



Hilsha Fish Marketing Strategies in Dhaka city of Bangladesh

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Abstract

The study was conducted to find out hilsha fish marketing system in Dhaka city of Bangladesh. Hilsha fish (*Tenualosa ilisha*) is the national fish of our country and all people like this fish on their meal but due to lack of proper marketing system maximum people remain out of touch of this fish. We found that Hilsha fish comes to Dhaka city maintaining a strong marketing channel member such as fishermen, faria, bapari, aratder and finally goes to consumer plate through retailer. For identifying marketing pattern and pricing strategies of the Hilsha I have chosen sample size containing 60 respondents (10 fishermen, 10 aratders, 10 beparies, 10 faria and 20 retailers) and collected data from Jatrabari, Showarighat, Kawranbazar, Savar Kachabazar, Banani Kachabazar, Mirpur, Uttara, Krishi market, Baipal bazaar and Lunchghat of Chandpur through questionnaire. I found that net marketing margin for per mound (40kg) varies according to channel member such as Retailer (Tk2750.5), aratder (Tk417.5), faria (Tk1791.5), Bepari (Tk1580.5) and retailers get maximum share of profit margin. The marketing cost per mound (40kg) for retailer (449.5), aratder (702.5), faria (908.5), Bepari (1210.5). Price determined at retail market based on market condition, bargaining of retailers and consumers. Fishermen and aratder arrange an auction method for selling their fish as well as faria follows open bargaining, auction and market going price. I have also found that Hilsha fish is so much demanding to people all over the world and still sold at high priced but fishermen can not receive reasonable price due to involvement of mahajons (money lenders) who enforced fishermen to sell at prefixed rate as a result economic conditions of the fishermen are not changing.

Keyword: Marketing Margin; Marketing Cost; Hilsha Fish; Marketing Channel; Fishermen.

Introduction

Bangladesh is a densely populated country of 147 570 sq. km. with a population of 160 million people. It is fortunate in having an extensive water resource in the form of ponds, natural depressions (haors and beels), lakes, canals, rivers and estuaries covering an area of 4.56 million hector. Bangladesh possesses an immense wetland area comprising a multi-species ecosystem. About 230 rivers and their tributaries with a total length of 24,000 km flow down through the country. There are about 54 rivers shared with India (Bangladesh Bureau of Statistics 1991). We are fortunate in having an extensive water resource in the form of ponds, natural depressions (haors and beels), lakes, canals, rivers and estuaries covering an area of 4.56 million hector. Fisheries in Bangladesh are diverse; there are about 795 native species of fish and shrimp in the fresh and marine waters of Bangladesh and 12 exotic species that have been introduced. In addition, there are 10 species of pearl bearing bivalves, 12 species of edible tortoise and turtle, 15 species of crab and 3 species of lobster (FAO, 2006).

The freshwater inland aquaculture production in Bangladesh is the second highest in the world after China (FAO, 2009). The total annual fish production was at 3.878 million tons in 2015-16 (DoF, 2017), of which 2.16 million tons (55.93%) are obtained from inland aquaculture, 1.077 million tons (27.79%) from inland capture fisheries, and 0.631 million tons (16.28%) from marine fisheries (DoF, 2017). The fishery sector contributes to our national Gross Domestic Product

(GDP) 3.69% which is 24.41% of total agricultural GDP (DoF,2017). It plays a significant role in export earning sectors after Ready Made Garment(RMG) which earned \$630.24 Million(DoF,2015).This sector have employed (part and full time)17.80 million which is 11% of total Population. Since meat and meat products are expensive in our country 60% of animal protein comes from fish in Bangladesh. (DoF, 2017).

Hilsha, national fish of Bangladesh is very tasty, nutritious having high food value that contains fat, protein, carbohydrate, iron, calcium and vitamin C and Kcals262per100gm(internet).

Hilsha fish is the single species that contributes to 1% of total GDP of Bangladesh , about 5 lakh fishermen are directly involved in catching hilsha ,now net worth US \$150 billion, according to a Bangladesh Fisheries Research Institute publication. Fishermen caught 3.949 lakh metric tons of hilsa in fiscal 2015-16, where it was only 1.83 lakh metric tons in fiscal 1987-1988. We have seen a continuous rise of hilsha fish production due to taking steps for protecting mother hilsha and jatka from fishing in prescribed period of October(1 to 22) every year.

The export market of value added products is highly competitive, involving changes in type of products, forms and packaging as well as consumer behavior. Export of fish, shrimp and other fishery products were considered as non-conventional items before the independence of the country. It has increased many-folds during the last decades and the country is earning foreign exchange to minimize the trade gap. Since fish production in Bangladesh is increasing over the years, its disposal pattern is very important as growers, wholesalers, retailers and consumers- all are affected due to value addition in the marketing process. For the sustainability of these stakeholders, fish marketing studies are very necessary. Thus, the present study is conducted to examine the fish marketing system, supply chain and value addition to determine the pulling factors for enhancing production, processing and marketing of different species of fishes in Bangladesh.

Statement of the Problem

The present study takes the first steps to collect primary data and to identify the marketing channels and marketing cost borne by various intermediaries, level of marketing margin for hilsha in Bangladesh. This study also analyzes the various marketing functions done by channel members and price variation of hilsha fish for peak and lean season. This report also provides information on overall marketing system of hilsha fish in Dhaka city of Bangladesh to support the statistical report linking the value chain in fish supply. Finally, this study is expected to also provide some useful information to traders, fish farmers and policy makers to help them formulate programs and policies related to the concerned fish production and marketing.

Objectives of the Study

The present work has been done therefore undertaken with the following objectives:

- i) To find out price determination strategies of hilsa fish.
- ii) To estimate marketing costs and margins of hilsa fish at different levels.
- iii) To analyze the price variation of hilsa fish at lean period and peak period.

Review of Literature

Several studies on marketing of different agricultural commodities have been done in Bangladesh. In spite of the great necessity of studies on the marketing of fishes, only a few empirical studies have so far been done in Bangladesh. Conversely, many studies have been made in many parts of the world. A brief review of the few important studies made both in Bangladesh and outside Bangladesh is presented below.

Kleih et al., (2002) claimed that the market is associated with strong demand, driven by continued increases in population.

According to Ahmed and Sturrock, (2006) mainly due to population growth there is a growing gap between supply and demand of fish in markets. Narrowing the gap not only requires increasing production but also improvements of all aspects of fish marketing and distribution systems (Ahmed, 2007 and 2008).

Bangladesh has exported 670 metric tons of dried fish during the 2011-2012 fiscal year whose market value was amounted Tk. 680million (DoF, 2012).

Monir et al., (2013) claimed that marketing provides a communication between the producers and consumers and the system is operated by a number of intermediaries.

Reza et al.(2005) reported that fish and fishery products are marketed through many different channels and outlets in Bangladesh.

Bangladesh earned Tk 4,703.95 crore by exporting fish and fisheries products during 2011-12 (DoF, 2013).

Monir et al. (2013) commented that the presences of the large number of intermediaries in the marketing channel increases the price of the final product and lessen benefits.

Amin et al.(2012) said that price fluctuation could be minimized or lessen by improving marketing facilities, eliminating unnecessary, inefficient and exploitative middlemen from the marketing channel

Md. Mojammel Haque et al, (2015) said that fisheries sector earns huge foreign exchange by exporting frozen shrimp and other fish and fisheries products to the USA, UK, Japan, France, Hong Kong, Singapore, the Kingdom of Saudi Arabia, Sudan and other countries.

According to Flowra et al.(2010) supernumerary middlemen in the marketing chains in Bangladesh reduce the profit of fresh/dry fish processors

Agarwal (1990) suggested that the marketing should not have the object only catching and selling of fish but the fish marketing should have the wide scope for exploitation, production, distribution, preservation, and transportation of fish in addition to actual sale of fish by reducing middlemen.

Biswas (1990) said that fishermen usually brought their fish to Netrokona, Mechhua Bazar and sold them to Aratdars, a small member of fishermen sold fishes to retailer directly. Study revealed that fishermen sold 60.35% fish to Aratdars, 29.16% fish to retailer and only 10.49% fish directly to consumers. Aratdars sold 88.38% fish to retailers and only 11.62% fishes to consumers directly. Retailer collected 75.20% fish from Aratdars and 24.80% fish from fishermen for selling to consumers.

According to Katiha and Chandra (1990), fish market system currently operated was fairly integrated as far as inter-market price movements were concerned in Allahabad. However, higher retailers' profit margins accounts for a large proportion of price paid by the consumers, which was a symptom of inefficiency.

Huque (1990) studied marketing of dry fish in some areas of Bangladesh. He showed that dry fish marketing system is inefficient in Bangladesh and noted that there was wide variation between producer price and consumer price.

Sadanandan et al. (1992) noted that the consumer acceptance and price levels in the market place are two of the major factors that determine economic viability in many situations.

Dampha (1993) demonstrated that in Burundi, whole selling and retailing of the entire catch of the industrial fleet took place at the same spot. An industrial unit owner negotiates the price with a wholesaler. The wholesaler then immediately starts selling fish in boxes of 40-50 kg to the retailers. After obtaining fishes the retailers display their fish on cement tables provided by city authorities for selling. Any remaining fish is sold in the afternoon or dried by the fish trader. The catch of artisanal and traditional units is usually sold directly at the landing beaches.

Atapattu (1994) opined that the fish marketing and distribution system in Sri Lanka is concerned as co-operative aspects. Co-operatives specifically designed for the purpose of fish marketing could not very effective in improving the distribution of fish but would also assist in ensuring more equitable incomes for the fishermen.

Khan (1995) found that after the fishermen, the major intermediaries who entered into the fish marketing chain in Mymensingh region were Aratdar, Paiker and Retailers. Fish Paiker earned more profit than all other traders. Fishermen received higher percent of retail price when marketing channel was shorter.

Subasinghe (1995) explained that the quality of the fresh fish in most domestic markets in the Asian region is far from satisfactory. Poor onboard practices, poor infrastructure, handling, and storage facilities are causes for the low quality fish in many domestic markets. Poor quality of fish limits their use for further processing, depriving the producer of a chance to gate better income for the producer; it also restrict the export potential of landings.

Mia (1996) identified three marketing channels in Mymensingh district, the first one was fish farmer- bapary- aratder-retailer- consumer, the second one was fish farmerbapery- retailer-consumer, and the third one was bapary-aratder-retailer-consumer.

King (1997) found that some fisher folk groups and NGOs have attempted to market their own fish or produce value-added products and become more active in small-scale marketing development activities in India. Artisanal communities can add value to catch through improved post-harvest practices. Identifying fish marketing and handling opportunities can benefit traditional fishing communities.

Rahman (1997) said that marketing organizations, fish freezing and storage facilities as well as ice plants should be ensured for marketing systems. In addition, fish quality control, role of co-operatives, credit availability and participation of women in fish marketing should be improved.

Rahman et al., (2009) observed the fish marketing systems in Khulna, based on existing marketing systems, economic features of marketing activities and inefficiencies. The market chain from producers to consumers passes through a number of intermediaries: local traders, agents/suppliers, wholesalers and retailers.

Alam et al., (2010) found that in Swarighat, almost all fish traded internally move through the private sector where a large number of people are dealing with fish distribution and marketing system. The market chain from producers to retailers goes onward through a number of intermediaries: Traders, Broker, Aratdar, Wholesalers, Mahajans, and Dadondars.

Methodology

The research methodology which is done to achieve the objectives of the study and explained the choice for selecting the methods for data collection. It is a descriptive study based on quantitative data regarding market condition of the hilsha fish Dhaka city. It described the marketing system of hilsha fish including, price variation, marketing intermediaries, cost of marketing, marketing margin, percentage of profit for marketing intermediaries, production, distribution and contribution to national economy. To study marketing strategies & practices of Hilsha fish in Dhaka city, I have applied stratified random sampling procedure to collect data from various marketing participants. Total sample size was 60 respondents (10 fishermen, 10 aratders, 10 beparies, 10 faria and 20 retailers). Researcher himself collected data of fishermen, faria from launchghat in Chandpur district of Bangladesh and collected data of aratder, bepari, retailer from Jatrabari, Showarighat, Kawranbazar, Savar Kachabazar, Banani Kachabazar, Mirpur, Uttara, Krishi market, Baipal bazaar of Dhaka district through questionnaire.

Finding & Results Discussion

Pricing

All intermediaries are involved in buying and selling of fish. Fishermen sell fish through open bargaining, auction. Sometimes fishermen sell through prefixed prices to aratder, bepari due to condition of dadon taking. Aratdar follows auction 90% and open bargaining 10%. Bepari sells fish through cost plus method, auction open bargaining and marketing prices. Faria, uses open bargaining, auction and going market prices method for fixing price of their fish. The retailers follow open bargaining and market based pricing for selling their fish to consumers (Table 1).

Table 1: Pricing Determination Strategies Followed in Selling Fishes in Bangladesh					
Pricing methods	% Market Intermediaries				
	Fishermen	Arat-dar	Faria	Bepari	Retailer
Open bargaining	30	10	53	10	45
Auction	55	90	37	35	0
Based on going market prices	0	0	30	15	30
Prefixed prices	15	0	0	0	0
Cost-plus method	0	0	0	40	25
Total	100	100	100	100	100

Source: Author survey, 2016

Table 2 : Price (Tk/Kg) Variation of Hilsha in Peak and Lean Season Based on Size at Retail Market		
Size	Peak season (Tk. /Kg)	Lean season(Tk. /Kg)
Less than 300gm	250	500
300-700gm	500	850
700-1000gm	800	1200
Above 1000gm	1100	1600

Author Survey, 2016

From the table 2, we can say that price variation is seen according to size, season an special occasion like pahela baishakh & pooja. Due to huge supply at peak season price remains comparatively low such as less than 300gm (Tk.250/kg), about one kg (Tk.800/kg) and large size (Tk.1100/kg). Where price goesup high 60 to 100% in lean season. We can see exceptional price rising in Pahela Baishakh when large size price goes up 3000-4000Tk/Kg.

Value Addition Costs by Different Actors

The cost incurred to transport the product from producers to consumers is ordinarily known as marketing cost. In other words, the cost of marketing represents the cost of performing various marketing functions (Kohls and Uhl, 2005; p.96). Marketing costs are incurred when commodities are shipped from the farm to the final market. Intermediary-wise marketing costs are discussed below:

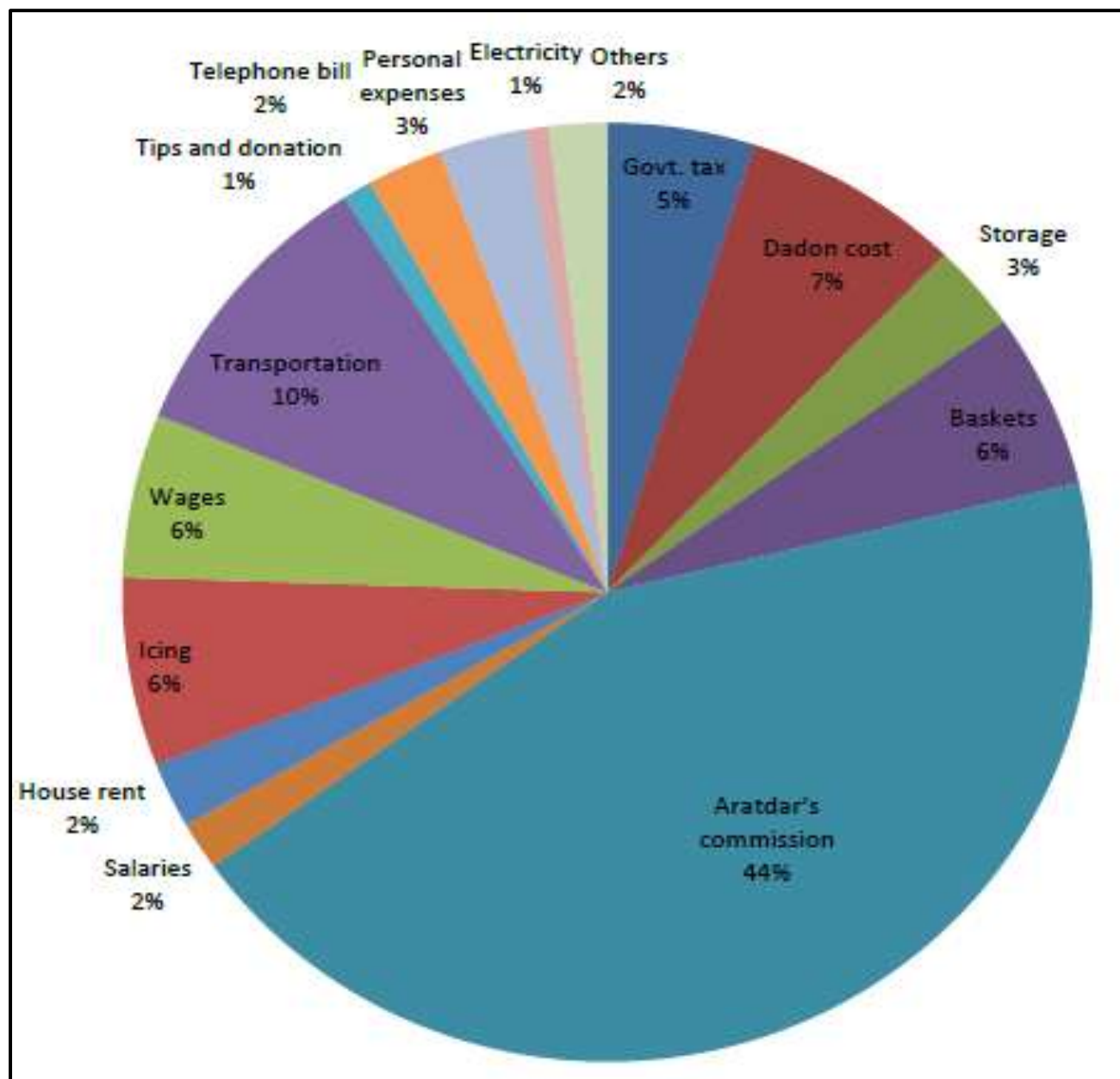
Table 3. Total Marketing Cost of Different Intermediaries Involved in Hilsha Marketing (Per Maund)							
Cost Items	Fishermnn	Aratdar	Bepari	Faria	Retailer	Total Cost	Percentages of Cost
Govt. Tax		205	-	-	-	205	4.92
Dadon Cost	160	145	-	-	-	305	7.33
Storage	60	15	-		50	125	3.00
Baskets	40	-	110	60	40	250	6.00
Aratdar's Commission	520	-	680	625	-	1825	43.83
Salaries		40	30	-		70	1.68
House Rent		33.5	30		30.5	94	2.26
Icing	40	-	80	60	90	270	6.48
Wages		150	45	10	30	235	5.64
Transportation		-	180	120	105	405	9.73
Tips And Donation	12.5	13.5	10.5	4.5	-	41	0.98
Telephone Bill	20	35.5	13	6.5	30	105	2.52
Personal Expenses	20	45	12	12.5	30.5	120	2.88
Electricity		10	-		23.5	33.5	0.80
Others	20	10	20	10	20	80	1.92
Total	892.5	702.5	1210.5	908.5	449.5	4163.5	100.00

Source: Author survey, 2016

In hilsha marketing system, the highest value added cost per maund of fish sold is incurred by bepari (Taka 1210.5) followed by local faria (Taka 908.5),fisherman(Taka892.5) aratdar (Taka 702.5) and retailer (Taka 449.5). Aratdar's major cost component are government tax for using landing station (Taka 205) because, in hilsha marketing system, fish landing station is maintained by the Bangladesh Fisheries Development Corporation (BFDC) and fishes transacted in the landing station,Dadon Cost(Taka 145) and Wages (Taka150). Aratdari commission is the highest cost item for fisherman, Bepari, and local faria. Transportation cost is the highest component for bepari (Taka 180). Aratdar's

commission is the highest cost of hilsha fish marketing (Tk. 680) for Bepari in Bangladesh. Fishermen incur dadon cost of marketing (Tk 160) .Icing cost is higher for retailer(Taka 90).

Pie Chart 1: Showing Various Marketing Cost



Marketing Margin

According to Kohls and Uhl (2005), marketing margin in a sense is the price of all utility adding activities and functions that are performed by the intermediaries. A marketing margin is the percentage of the final weighted average selling price taken by each stage of the marketing chain. The margin must cover the costs involved in transferring produce from one stage to the next and provide a reasonable return to those doing the marketing activities. (Crawford, 1997). It is also termed as price spread as it represents the difference between the buying and selling price. Total marketing margin is the difference between the price received by the fish Farmers and the price paid by the final consumers. Marketing margins of fish are calculated separately for different intermediaries. Gross marketing margin of each type of intermediaries is calculated by deducting the purchase price of fish from their sale prices while net margin or profit component is calculated by deducting the marketing cost from gross marketing margins.

Table 4: Average Net Marketing Margin of Different Intermediaries for Hilsha Fish Marketing (Tk/Maund)

Intermediaries	Purchase Price	Sale Price	Gross Marketing Margin	Marketing Cost In	Net Marketing Margin
Fishermen	0	10000	10000	892.5	9107.5
Aratdar	-	-	1120	702.5	417.5
Bepari	13500	16300	2800	1210.5	1589.5
Local Faria	12200	14900	2700	908.5	1791.5
Retailer	18300	21500	3200	449.5	2750.5

Source: Author survey, 2016.

Note: Aratdar Gross margin = Average received Aratdar's commission. Gross margin = Sale price – purchase price. Net margin = gross margin – marketing costs

Average net marketing margins of all intermediaries for hilsha are shown in Table 4. Amongst all intermediaries, profit of retailers is the highest (Taka 2750.5) followed by local faria (Taka 1791.5), bepari (Taka 1589.5) and aratder (Taka 417.5) per per maund of fish. Profit of intermediaries varies due to variation in their costs, purchase price, sales price and market condition

Recommendation

- i) The proper infrastructure and necessary social capital are available for effective participation of all the market intermediaries as well as fishermen need to be free from the cycle of money lenders of the hilsha fish marketing.
- ii) Government should also play active role in providing physical facilities like refrigerated storage, refrigerated vans, good market places with related facilities like water, ice, electricity, drainage facilities and sitting arrangements etc
- iii) Market regulations needs to be strictly followed to avoid malpractices
- iv) Monitoring to ensure fish quality needs to be strengthened

Conclusion

Hilsha Fish marketing system in Bangladesh has historically been developed by the private sector. The government provides support in the form of roads and infrastructures, establishment of fish landing point & shed for dealing fish, laboratory for research, but does not play active role in properly regulating market behavior and market performance. Generally price is determined by open bargaining between the sellers and buyers.

Marketing of fresh fish in Bangladesh is characterized by involvement of many marketing intermediaries. Though demand for fish is hilsha high in Bangladesh, markets are centralized in some areas and fishermen have limited ability to reach better alternative markets. Involvement of some intermediaries seems to be worthless whose presence just increases a cost to the consumer and a loss to the fishermen.

The development of supermarket has changed fish marketing pattern in Bangladesh. Now super markets are not only limited in the capital city, its branch is being expanded in many other regions of Bangladesh. The fish available in the super markets are better quality in terms of freshness, chemical-free. Proper icing and refrigerated boxes are maintained for fish being sold. Supermarkets collect fish from fishermen (having previous contract between fishermen and supermarket) at fish landing point and directly carry to super market. This arrangement has shortened marketing channel and fishermen are getting better price. Since supermarkets target upper class customer and enjoy higher share in consumer price.

It is also the responsibility of the government to see that consignment can reach the destination without payment unnecessary tolls and subscriptions. The development of good road and transport networks can reduce superfluous involvement of middlemen, which could be beneficial for both the fishermen and consumers. Assembling points with refrigerated storage facilities may be ensured so that the perishability of fish is reduced, which would enable the assembling points to make bulk sell/transfer to the next destination. This could reduce post harvest loss and provide better price for the fishermen.

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