondents

According to Halder *et al.* (2011) no secondary occupation was found in case of fish retails. While working with pangus farmers, Ali and Haque (2010) found that 13.30% farmers had no secondary occupation.

HH members: The mean family members were 3.60±1.34 (2 to 8) in each HH. Almost similar results also reported by Halder *et al.* (2011) and Kostori (2012) while working with fish traders and fishermen of the Chalan Beel respectively. Considering all the members of the respondent's family, 47.22% was found male and remaining 52.78% was female members. The mean male and female members in a family were found as 1.70±0.81 and 1.90±0.93 respectively.

The value of chi square was found 0.268 (p=0.605, *df*=1) which did not significantly differs from the expected ratio (1:1). There were children in 62% families consisting 21.67% of the total HH members. The mean member of children was found 0.80±0.72 (0 to 2).

Monthly income of the HH: Income is the most important factor for better understanding of the socio-economic conditions of fishermen (Kostori 2012). The mean monthly income was found 9470±4806.89 BDT (5000 BDT to 24000 BDT). Kostori (2012) stated that at the time of peak fishing, majority fishermen (50%) earn BDT 200-250 per day.

Educational status: The maximum fishermen were found illiterate (48%) followed by secondary level (20%) (Figure 3). Similar results also mentioned by Kostori (2012) while working with the fishermen of the Chalan Beel. Halder *et al.* (2011) also reported similar findings, 52.78% fish retailers had no formal education.

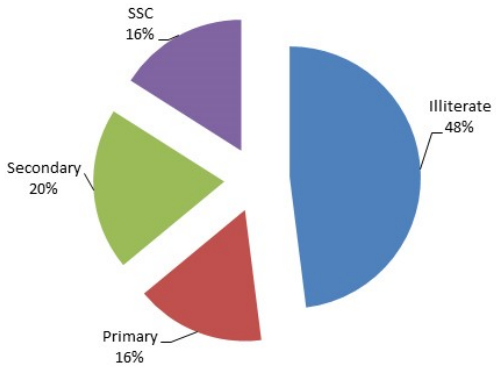

Figure 3: Educational status of the fishermen

Land holding status: Two percent fishermen were landless. The mean land owned by the fishermen was 0.24±0.36 ha (0.02 to 1.57 ha). The lands were divided into three major categories- HH land, agricultural land and water area. The mean HH land was recorded 0.06±0.04 ha, whereas the mean area of agricultural land and water areas were 0.13±0.27 ha and 0.06±0.18 ha respectively.

The result found in the present study is similar to Kostori (2012) but differs from the result reported by Flowra *et al.* (2009) who stated that majority fishermen had no land in Dahia Beel area under Natore district.

Access to the government organizations (GOs) or non-government organizations (NGOs)

Training status: Only 4% fishermen had training on fishing and fish culture (Figure 4). They have received training both from government organization (2%) and non-government organization (2%). The present status of training revealed the actual state of the fishermen, and indicated that they were far behind from the opportunity to develop their skill from formal or informal gathering.

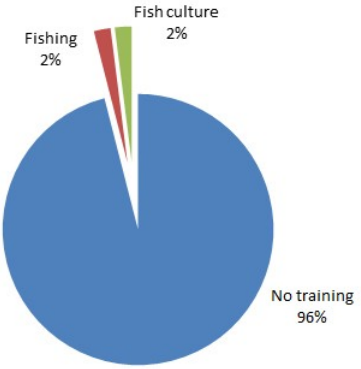

Figure 4: Training status of the fishermen

Loan or credit and savings: A vital portion of the studied fishing community (46%) was involved in NGOs. They took loan from these organizations and deposit their savings. All the fishermen who involved in NGOs (46%) received loan from corresponding NGOs. The mean loan amount was BDT 9,856.52±10,826.56 (BDT 1,000 to 55,000). Interest rate of NGO loan was reported too high by all the fishermen.

Similar trend in taking loan from NGOs was also reported by Kostori (2012), Halder *et al.* (2011) and Ali *et al.* (2010). High interest rate of NGO loan was also mentioned by Kostori (2012) and Halder *et al.* (2011). In a study by Zaman *et al.* (2006) it was revealed that poor fish farmers had no access to bank loan due to lack of mortgage assets.

Utilization of land resources

Paddy production in boro (summer) season: 52% fishermen cultivated paddy during *boro* season. The mean cultivated area was found 0.25±0.36 ha (0.40 to 1.70 ha) whereas the production was 50,193.59±1,090.41 kg/ha

(3,766.75 to 8,821.43 kg/ha). The average cultivation cost was 40,014.10±16,039.88 kg/ha (5,434 to 74,100 kg/ha) and the income was found 66,698.48±17,250.92 BDT/ha (7,645.24 to 95,095 BDT/ha).

Paddy production in aman (rainy) season: Only 18% fishermen cultivated paddy during *aman* season. The mean cultivated area during this time was 0.20±0.08 ha (0.14 to 0.34 ha) whereas the production was 21,756.91±17,665.47 kg/ha (2,822.86 to 39,520 kg/ha). The average cultivation cost was 36,657.94±12,690.97 BDT/ha (17,642.86 to 49,400 BDT/ha) and the income was found 48,192.77±5,324.51 BDT/ha (38,814.29 to 55,575 BDT/ha).

Household nutrition

Consumption of small indigenous species (SIS): Majority HH (80%) consumed SIS. These HHs consumed SIS 9.83±5.07 days in a month and mean amount of consumption was 4.60±2.64 kg/month. Similar findings also reported by Kostori (2012).

Consumption of large fishes (non SIS): Maximum (90%) HHs consumed non SIS fishes in 11.47±6.88 days a month. The mean amount of consumption was found 6.31±4.18 kg/month. Similar findings also reported by Kostori (2012).

Consumption of meat: Meat was consumed in almost all the HHs (96%). These HHs consumed meat 3.25±1.95 days in a month at the rate of 3.54±1.67 kg/month. This result differs from the findings of Kostori (2012) who mentioned that fishermen of the Chalan Beel did not buy meat except on special events like *Eid*, wedding ceremonies etc.

Intake of eggs: Eggs were consumed in 52% HHs at the rate of 18.73±22.20 pieces/month. These HHs consumed eggs 7.23±4.89 days in a month. Kostori (2012) mentioned that fishermen have boiled eggs only in winter season.

Intake of milk: Consumption of milk was found only in 40% HHs at the rate of 11.10±15.54 liter/month. These HHs took milk 10.85±9.69 days in a month. Occasional intake of milk by the fishermen was reported by Kostori (2012).

Household income and expenditure: The mean yearly income of the HH was 51,980.60±32,375.02 BDT (18,200 to 169,200 BDT/year). The recorded annual income was found much lower than that of Halder *et al.* (2011) while working with fish retailers. The major expenditures of a HH were found as follows- food, education, health, furniture, cloths and others (Table 1).

Table 1: Expenditures status of surveyed households

Expenditure issues	*HH (%)*	*Cost (BDT/year)*		
		Min	*Max*	*Mean±SD*
Food	100	10000	84000	27070±17868
Education	48	500	24000	5725±5155.39
Health	100	300	7500	1173.60±1029.28
Cloths	100	500	5000	1433±997.63
Furniture	100	2000	90000	16810±22294.16
Others	100	1000	5000	2746±1304.03

Vulnerability contexts: All the fishermen in the study area were vulnerable to *vabadaha*, a situation when water logging takes place during monsoon time due to lack of sufficient water drainage system.

Livelihood outcomes: In spite of having poor resources, livelihood outcomes of fishing were positive. The fishermen increased their income, food security and other basic needs. A total of 70% fishermen reported better socio-economic conditions during the survey period. Similar results also reported by Halder *et al.* (2011). 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 the resources, access of disadvantaged group to sufficient, safe and nutritionally adequate food (Scoones 1998).

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