A COMPARATIVE STUDY ON LIVELIHOOD STATUS OF FISH FARMER, STOCKIST AND FISH RETAILER IN TRISHAL UPAZILA OF MYMENSINGH DISTRICT

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ABSTRACT

A study was conducted for a period of 16 weeks from July to October 2010 in Trishal Upazila under the district of Mymensingh to assess livelihood conditions of stockist, fishermen and fish retailer. In this study, total 75 respondents (25 Stockists, 25 fishermen and 25 fish retailers) were randomly selected from the study area. Livelihood conditions of the fishing communities were not satisfactory. Muslims were the featuring as the absolute majority in fish trading activities comprising 68%, 80% and 74% of stockist, fish farmer and fish retailer, respectively. About 40% of stockist and 52% of fish farmer had medium family size ranging 5 to 8 members whereas 72% of the fish retailer had small family. Stockist and fish retailer mostly depended on their fishing business having the small (<0.5 ha) land area. Approximately 64% fish farmers had large (>1 ha) land area. In case of housing condition 80% of fish retailer, 64% of fish farmer and 48% of stockist had pacca house. On the other hand, 56% of stockist and 64% of fish farmer had pacca and semi-pacca latrine respectively. About 80% of stockist, 48% of fish farmer and 36% of fish retailer were able to take health facilities from upazila health complex. The market chain from farmers to consumers passes through a number of middlemen, local fish retailers, agents, whole salers and retailers.

Key words: Livelihood, fish farmer, stockist and retailer

INTRODUCTION

A periodical gathering of people for buying and selling of fish or fisheries products is called a market. A fisherman in a small rural community who lands a catch in excess of his needs and seeks to exchange the fish for another product is implicitly involved in the activity of fish marketing (Chaston 1987). Markets have become a major issue for aquaculture sector, where consumers demands, international competitiveness, health and quality product are important. Fish retailer are those people who are collected or bought fish from either fish farmer or wholesaler and sell to the consumer in local market. High rate of population growth resulted in growing gap between supply and demand of fish and fisheries product of Bangladesh. However, very few steps have been taken by any organization either government organizations (GOs) or non-government organizations (NGOs) to improve the fish marketing system, which is a major part of fisheries sector. During the fishing seasons, a huge quantity of fish is not marketed due to inadequate transport facilities.

Moreover, the most serious marketing difficulties seem to occur in remote communities, with lack of transport, ice, and poor road facilities and where the farmers are in particularly weak position in relation to intermediaries (DFID 1997). Livelihood status of the people involved in fish related activities depend on the fisheries resources and marketing system. So, fishing group is an important community to enrich economics of Bangladesh. But most of the fishermen and fish traders are poor and are deprived of many amenities of life. All time they have to struggle to survive. Livelihood condition of fishermen is not satisfactory at all. Most of the markets are now being controlled and managed by a few rich and influential persons as well as middle men of the area. As a result farmers are not getting real price due to poor knowledge on pricing policy. However, the current study was designed to know the socio-economic status of stockist, fish farmer and fish retailer including the existing fish marketing system.

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MATERIALS AND METHODS

The primary criterion for the selection of the study area was a suitable geographical coverage for good numbers of dependent stockist, fish retailer and fishermen as far as possible. The field survey was conducted in Trisal upazila under the district of Mymensingh. From July to October 2010, total 75 respondents (25 Stockists, 25 fish retailers and 25 fishermen) were randomly selected from the study area. The samples and data were collected weekly throughout the study period. Social status of fish stockist, fish retailer and fisherman such as age, education, religion, sanitation, family size, drinking water facilities, medical facilities, economic status like income, daily expenditure, credit facilities, and marketing channels were collected using questionnaire through one to one interview, PRA tools like focus group discussion (FGD). Crosscheck interviews were conducted with key informants such as ten school teachers, ten local leaders, one Upazila Fishery Officer and six relevant NGO workers to verify the information from questionnaire interviews and FGD. The interviews of the respondents were conducted in their offices.

The collected data were summarized carefully before actual tabulation. Some of the data were collected into local units and these data were converted into international units. The processed data were transferred to a master sheet from which classified tables were prepared revealing the findings of the study. Preliminary data sheets were compared with computer spread sheets to ensure the accuracy of the data. After data entry, "Microsoft Excel" and "SPSS" (Statistical Package for Social Science) computer package was used to perform descriptive statistical analysis of data.

RESULTS AND DISCUSSION

An investigation on the livelihood status of stockist, fish farmer and fish retailer under the Trishal upazila of Myemensigh district is represented in Table 1.

Age structure
About 52% of the respondents in respect of stockist belong to middle age group, 48% of fish farmers were in middle age but 48% of fish retailers were young. In case of stockist young people was engaged in this type of business at very low proportion (16%). The majority (32%) of old aged respondents was observed in term of stockist. On the other hand, 28% of old aged people were found to be engaged in both fish farming activities and fish retailing.

Educational status
The result revealed that 60% of stockist had education up to primary level and only 16% got education up to secondary level. On the other hand, 24% of the stockist belonged to secondary group. In case of fish farmer 72% of the respondents had primary education and 20% had secondary education while only 8% belonged to higher secondary group. No respondent was found in higher secondary level.

Religion
About 68% and 32% of stockist were Muslim and Hindu, respectively. In case of fish farmers, 80% of the respondents were Muslim while only 20% was Hindu. About 76% and 24% of the respondents were Muslim and Hindu for fish retailers, respectively.

Family size
In the study area 72% of the retailers had small family compared with family size of stockist. In case of stockist, 40% was observed in medium family group and 28% had small family. About 52% fish farmers had medium to large family where as only 20% of the respondents had small family.

Land area
It was found that 88% of the stockist had small to medium land area whereas 12% of them had large land area. Nearly, 64% of fish farmers belonged to large group and 12% had small land area. In case of fish retailers, 68% possessed small land area and 8% had large land area.

Housing condition
It was evident from data that 48% of the stockist had pacca and 40% of the stockist had semi-pacca house while only 12% of the stockist lived in kacha house. In case of fish farmers, 64% had semi-pacca house whereas 24% and 12% for kacha and pacca house, respectively. None of the fish retailer had pacca house and most of them spent their life in kacha house.

Sanitation facilities
Nearly 56% of stockist had pacca toilet and 36% had semi-pacca toilet where as only 8% had kacha toilet. On the other hand, 64% of fish farmers had semi-pacca toilet while 16% and 20% of the fish farmers had kacha and pacca toilet, respectively. In case of fish retailers, 96% of the respondents had kacha to semi-pacca toilet facilities, whereas 4% percent of fish retailers were able to construct pacca toilet.

Health facilities
It was observed that 80% of the stockist went to upazila health complex for treatment where as only 20% of stockist was dependent on kabiraz and unskilled village doctor. About half (52%) of fish farmers was far away from getting standardized

Table 1. Livelihood status of stockist, fish farmer and fish retailer under the Trishal upazila of Myemensigh district

Features	Categories	Stockist (%)	Fish farmer (%)	Fish retailer (%)
Age structure	Young age (<35)	16	24	48
	Middle age (36-50)	52	48	24
	Old age (>50)	32	28	28
Education	Illiterate	-	-	20
	Primary	60	72	72
	SSC	24	20	8
	HSC	16	8	-
Religion	Muslim	68	80	76
	Hindu	32	20	24
Family size	Small(<4)	28	20	72
	Moderate (5-8)	40	52	16
	Large (>8)	32	28	12
Land area (ha)	Small (<0.5)	48	12	68
	Moderate (0.5-1)	40	24	24
	Large(>1.0)	12	64	8
Housing condition	Kacha	12	24	80
	Semi-pacca	40	64	20
	Pacca	48	12	-
Sanitation facilities	Kacha	8	16	44
	Semi-pacca	36	64	52
	Pacca	56	20	4
Health facilities	Kabiraz	8	20	32
	Village doctor	12	32	32
	Hospital	80	48	36
Drinking water facilities	Tubewell	100	100	92
	Pond water	-	-	-
	Others	-	-	8
Education of children	School going	88	80	72
	Not school going	12	20	28
Related experience	Absent	8	4	8
	low(<3)	16	24	10
	Moderate (4-6)	32	40	32
	High (>6)	44	32	40
Transportation facilities	Absent	28	32	12
	Motor vehicles	20	8	-
	Small vehicles	52	60	88
Annual income(lakh)	High (>2.0)	68	48	12
	Moderate (1-2)	24	32	32
	Low(<1.0)	8	20	56
Annual expenditure (lakh)	High (>1.5)	72	56	20
	Moderate (1-1.5)	16	28	24
	Low (<1.0)	12	16	56
Savings (thousands)	High (>50)	28	68	8
	Moderate (10-50)	60	24	20
	Low (<10)	12	8	72
Credit received	No	20	8	8
	Low	20	20	60
	Moderate	48	60	20
	High	12	12	12

health facilities and 48% got health service from upazila health complex. In case of fish retailers, 64% relied on kabiraz and village doctor but 36% of them enjoyed health service from upazila health complex.

Drinking water facilities

Among the three types of respondents categories100% of stockist and fish farmers used own tube well water for drinking purpose. In case of fish retailers,the majority of the respondents had own tube well for their drinking purpose while 2% of fish retailers household used water from various sources

like pond, cannel, river, etc without purifying for drinking.

Education of children
It is reported that 88% of stockist sent their children to school whereas 12% of them was not interested to send their children to school. In case of fish farmers, 80% of the respondents were found to send their children to school while children of 20% of the fish farmers was not school going. About 72% of fish retailers sent their children to school whereas 28% of them belonged to not schooling of children categories.

Related experience
Approximately, 76% of stockist had high to moderate experience whereas 8% of stockist was new in their own business. Nearly, 28% of the fish farmers had low to no experience whereas 32% and 40% of the fish farmers had high to moderate experience in fish farming activities. It was observed that 40% of retailers were highly experienced and 32% of them were experienced in fish retailing for about 4-6 years. Only 18% of the respondents had just initiated their retailing business in the study area.

Transportation facilities
For stockist, 52% had small vehicles, 20% had own motor vehicles and 28% had none. About 60% of the fish farmers transported products by their own small vehicles. Whereas 32% depended on hired vehicles and only 8% had motor vehicles. Majority of the fish retailers had small vehicles whereas 12% had none.

Annual income
It was observed that 68% of stockist had high income while 8% had low income. On the other hand, 80% of fish farmers had high to medium annual income and 20% of fish farmer earned below 1 lakh BDT per year. In case of fish retailers, 56% of them had low income while 32% and 12% of fish retailers had medium and high annual income, respectively.

Annual expenditure
About 72% stockist had high annual expenditure and 12% expend their income at low level. In respect of fish farmers, 84% had high to moderate annual expenditure and 16% had low expenditure. Fish retailers were found to be in low categories for 56% of respondents whereas 20% of fish retailers belonged to high expenditure group and 24% had moderate annual expenditure for their livelihood.

Savings
In case of stockist, 60% had moderate savings while 28% had high savings. On the contrary, 92% of fish farmer had moderate to high savings whereas only 8% had low savings. In respect of fish retailers, 72% had low savings while only 8% was able to save higher amount from their annual income.

Credit received
It was observed that 80% of the stockist received credit from different NGO's and banks while 20% used their own capital for their business. Majority of fish farmers received loan for fish farming activities while 8% belonged to no credit receiving group. In case of fish retailers, 60% enjoyed microcredit facilities from various NGO's, 32% of them received moderate to high loan and the rest 8% did not receive credit.

Fish marketing system
The marketing channel of fish from farmers to consumers at different sites through different agents under the Trishal upazila of Myemensigh district are shown in Figure 1, 2 and 3.
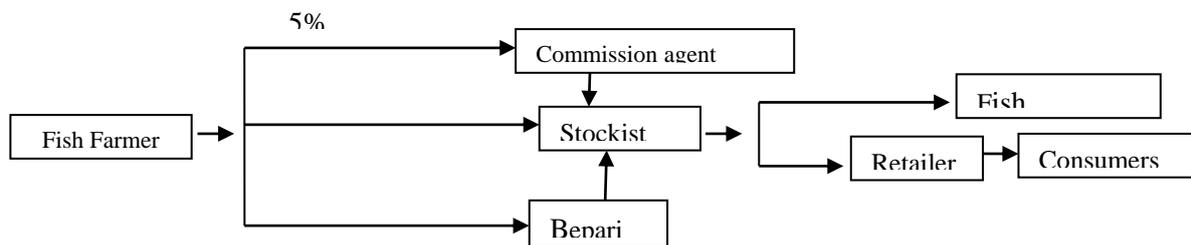

Figure 1. Marketing channel of fish in an arat under the Trishal upazila of Myemensigh district.
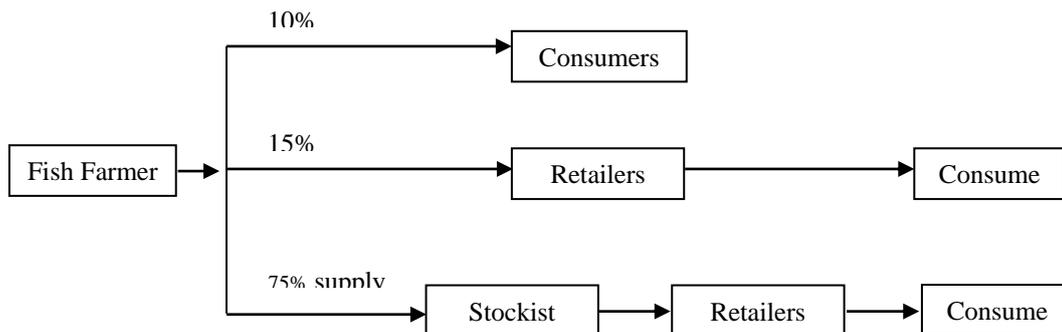

Figure 2. Marketing channel of fish from farmers to consumers through different intermediate commission agents under the Trishal upazila of Myemensigh district.
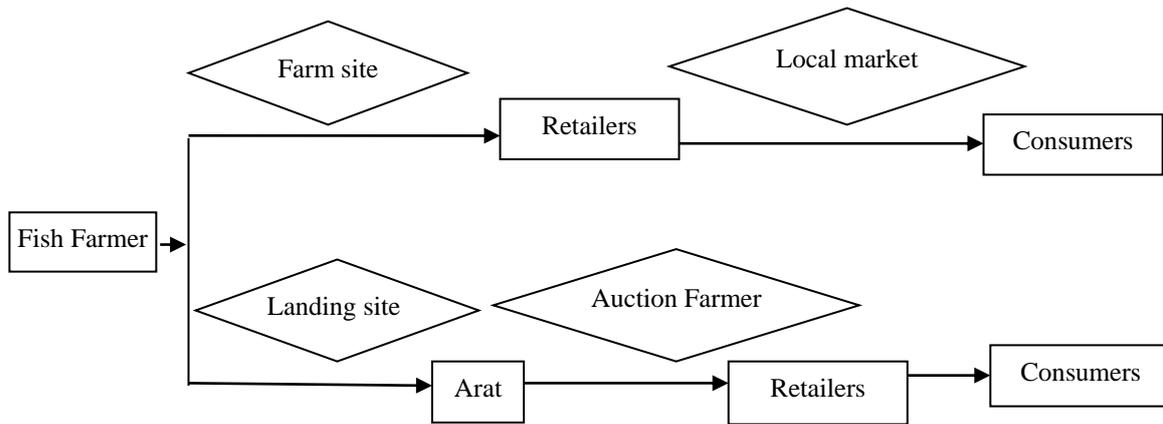
Figure 3. Marketing channel of fish from farmers to consumers at different sites through different agents under the Trishal upazila of Myemensigh district.

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 Karatua river. Khayruzzaman (2007) conducted a research on livelihood of fish retailers in Jamalpur district where 48% fish retailers were age group of 31-40 years. Sohel et al. (2008) observed the livelihoods of farmer outcomes were positive and most farmers (81%) have found to be improved their social and economic conditions through pond fish production. The fish pond owners were in the age groups of 21-40 years (54 %) of which 13 % were illiterate, 11 % were capable to sign only and the rest 76 % farmers received formal education. The average family size was 6.93 and most of the farmers (40%) had tin shed house and the households (43%) were dependent on village doctors. The sanitary conditions of the fisher were very poor and most of them (48%) used semi pucca toilets. Rana (1996) also found that 70% pond farmers were in 18-45 years age group in his study in Sirajgonj district. 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. It might be due to most of the sampled fishermen were compelled to enter into the fishing profession in their early stage due to poor economic conditions and lack of awareness about education. Rahman (2003) observed in Gazipur district where 74% pond farmers were Muslims and 26% Hindus. Islam (2006) found in Lalmonirhat where 80% farmers were Muslims and 20% were Hindun. Graaf et.al. (2001) observed in the last decades while the number of Muslims having fishing as a major occupation increased, which is similar to the present findings. Roy (2010) noted that the highest value (27.77%) was found in fishermen in medium land area group. There are three types of house in the present study area such as i) kacha ii) semi pakka and iii) pakka. Ahmed (2003) also found 62% of katcha housing structure of prawn farmers in Mymensingh area. Islam (2006) also

found that 16% housing structure were katcha, 24% were semi-pucca, 6% were pucca and 54% were tinshed. Ahmed (2002) found that in Mymensingh area, (62%) of fishermen house structure were kacha. Alam (2006) found in his study that only 24% had good sanitation condition using pakka toilets. Halder et al. (2011) found most of the retailers (54.17%) belong to the age group 31 to 40 years and in average 76.39% lived with nuclear family. About 48.61% of the respondents had 4 to 5 family members while 45.83% had small family (2-3 members) and the education level of the retailer was very poor where 52.78% had no formal education. About 80.56% of the respondent used own tube-well water for drinking purposes while 66.67% of the retailers have tinshed building and 72.22% of the respondents used semi-concrete sanitary, 22.22% used concrete while only 5.56% used wooden sanitary. In average 44.44% of the retailers received health service from village doctor while 31.94%, 11.11% and 12.5% received from upazila health complex, district hospital and MBBS, respectively. All respondents took this business as main occupation while 47.22% of the retailers have no alternative income sources. The annual income of majority respondents was above BDT 75,000 and most of the retailers (72.22%) did not take loan from external source for the business purposes. Alam (2006) found in his study that only 42% of the farmers in the Mithapuqur upazila under the Rangpur district got the opportunities for medical care by MBBS doctor and upazila health complex while the rest 58% was dependent on village doctor and others. Hossain (2007) reported that the highest monthly average income was found in fish farmer group and the lowest monthly average income was found in the retailer group in the Kolimar haor, Itna, Kishorgonj. Respondents were divided into 4 groups such as no saving, low saving, medium savings, and high saving. It appears that fish farmers saved more money compared with stockist and fish retailer. It might be due to their annual income and annual expenditure as well as related to their family size. With the growth in commercial pond fishery, a new

pattern in the marketing channel was occurred that affects production points, primary markets/landing areas, higher secondary markets and consuming areas/retail markets (Alam 2000). After harvest pond fish farmers directly approach stockist at the higher secondary market. Fish farmers get 8-10% of the total sale proceeds from the lot of each catch. The farmers bear the transportation costs to the stockist in the markets and arrange bidding for open sales of fish to retailers. Shahriar et al. (2010) found that about 42% fishermen directly sold their fish to the consumer, while 50% of them disposed to the retailer and only 8% of the fishermen handed over their fish to the whole seller. Aktar et al. (2010) conducted that the higher transport cost, poor road and transportation facilities, insufficient ice supply, exploitation by middleman, inadequate drainage system, poor water supply, poor sanitary facilities, unhygienic condition as well as poor infrastructure were the common constraints of the fish marketing. The average net profit of fish retailers was found Tk.54 to Tk. 333 and the average age groups of 21-40 years were found among the markets. The average family size was 5.8 which were higher than national average. Most of the housing conditions were kacha (68.9%) and Muslim fish retailers were predominant in all markets. Flowra et al. (2012) reported that most of the stockist (75-83%) earned Tk. 100-500 per day. Infrastructure of wholesale and retail fish markets were not adequate with regarding to sales area, packaging, sanitation, water supply, drainage, cleaning, washing, maintenance and repairs except very few. Respondents were required to state the types of health services that they could afford for their health maintenance or facility. A family may be said to well serve in health facilities when all of its members have sustainable access to the medical care needed to be free from debilitation and preventable, health problems. The health facilities enjoyed by the respondent in the study area were not at all satisfactory level except in case of stockist.

CONCLUSION

Fish production and fish marketing is the main occupation of people in Trishal upazila under Mymensingh district. Trishal upazila is the pioneer in fish production among greater Mymensingh district. However, there are various problems in the study area which are declining fish supplies, lack of financial support through loans at preferential interest rates, institutional supports, infrastructure, ice factory and public cold storage, road access to markets is often too narrow, markets shelter, etc. Vandalism *i.e.,* theft of boats, nets, and engines are also constrains of fish farmers. Poor accessibility of market, *i.e.,* higher income consumers cannot access the market by car due to road congestion. . It also suggested that government, NGOs, research

organizations, local authority and law enforcing agencies should cooperate together to formulate an integrated policy to overcome problem. So, it is necessary to expose the social status, problem and existing marketing system for improvement of aqua business in the other part of Bangladesh.

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