

Marketing system of Hilsa in Chandpur district of Bangladesh

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ARTICLE INFO

Article History

Received: October 07, 2021
Accepted: December 15, 2021
Online: August 30, 2022

Keywords

Market overview Marketing
channel Marketing
constrains
Market infrastructure and policy

ABSTRACT

A study was carried out between January to December of 2018 with an objective of understanding the practices of the Hilsa marketing system in the district of Chandpur. Constituents of the primary data include personal interviews, Focus Group Discussions of fishers, intermediaries and cross check interviews of key informants keeping the emphasis on overviews of Hilsa marketing exercise, marketing channel, marketing constraints and the role of marketing participants. “Fishery ghat or *mach* ghat” was the main landing center of hilsa in Chandpur district from where Hilsa was distributed and marketed throughout the country with grading practice. Though level of preservation knowledge of some of market participants was alarming, Hilsa was found to be stored by some *aratdar*. Majority of intermediaries were self-financed. During this investigation it was observed that Hilsa marketing channel deals with both domestic and overseas marketing. Fishers were marginalized to a large extent both in the credit and product made by the advancing system of money lender, *aratdar* acted as a commission-based sales agent to sale the catch of fishers at the landing center. Wholesaler invested a huge amount of capital to purchase Hilsa for a short period of time and LC *paikars* exported their entire purchase to overseas market and retailers were the last intermediaries who sold Hilsa directly to consumer. Major constrains of Hilsa marketing includes infrastructure, long marketing chain, credit facility, and effective policy. For the development of the Hilsa market effective policies along with fishers’ cooperative societies are recommended.

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Introduction

Wetlands, floodplains and countless rivers mark out the geography of Bangladesh and in such geographies the fishery plays a vital role in employment creation and maintaining livelihoods. The population here is a fast growing one which gets a majority (60%) of its animal nutrients from

fish. It contributes about a quarter (25.3%) to the agricultural GDP and 3.57% to national GDP (DoF, 2018). The sector supports about 1 in 10 people either directly or indirectly (DoF, 2019). Whether dealing with volume, value or employment will find the numbers to be massive in the sector. The marketing systems are traditional, complex and The whole marketing system is mostly administered/ managed by the private sector (Khan,1995).

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In this system a group of intermediaries known as *aratdars* (commission agent) or *mahajans* (financiers/money lenders) retain executive authority over the system. The intermediaries finance the whole fishing operation (provides capital in advance) but not only that, they also finance the entire livelihood of the fisher with a condition to sell the entire catch to them below market price (Faruque, 2007). The marketing system reflects the economic stability of local people and production system of any area (Alam et al., 2009). The fish marketing system in Bangladesh faces serious problems including heavy losses, wastes and poor fish quality, along with the deprivation of the fishers (Rokeya et al., 1997). Yet since fish demand generally exceeds supply, there is limited incentive for traders to improve the quality of this system (Minar et al., 2012). The Government of Bangladesh in collaboration with foreign donors and NGOs are working in the fisheries sector to increase fish production. However, neither the government nor the development partners have made any concrete efforts to enhance the fish selling system, which is a critical component of the fisheries industry (ADB, 2005).

Prior to the country's independence, the export of fish and other fisheries goods was regarded as a non-conventional commodity. However, output has risen many times over in the previous several decades, and the government is generating foreign currency to close the trade imbalance (Dey et al., 2010). According to DoF (2020), Bangladesh exported fish and fisheries products worth taka 40745 million in 2018-2010. Since Bangladesh's fish output has increased over the years, its disposal pattern is critical, since farmers, retailers, wholesalers, consumers, and others are all influenced by marketing procedures (Hasan, 2001). Hilsa is the most important species in national fish production and is abundantly available in Chandpur district. Catching fish is an important source of income to the fishers here. Hilsa is harvested all the year round in Chandpur and transported from all over the country. In the marketing system a large number of people get employment opportunity in the forms of fisherman, trader, intermediary, assembler, processor, transporter, day labor etc. Fish marketing studies are critical for the long-term viability of these stakeholders. The present study was conducted to observe the Hilsa marketing exercise, marketing channel, role of marketing participants and marketing constraints of Chandpur district to determine the pulling factors for improving the marketing of Hilsa in the study area as well as the country also.

Materials and Methods

Study area

The study was conducted in four upazilla of Chandpur District namely Sadar, Haimchar, Matlab Uttar and Matlab Dakshin.

Data collection

For the collection of data both primary and secondary sources were taken into account. Three methodological tools— questionnaire interview, Focus Group Discussion (FGD) and cross check interview were used to collect primary data. The main objective of the draft questionnaire was to gain real experience from the field and then to develop the final questionnaire. The researcher filled in the questionnaire form by interviewing fisherman and intermediaries to collect accurate information related to the objectives. The investigation utilized

12 questionnaire surveys with fisher, 10 with intermediaries and 8 FGDs where 4 were conducted with fishermen and 4 with market participants in different spots of the study area. Each group size of FGD was 8 to 12 men and after every three months one FGD was conducted. Crosscheck interview was carried out with local leaders, concern government and non-government organization, school teachers at their office or home or through mobile phone. Web articles, journals, organization's reports and official documents were some sources of secondary data to get some fast hand information.

Data analysis

MS Excel and very simple statistical tools like average, percentages were used for the analysis of data. MS Excel, MS Word, tables, figures etc. were used for the presentation of data.

Results

Landing and grading of Hilsa

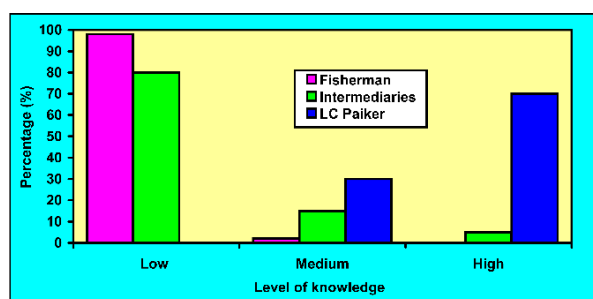
Mach/fishery *ghat* was the main landing center of Hilsa in Chandpur district from where Hilsa was distributed and marketed throughout the country. In case of Hilsa, location and size are two factors of grading procedure. Hilsa from Chandpur are priced differently than downstream Hilsa of Barisal, Bhola, Potuakhali, Jhalokathi, Pirojpur, Borguna and Chittagong. Three main grading practices were found during the investigation in Chandpur such as >1000 g as large, > 500 – 1000 g as medium and >300 -500 g as small size (Table 1).

Table 1. Weight basis grading practice of Hilsa in Chandpur district

Specification	Range
Large	1500 g or more
	1200 -1500 g
	1000 - 1200 g
Medium	800 - 1000 g
	700 - 800 g
	500 - 700 g
Small	300 - 500 g
	300 g or less

Preservation

Only 2% fisher and 15% intermediaries possess medium level of preservation knowledge although 70% and 30% LC Paiker seize high and medium level of preservation knowledge respectively. 98% fishers and 80% intermediaries have very low preservation knowledge (Fig. 1). LC Paikers are far ahead from the fishers and other intermediaries.

**Fig. 1.** Level of preservation knowledge of Hilsa market participants in the study area

Storage and transport

During the investigation Hilsa was found to be stored by some *aratdar* in cold storage. Nine cold storages were observed in the study area. In the study area the intermediaries used various modes of transport to move the product from the landing centers to other places which are shown in Table 2. Fishers transport their products through a boat or on head to the local area or *arat*. *Beparis* and *paikers* use trucks, pick-ups sometimes have refrigerated cargo for transport to local markets or other districts in Bangladesh. LC *paikers* use cargo carriers, refrigerated pick-ups or Lorries for overseas transport of Hilsa. Retailer's transport Hilsa to local markets through head load, CNG/Auto (three wheel mechanized carrier), Rickshaw/van (three wheel non-mechanized man driven carriers).

Table 2. Transports used by Hilsa fishers and intermediaries for the movement of Hilsa

Market participant	Mode of transport	Transport to
Fishers	Head load: Container carry on head Boat: Non-mechanized or mechanized water vehicle	Local area
<i>Bepari</i>	Truck: Not cargo Truck: Cargo carrier (Nonrefrigerated) Pickup: Small lorry	Local + other district
<i>Paiker</i>	Truck: Not cargo Truck: Cargo carrier (Nonrefrigerated) Pickup: Small lorry	Local + other district
LC <i>paiker</i>	Truck: Not cargo Truck: Cargo carrier (refrigerated) Pickup: Lorry	Overseas
Retailer	Head load : Container carry on head CNG: Three wheel mechanized carrier Auto: Three wheel mechanized carrier Rickshaw/van: Three wheel non-mechanized man driven carrier	Local

Financing

Majority of intermediaries (*aratdar*, *bepari*, *paiker* and retailer) were self-financed. Some other sources of their finance were banks, NGOs, friends and relatives and *dadon* (advance payment by *aratdar/ mahajan*). It was worth mentioning that most of the fishermen resort to the *dadondars* for finance. Source of financial support of the fishers and intermediaries are shown in Table 3. *Dadon* from *aratdar* is the major source of fishers, 97% fishers are bounded with *aratdar* and they are compelled to sale their fish to the *aratdar* in cheap rate below the market price.

Table 3. Sources of finance for fisherman and intermediaries in Hilsa marketing system

Source of finance	Market participants (%)					
	Fishers	<i>Aratdar</i>	<i>Bepari</i>	<i>Paikar</i>	LC <i>Paikar</i>	Retailer
Own fund	3	90	90	80	75	90
Bank	1	10	5	10	20	-
NGO	96	-	-	-	5	5
Friends and relatives	-	-	-	-	-	5
<i>Dadon</i> from <i>aratdar</i>	97	-	5	10	-	-

Communication

In the study area market information through visiting the market and use of mobile/ telephone was the most used practice to be found. Getting information from fellow traders was also a common communication for all types of market actors. Generally, exporters or LC paikers are highly educated and they largely rely on email/internet for communication. Table 4 shows the different medium of market information by various market stakeholders.

Table 4. Communication medium for market information used by market actors

Communication	Market actors (%)					
	Fisherman	Aratdar	Paiker	Retailer	LC Paiker	Bepari
Through visiting	80	60	75	95	40	70
From fellow traders	51	45	45	25	20	30
Email/internet	-	-	-	-	80	-
Telephone/mobile	60	90	85	55	100	100

Packaging

Packing materials of different size and capacities were used by market participants. Bamboo basket is used by fishermen, aratdars, and transit facilitators to care after their fish. Bamboo, rope and polythene-made 'basket' and 'plastic drums' were found to be used by the fisherman, paiker and retailers as their needs required. Recently 'plastic crates' had become popular and used by beparis, paikers and retailers in the Hilsa marketing channel. Steel and wooden boxes were used by the beparis, paikers and in auction. 70% beparis are involved in ongoing market price sale and 30% contribute open bargaining (Fig. 2).

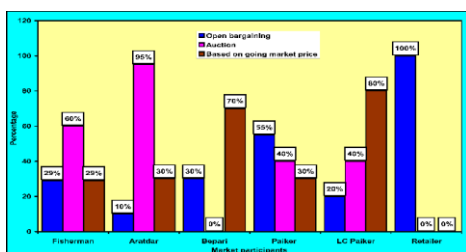


Fig. 2. Pricing practices of Hilsa market in study area

Pricing

In the study area, 60% fishers are sale their product through auction. Some are taking part in open bargaining and ongoing market price sale also. In case of aratdar 95% are involved in auction system. 30% sale ongoing market price, however only trace (10%) aratdar taking part in open bargaining. Beparis are not interested in auction. 70% beparis are involved in ongoing market price sale and 30% contribute open bargaining (Fig. 2).

Marketing channel of Hilsa

Marketing channel is the route of product flow required to bring it through different phases to final consumer. The full range of activities may be short or long depending on the specifics of the goods quality, size and nature of consumer and producer and the prevailing social and physical environment. In the study area following major value chain of Hilsa was observed (Table 6).

Table 5. Packaging practices of Hilsa marketing in Chandpur District

Packaging practices	Materials	Capacity (Kg)	Used by
Basket	Bamboo, rope and polythene	20, 40	Fisherman, Paiker, Retailer
Drum	Plastic	20, 40	
Crate	Plastic, polythene	40	Bepari, Paiker, Retailer
Steel box	Steel sheet	250	Bepari, Paiker, LC Paiker
Wooden box	Wood, polythene	160	
Box	Cork sheet	20, 40	

Table 6. Different marketing channel of Hilsa in Chadpur of Bangladesh

Types of market	Value chain
Domestic	Distant Fisherman – Aratdar – Bepari – Paiker – Retailer – Consumer Fisherman – Aratdar – Paiker – Aratdar – Retailer – Consumer
	Local Fisherman – Aratdar – Paiker – Retailer – Consumer Fisherman – Aratdar – Retailer – Consumer Fisherman – Aratdar – Paiker – Bepari – Retailer – Consumer Fisherman – Aratdar – Bepari – Retailer – Consumer Fisherman – Aratdar – Bepari – Paiker – Retailer – Consumer
Overseas market	Fisherman – Aratdar – LC Paiker – Consumer

Major constrains of Hilsa market system

Fishers are the most disregarded community of the country. Traditional market systems are generally middleman based. Because of the ill practices of various middlemen like paiker and aratdar fishers are deprived from their proper profit. Beside the inconsiderate mindset of middlemen there are also some constrains in current marketing system.

- a. **Infrastructural:** Modern landing centers, handling and preservation facilities,

wholesale and retail markets, road and transport systems were not found.

- b. **Long marketing chain:** The full range of activities from harvesting to delivery to the final consumer comprised a much longer chain. There were large gaps between demand and supply of Hilsa and a strong network of intermediaries and traders had left the fisherman at one end and the consumer at other.
- c. **Credit facilities:** The fishing community and poor participants of the marketing channel did not have easy access to appropriate institutional credit facilities due to excess official paper work (which are difficult to manage for the primary school educated fishing communities) and collateral arrangement.
- d. **Vulnerability:** The payment in advance system for fishing from a single powerful group of market participants (*aratdar/mahajan*) had made the poorer groups of market participants (fishers) vulnerable. The Fishermen in particular were in a weak position in relation to the intermediaries.
- e. **Hygiene and quality:** Day to day maintenance of the hygiene conditions and sanitation were quite poor at all stages of the industry.
- f. **Government policy:** Though Hilsa is a commodity that's high in demand (both in domestic and overseas markets) the government has no effective policy for its proper marketing.

Additional income generation scope

According to the responders they were able to carry out a few incomes generating activities for their family but the opportunities available, left them wanting more.

Discussion

Most of the fishers and intermediaries were ignorant about high preservation knowledge of Hilsa (Mohammed, 2013). Lack of proper preservation knowledge destroys the quality of Hilsa. In present market condition of Chandpur district of Bangladesh, fishers and intermediaries are remaining far behind than standard preservation knowledge. Because of the deficiency of proper knowledge lots of fishes and fisheries products lost their quality every year (Alam, 2010).

Inadequate storage facility is another problem that founded from the present research. Better storage facilities help to transport fisheries from production place to homestead and overseas market. Negligible storage facilities with unconventional transport system make the Hilsa market very fragile. Basically, most of the intermediaries are self-sufficient (Alam et al., 2012). However, the fishers are dependent on *Mohajon/paikar* for the financial support. Lack of proper institutional financing facilities like NGOs and bank, fishers are entrapped with *dadon* (highly interest loan) and they are bound to sale their products at cheaper rate which is one of the major reasons for their poor livelihood status (Ahashan et al., 2008). Mobile is a common source of communication in present era. All market participants are used mobile as a medium of communication. However, internet users' market actors are very few. Only LC *paikers* are use internet to communicate with buyers (Food export, 2021). Traditional visiting is also important method of communication that belongs in present market condition from ancient period. Bamboo baskets are traditional packaging materials of Chandpur as well as Bangladesh. Plastic crates are becoming popular day by day because of its availability, price and longevity. Sometimes drums are used by fishers, pikers and retailers to carry fishes to their target market. Still, wooden and cork sheet are generally used by the LC *paikers* or export related trader for exporting Hilsa to abroad (Paul et al., 2016).

All intermediaries practiced the buying and selling of Hilsa. Open bargaining, action and going market price method was practiced in varying degree by the fisherman, *aratdar*, *bepari*, *paiker* and LC *paiker* for fixing price of their products. All the retailers in the study area were found to be exercising open bargaining for selling their fish to the customer.

Conclusion and Recommendation

Fish markets in Bangladesh may be traditional and less competitive but is complex and plays a vital role in fulfilling consumer's demand for animal nutrients. Traditional fish marketing system in this region had been developed and managed fully by the private sector out of the say of former royals. Fishers are tied with the money lenders socially, culturally and economically which makes introducing any new arrangement quite difficult as the fishers are reluctant to have blight on their relationship with the money lenders. The fishers are hesitant to take on the risk of being deprived of the fishing opportunities.

Ensuring the hygienic condition of fish landing centers and the specifics of proper management in the day to day must be maintained for further development of the Hilsa marketing system in Chandpur district. Training people of the sector and disseminating information regarding the handling of fish, its quality, various hygienic practices is quite essential. A positive policy at government level should be considered for sustainable Hilsa marketing systems.

Acknowledgment

The authors thank the fisherman community and all market participants for their kind co-operation, which helped to fulfill the purpose of the study. The authors are also grateful to Upazilla Fisheries Officers, Senior Upazilla Fisheries Officers and District Fisheries Officers in the study area of the Department of Fisheries, Bangladesh for their assistance. Authors are indebted to Department of Fisheries, Rajshahi University, Bangladesh for the technical support to conduct the study.

Author contributions

Conceptualization, FT and MDH; Methodology, Investigation, FT and MAMA; Supervision, MDH; Formal analysis, FT and DAK; Writing—original draft preparation, review and editing, FT, MAMA and DAK. All authors have read and agreed to the published version of the manuscript.

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