

Marketing system of fishes and socioeconomic condition of fish retailers in Madaripur town

A.K. Sen, M.M. Hasan, M.L. Rahman¹, M.E. Ahsan, S. Islam and M.R. Haque²

Department of Fisheries Management, ¹Department of Fisheries Biology and Genetics, Bangladesh Agricultural University, Mymensingh, ² Department of Fisheries Management, HSTU, Dinajpur

Abstract: The fish marketing system in three markets of Madaripur town and the socio-economic status of the fish retailers were studied for a period of six months from January to June, 2008. Data were collected through questionnaire interviews and focus group discussions. The fish marketing chain started from the fish farmers to the consumers passes through a number of intermediaries such as, local fish traders, agents/supplier, commission agents and the retailers. The daily supply of fish in Iterpool bazar, Puran bazar and Municipal market was estimated as 1-2, 4-5 and 0.5-1 tones, respectively where carp fish was the highest (33.66%) and tilapia was the lowest (4%). The fish price varied according to daily demand and seasonal variations. Most of the fish retailers in all level of marketing chain had education at some level and were quite young. The average family size of the fish retailers was 5.6 and 81.66% were improved their socio-economic conditions through fish trading. Higher production cost, transport cost, unhygienic market place, lack of sanitary facilities, poor ice-supply, exploitation by the middlemen, lack of capital and the political disturbances were the common constraints of the fish marketing.

Key words: Fish marketing system, fish retailers, constraints and socio-economic condition.

Introduction

Madaripur town is situated on the bank of the Arial khan river which is the branch of the Padma under Dhaka division. Madaripur has different types of natural water resources especially floodplain areas where a large amount of small indigenous species (SIS) of fishes and other Indian major carp, exotic carp are transported to Madaripur town. Madaripur town is interconnected with the capital and other adjacent districts by roads and highways and different river channels.

In Bangladesh, fish marketing is almost exclusively a preserve of the private sector where the livelihoods of a large number of people are associated with fish production and marketing systems. However 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 particularly in weak position in relation to intermediaries (DFID, 1997). Several studies have already been carried out to explore the marketing system and the socio-economic condition of the poor retailers (Ahmed, 1984 and 1997; Khan, 1995; Rokeya *et al.*, 1997 and Siddique, 2001), but no or limited information is documented about the aforesaid town. Therefore, it is important to know the existing fish marketing system and the socio-economic condition of the fish retailers. Therefore, the present study was undertaken to understand the existing fish marketing systems and to assess the socio-economic condition of the fish retailers.

Materials and Methods

Three fish markets namely, Iterpool bazar, Puran bazar and Municipal bazar of Madaripur town were selected for the present study after discussion with fish farmers, retailers, local leaders, District Fisheries Officer (DFO), Senior Upazila Fisheries Officer (SUFO) and NGO workers based on market history, number of fish retailers, duration of marketing season and time etc. The study was carried out for a period of six months from January to June, 2008.

For this study a combination of questionnaire interview, Participatory Rural Appraisal (PRA) tools such as Focus Group Discussion (FGD) and crosscheck interviews were conducted with key informants such as Upazilla Fisheries

Officer, BRAC, Local leaders and NGOs workers. The draft questionnaires were tested with 10 fish retailers in the study area. The questionnaire were changed, modified and rearranged according to the experience gathered during pre-testing of questionnaire. A total of 60 fish retailers were randomly chosen for questionnaire interviews from the three markets i.e. 20 in Iterpool bazaar, 20 in Puran bazar and 20 in Municipal bazar at Madaripur town. In addition, a total of 60 consumers were interviewed at the market centre, home or office with questionnaires. Tabular technique was applied for the analysis of data by using simple statistical tools like average and percentage by Microsoft Excel.

Results

Fish distribution and marketing system

A number of middlemen are involved between farmers and consumers in fish marketing system in Madaripur town. The market chain from farmers to consumers passes through a number of intermediaries, such as local fish traders (paikers), wholesalers and retailers and found three types of marketing chain.

Channel I: Fish farmers → Paikers → Wholesalers → Retailers → Consumers

Channel II: Fish farmers → Wholesalers → Retailers → Consumers

Channel III: Fish farmers → Retailers → Consumers

Supply of fish in markets

Fishes in Iterpool bazar, Puran bazar and Municipal market have been estimated as 1-2, 4-5 and 0.5-1 tones, respectively. Virtually most of the fish (90%) are brought from different areas of the district and the remaining part of Barisal and Chandpur region (especially hilsa fish). It was estimated that about half of the fish (35%) regularly sold in markets were major carps (Table 1). Besides the carps, small quantities of other fish, e.g. hilsa, catfish, tilapia, small indigenous species (SIS) of fish, prawn and shrimp and other fish including marine ones are sold in the markets. Buses, trucks and pickups were used for transport of fish to the markets from inside and outside of the

district. During the survey some consumers claimed that they did not prefer imported fish because of formalin (a

highly toxic substance and hazardous to human health).

Table 1. Market shares of main fish species in three different fish markets

Source of fish in markets	Fish	Iterpool bazar (%)	Puran bazar (%)	Municipal market (%)	Average (%)
Madaripur region (90%) (Sadar upazila, Shibchar, Kalkini, Kalagachia bazar, Mustaphapur bazar, Shoshikor, Bhurighata)	Indian major carps	26	34	31	30.33
	Small indigenous fish (Mola, tengra, shol, bele, punti)	36	26	26	29.33
	Catfishes (Pangus, Shing, Air, Boal, Magur)	9	10	11	10
	Hilsa	10	12	11	11
	Prawn	5	6	4	5
	Tilapia	3	3	6	4
Outside of Madirpur (10%) (Gopulgonj, Faridpur, Barisal, Chandpur)	Others (Silver carp, Bighead carp, Grass carp)	4	4	7	5
	Carps (Indian and Exotic)	5	2	3	3.33
Total	Other (Including marine marine fish)	2	3	1	2
		100	100	100	100

Season and time of fish trading

The season of fish trading was round the year. In Iterpool bazar, retailers were engaged in fish trading from morning 8 am to noon 1 pm, while in Puran bazar and Municipal market were engaged from 6 am to 8 pm and 7 am to 11 am, respectively. Retailers in Iterpool bazar and Puran bazaar were spent more time due to higher amount of fish. The total number of retailers in Puran bazar was 75 where 35 in Iterpool bazar and 25 in Municipal market.

Amount of fish sold

It was found that a fish retailer of Iterpool bazar, Puran bazar and Municipal sold on an average 50, 65 and 30kg fish/day, respectively. About 35, 75 and 25 numbers of retailers were involved in Iterpool bazar, Puran bazar and Municipal market, respectively. The daily supply of fish in Iterpool bazar, Puran bazar and Municipal market was 1-2, 4-5 and 0.5-1 tones, respectively which indicated that the amount of fish sold by a retailers at Puran bazar was double than Iterpool bazar and the amount of fish sold in Iterpool bazar was double than Municipal market.

Price of fish

It was found that price of fishes varied according to daily demand and seasonal variations with the highest in April to June and the lowest in January to March and the Municipal market showed the lower prices of all kinds of fishes either native or exotic and captured or cultured

compared to other two markets in the Madaripur town. Price of some important fish species were found flexible in market to market (Table 2).

Table 2. Average price (Tk./kg) of fishes in different markets of the Madaripur town

Fish species	Average price (Tk./kg)
Catla (<i>Catla catla</i>)	100-120
Rohu (<i>Labeo rohita</i>)	120-150
Mriga (<i>Currhinus cirrhosus</i>)	80-90
Illish (<i>Tenuulosa ilisha</i>)	250-280
Thai pangus (<i>Pangasius hypophthalmus</i>)	50-80
Small indigenous species of fish (Mola, Tengra, Shole, Bele, Punti)	125-150

Constraints of fish marketing

A number of constrains for fish marketing were reported by retailers, including higher transport cost, poor road and transport facilities, poor supply of ice, exploitation by middlemen as a result of lower market prices, inadequate drainage system, poor water supply, poor sanitary facilities, political disturbance and unhygienic condition (Table 3). As a result, the perishable product of fish got damaged and the retailers sold these at cheaper prices, sometimes they even failed to get any revenue due to quality deterioration.

Table 3. Key constraints for fish marketing by retailers

Constraints	Iterpool bazar n = 20	Puran bazar n = 20	Municipal market n = 20	Total N = 60
Higher transport cost	9 (45%)	6 (30%)	4 (20%)	19 (31.66%)
Exploitation by middlemen	5 (17%)	4 (20%)	3 (15%)	12 (20%)
Poor ice supply	2 (10%)	3 (15%)	3 (15%)	8 (13.33%)
Lack of money	3 (15%)	4 (20%)	5 (17%)	12 (20%)
Lack of infrastructure	1 (5%)	3 (15%)	5 (25%)	9 (15%)

(n = sample size)

Socioeconomic conditions of fish retailers

Age structure: Most of the retailers were quite young and average age was 32.1 years with a range from 19 to 65

years. There was very little difference in average age of the fish retailers among the three markets (Table 4).

Table 4. Distribution of fish trader's age groups

Age distribution (years)	Iterpool bazar	Puran bazar	Municipal market	Total
	n = 20	n = 20	n = 20	N = 60
Up to 30	8 (40%)	5 (25%)	9 (45%)	22 (36.66%)
31-40	7 (35%)	8 (40%)	6 (30%)	21 (35%)
41-50	3 (15%)	3 (15%)	4 (20%)	10 (16.66%)
Above 50	2 (10%)	4 (20%)	1 (5%)	7 (11.66)

(n = sample size)

Family size

The average family size of the retailers was found to be 5.6 persons in a single family. The average family size was higher in Puran bazar (5.8) than Iterpool bazar (5.6) and Municipal bazar (5.4).

Education

It was found that the total (60) interviewed, 58.33% of retailers had primary level of education, 26.67% had secondary, 9% had S.S.C, none had H.S.C and bachelor level of education (Table 5).

Table 5. Distribution of fish trader's education level

Educational Level	Iterpool bazar	Puran bazar	Municipal market	Total
	n = 20	n = 20	n = 20	N = 60
Primary	12 (60%)	10 (50%)	13 (65%)	35 (58.33%)
Lower secondary	5 (25%)	6 (30%)	5 (25%)	16 (26.66%)
SSC	3 (15%)	4 (20%)	2 (10%)	9 (15%)
HSC	-	-	-	-
Bachelor	-	-	-	-

(n = Sample size)

Daily average gross profit of the fish retailers

The average gross profit of a fish retailers in Iterpool bazaar, Puran bazar and Municipal market were 600, 500 and 300 Tk./day.

Improved socio-economic conditions

The present study showed that the fish retailers improved their socio-economic conditions through fish trading

which was confirmed by 80% of the fish retailers. These could include increased food consumption, increased social status, and improved their standards of living, purchasing power, choice, and ability as an economic sector (Table 6).

Table 6. Improved socio-economic conditions through fish trading

Improved socio-economic conditions	Iterpool bazar	Puran bazar	Municipal market	Total
	n = 20	n = 20	n = 20	N = 60
Yes	16 (80%)	18 (90%)	15 (75%)	49 (81.66%)
No	4 (20%)	2 (10%)	5 (25%)	11 (18.33%)

(n = sample size)

Discussion

The fish market chain passed through a number of intermediaries such as, local fish trader, beparies, aratdar, whole sellers and retailers. Three types of marketing channels were observed i.e. fish farmers-paikers-whole sellers- retailers- consumer, fish farmers-whole sellers-retailers-consumers and fish farmers-retailers-consumers. Mia (1996) and Rahman (2003) identified several types of marketing channels in Netrokona, Mymensingh and Gazipur district, respectively, all of which involved the active participation of aratdar and beparies as a strong linked in the existing marketing system. Presence of intermediaries was also reported in other parts of Bangladesh and India (Ahmed 1984, Khan 1995). The daily supply of fish in Iterpool bazar, Puran bazar and Municipal market was estimated as 1-2, 4-5 and 0.5-1 tones, respectively. It was also found that good number of

Indian major carps was imported from India and Myanmar. Rahman (2003) found that the daily supply of fish at Gazipur Sadar and Sripur marker were estimated at 2-3 and 1-2 tones, respectively. A significant amount of carps were also imported from outside the country mainly from India and Myanmar. Similar results also reported by Siddique (2001).

Indian major carps, minor carps, exotic carps, small quantities of other fish (catfish, hilsa, tilapia, small indigenous fish, prawn and shrimp and other fish including marine) were found in the markets. Rahman (2003) found similar results in Gazipur district. Rahman (2003) found that rohu fish was the most valuable among the Indian major carps and grass carp was among the exotic carps in Gazipur district. Hasan and Middendrop (1999) mentioned that rohu was found to be the most expensive fish

followed by catla, mrigal, grass carp, common carp and silver carp in southwest Bangladesh.

The price of carp was fluctuated with the variation of market structure, species, quality, size and weight. Quddus (1991) also found similar seasonality for the price of fish market in Mymensingh.

The fish retailers' average profit in Iterpool bazar, Puran bazar and Municipal market in Madaripur town were estimated at Tk 600, 500 and 300/day, respectively. Rahman (2003) found the average net profit of a fish retailer in Gazipur Sadar market was Tk. 325/day, while for Sripur market it was Tk. 175/day. However, Siddique (2001) reported the average gross profit of fish retailers in Nutun Bazar, Mymensingh were Tk. 540/day.

The fish market and marketing system of Madaripur town were found to be manifested with a large number of problems. These were higher transport cost, poor road communication, absence of icing facilities, inadequate water supply, poor hygienic and sanitation condition etc. The above problems regarding fish marketing were also reported by Quddus (1991), Khan (1995), Mia (1996), and Rokeya *et al.*, (1997).

It is notable that most of the fish retailers in all level of marketing chain had education at some level. Most of the fish retailers were quite young and average age was 32.1years. The age structure of the retailers was not significantly different among the markets. About 75% of the fish retailers were Muslims and the other 25% were Hindus. More or less similar results also reported by Rahman (2003) and Siddique (2001).

The average family size of the fish retailers was 5.6 which were similar to the national household size (5.6) (BBS, 2000). The average family size was found higher in Puran bazar (5.8) than Iterpool bazar (5.6) and Municipal market (5.4). Rahman (2003) found similar findings in Gazipur district. About 81.66% retailers were improved their socio-economic conditions, where the remaining 18.33% were not improved their previous socio- economics conditions.

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