



## Present status of dried fish markets in Sylhet of Bangladesh

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### Abstract

This study was aimed to assess the present status of retail market of dried fishery products in Sadar Upazila, Sylhet, Bangladesh during the period of January to May, 2015. A survey questionnaire was developed, pre-tested and finally used for the collection of data from 21 fish retailers from 5 different markets. It was observed that the dried fish distribution chain from producers to consumers run through a number of intermediaries: wholesalers, *paikers*, local vendors and retailers. The number of retailer in the markets varied between 2 to 12. A total of 22 freshwater sun dried fish products were found in the different markets of which 17 were small in size and 5 were big sized that represented 77% and 23% of market share, respectively. The price variation of the selected fish products depends on markets, species, size, quality and availability of the dried fish. The price of small dried fish species varied from BDT 300-800 per kg. The price of Punti, Tengra, Taki and Guchi baim ranged between BDT 300-400, BDT 450-500, BDT 500-600 and BDT 700-800 per kg, respectively. It was found that the retailers usually sell their products within 5-7 days after collection from the *aratdars* and they do not use any preservatives or insecticides within this period. It was also found that a retailer usually sell up to 10 kg of dried fish products per day in a larger market whereas in a smaller market it was about 4 kg per day. Lack of capital, higher transport cost, inadequate storage facilities and unhygienic market place were the major constraints as claimed by the retailers. The constraints identified in this study could be solved by providing participatory training for the producers to produce good quality products, providing loan facilities to poor retailers, ensuring proper marketing facilities and introducing modern packaging techniques to increase the shelf life of dried fish products.

**Key words:** Fish drying, fish processing area, fish marketing, retail fish market

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### Introduction

In Bangladesh, the fishing activities are strengthened during monsoon period and huge quantities of fishes are usually harvested than those of the other seasons. The greater Sylhet region including Moulovibazar, Sunamganj and Habiganj is blessed with vast water bodies and enriched with *haor* fisheries. These areas comprise altogether 411 *haors* with an area of about 8,000 square km including Netrokona and Kishorganj districts covering about 25% of the total *haors* of the country. As a result, in every year huge amount of both large size and small indigenous fish

species such as Boal, Shol, Gozar, Ayr, Rui, Catla, Mrigal, Punti, Mola, Taki, Chanda, Kholisha, Kaski, Kakila, Tengra, Chela, Guchi baim, Dhela, Meni, Chapila, Darkina, Bele, Batasi etc. are caught from those *haors*. Much of them remain unsold because of shortage of buying customers, as a result huge amount of post-harvest loss occurs. Moreover, bulk catches are destroyed at that time due to unavailability of processing and preservation facilities. Therefore, the local people and some entrepreneurs come forward to use these fish for

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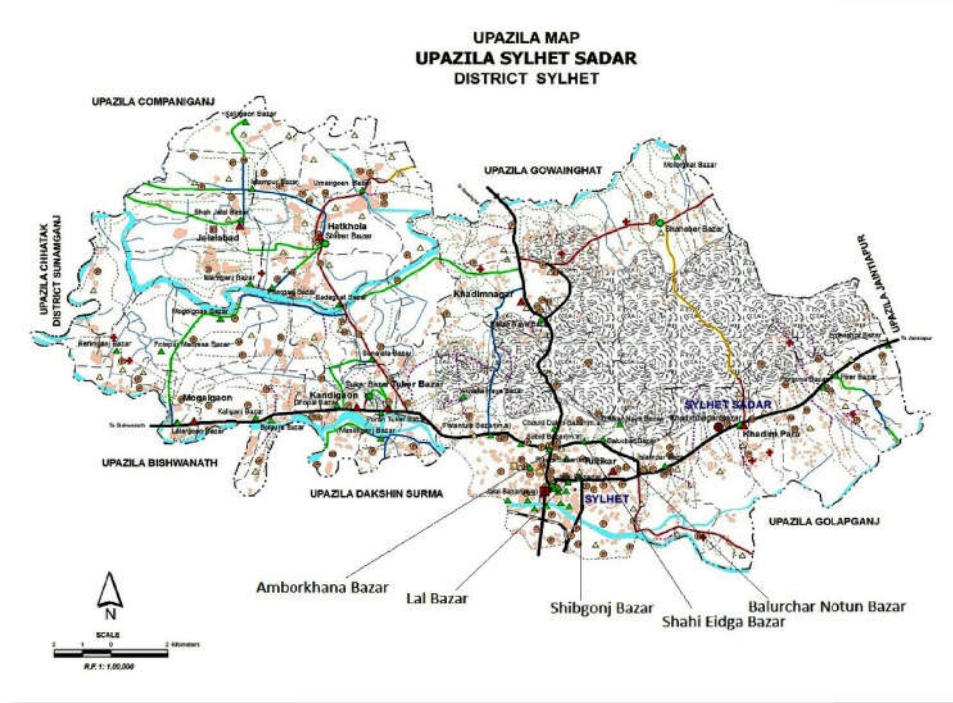
drying purpose considering the demand in the local markets which made the Sylhet region as an important place for fish drying. It is estimated that about 20% of the local artisanal fish catch are sun dried and consumed in the domestic market in Bangladesh (Mazid and Kamal, 2005).

The processors usually dried the fish by traditional methods. There are about twelve, twenty and six fish drying points in the Toker Bazar, Mahtabpur and Amtoli villages in Sylhet district, respectively. It has been reported that only Mahtabpur village produced approximately 201,666.6 kg of dried fish in 2013, whereas the production of Toker Bazar and Amtoli villages were estimated about 73,766.64 and 9,166.68 kg, respectively (Marine, 2013). Sylhet region of Bangladesh plays a vital role in the national economy by producing a huge amount of dried fishes every year (Monir *et al.*, 2013). It has been reported that fish and fishery products are marketed through

many different channels and outlets in Bangladesh (Reza *et al.*, 2005). There is a long marketing chain observed for fresh and processed fish all over the country that ultimately increases the price of the fish products (Ahmed *et al.*, 1993; Mazid, 1994). As a result the consumers buy the products at a higher price. Although traditional drying is often rudimentary and good hygiene is rarely practiced and also retailers face the different problems in retail markets (Azam, 2002). Therefore, this study was aimed to evaluate the present status of dried fish markets and marketing conditions in Sylhet sadar and to identify the necessary steps to improve the retail markets in this region.

## Materials and Methods

The study was conducted in five retail markets in Sadar Upazila, Sylhet in Bangladesh during the period of January to May, 2015 (Figure 1).



**Figure 1.** Map of Upazila Sylhet Sadar showing five market places i.e. Balurchar Notun Bazar (BNB), Shibgonj Bazar (SB), Lal Bazar (LB), Shahi Edga Bazar (SEB) and Amborkhana Bazar (AB)

Balurchar Notun Bazar (BNB), Shibgonj Bazar (SB), Lal Bazar (LB), Shahi Eidga Bazar (SEB) and Amborkhana Bazar (AB) were selected in this study. A total of 21 dried fish retailers were interviewed for

obtaining pertinent data. A questionnaire was developed, pretested and finally used for the collection of data. The data were collected using questionnaire interview, focus group discussion

(FGD) with intermediaries and crosscheck interviews with key informants. The specific areas covered in the questionnaire were total number of retailers, fish species, size and availability in the markets, prices, daily selling and constraints in the existing markets.

The collected data were summarized carefully before actual tabulation. 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. Data were analyzed using MS Excel 2010.

## Results and Discussion

### Dried fish distribution chain in the retail markets

Fishes were dried in the drying yards in some selected areas of Sylhet Sadar Upazila. Most of these drying yards were situated mainly in Mahtabpur, Toker Bazar, and Amtoli areas, which were far from the surveyed markets. It was found that these products are generally distributed through a long chain from producers to consumers consisting of

intermediaries: wholesalers, *paikers*, local vendor and retailers. The fish processors usually sell their products to the *aratdars* of Shorarpar dried fish markets. Our results are more or less similar to that reported by Marine (2013). No processor was found to be engaged in retailing activities of the products, however, in some areas the local vendor and retailers directly collected the dried fish products from the processor for selling it to the consumers (Figure 2).

Transportation and storage facilities of sun dried fish products are poor in most part of the country. Therefore, the producers usually prefer to sell their products in the drying yards immediately after drying. Due to lack of proper market infrastructure for both wholesale and retail markets in Bangladesh is the reason why sometimes middlemen got opportunities to buy the products from the producers and stored them for a particular time (e.g. few days to months) before selling it to the *aratdars* and retailers.

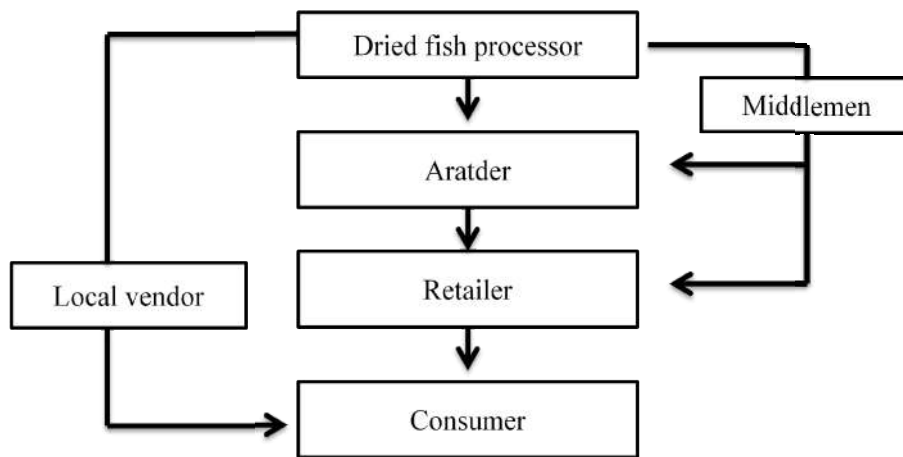


Figure 2. Dried fish distribution chain from processor to consumer in Sadar Upazila, Sylhet

It has been reported that the involvement of large number of middlemen and commission agents in the marketing channel sometimes reduce the benefit of the producers of dried fish. Such a channel was observed while marketing the marine fish products from Kutubdia Island to Chittagong city (Amin et al., 2012). It has also been shown that the marketing chains passed through a number of intermediaries

including *beparies*, *aratdars*, wholesalers, local vendors and retailers similar to those of the present study.

### Availability of dried fish species in the retail markets

Availability of traditional sun dried fish products in the five retail markets during the survey period is

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shown in Table 1. It was found that the availability of dried fish species was not similar in the five markets and the species varied between 12 and 22. It was observed that Punti, Taki, Guchi baim, Tengra, Darkina, Mola, Kachki, Kholisha and Chingri were very common species in these markets and those species were found throughout the year. Moreover, availability of dried fishes was comparatively higher during summer than winter. The similar features in the dried fish markets also demonstrated in other region of the country. In another study, twenty five dried fish species found in the several markets of Rajshahi and Thakurgoan region (Flowra *et al.*

2010). Samad *et al.* (2009) also reported that twenty six fish species were used for drying purpose in Chalan beel area. Marine (2013) found that a total of 23 species commonly dried in the Sylhet region. It is likely that these species ultimately come to the retail markets and ensure a steady supply of the dried fish throughout the year. In this study, differences in availability of dried fish species from market to market might be due to the irregular supply of the products or the retailers did not purchase a particular dried fish products because of their higher price as well as less market demand to the consumers.

**Table 1.** Availability of sun dried fish species in the retail markets of Sylhet Sadar Upazila

Local name	Scientific name	Name of markets				
		BNB	SB	LB	AB	SEB
Jat Punti	<i>Puntius sophore</i>	√	√	√	√	√
Chanda	<i>Chanda nama</i>	√	√	√	-	-
Tengra	<i>Mystus vittatus</i>	√	√	√	√	√
Kholisha	<i>Colisa fasciatus</i>	√	√	√	√	√
Chingri	<i>Macrobrachium sp.</i>	√	√	√	√	√
Chapila	<i>Gudusia chapra</i>	√	-	√	√	-
Mola	<i>Amblypharyngodon mola</i>	√	√	√	√	√
Dhela	<i>Rohtee cotio</i>	-	-	√	√	-
Meni	<i>Nandus nandus</i>	-	-	√	-	√
Guchi baim	<i>Mastacembelus pancalus</i>	√	√	√	√	√
Darkina	<i>Esomus danricus</i>	√	√	√	√	√
Bele	<i>Glossogobius giuris</i>	-	√	√	√	√
Shol	<i>Channa striatus</i>	-	√	√	√	√
Boal	<i>Wallago attu</i>	√	-	√	-	-
Taki	<i>Channa punctatus</i>	√	√	√	√	√
Gojar	<i>Channa marulius</i>	-	√	√	-	√
Baim	<i>Mastacembelus armatus</i>	-	-	√	-	√
kachki	<i>Corica soborna</i>	√	√	√	√	√
Batasi	<i>Neotropius atherinoides</i>	-	-	√	-	-
Ayre	<i>Sperata aor</i>	-	-	√	-	-
Pabda	<i>Ompok pabda</i>	-	-	√	-	-
kakila	<i>Xenentodon cancila</i>	-	-	√	-	-

‘√’= Yes, ‘-’= No (Based on Survey)

### Prices of sun dried fishes in the retail markets

The prices of traditional sun dried fish products mostly depend on the supply and demand of products in the retail markets. It was found that the price of a particular fish species almost similar in all the

markets although it may vary depending on the size and quality of the products. The prices of sun dried species in the five retail markets are shown in Table 2. In this study, the prices of several small size sun dried fish species such as Taki, Punti, Guchi baim, Darkina, Kachki, Mola, Dhela, Kholisha, Chapila,

Bele etc. were found to vary from BDT 300 to 800 per kg. On the other hand, the price of larger size sun dried fish species such as Boal, Gojar, Ayre, Shol, Baim etc. ranged from BDT 850 to 1400 per kg. The highest market price of the sun dried fish species was observed in LB and AB and comparatively lower price were mainly in BNB, SEB and SB. This price variation might depend on the location of the markets. The price of almost all the sun dried fish products varied between BDT 50 and 100 per kg whereas higher price was observed in the urban areas than those of the rural markets. The price of the

products was also influenced by the seasonal variation and availability of the products. It has been reported that the price of sun dried fish is higher in summer season while comparatively lower in winter season (Khan, 1998). It has also been notified that the products of small indigenous fish such as Guchi baim, Puntti, Taki, Kholisha and Tengra are comparatively cheaper and highly preferred by low income people whereas Pabda, Boal, Gojar, Baim, Shol and Ayre were found as very costly item which were mainly preferred by the medium to high income people.

**Table 2.** Price of sun dried fishes in the retail markets of Sylhet Sadar Upazila

Local name	Scientific name	Price (BDT/Kg)
Jat Puntti	<i>Puntius sophore</i>	300-400
Chanda	<i>Chanda nama</i>	200-300
Tengra	<i>Mystus vittatus</i>	450-500
Kholisha	<i>Colisa fasciatus</i>	600-700
Chingri	<i>Macrobrachium sp.</i>	750-850
Chapila	<i>Gudusia chapra</i>	600-700
Mola	<i>Amblypharyngodon mola</i>	400-500
Dhela	<i>Rohtee cotio</i>	400-500
Meni	<i>Nandus nandus</i>	550-650
Guchi baim	<i>Mastacembelus pancalus</i>	700-800
Darkina	<i>Esomus danricus</i>	300-400
Bele	<i>Glossogobius giuris</i>	400-500
Shol	<i>Channa striatus</i>	850-950
Boal	<i>Wallago attu</i>	1000-1100
Taki	<i>Channa punctatus</i>	500-600
Gojar	<i>Channa marulius</i>	950-1050
Baim	<i>Mastacembelus armatus</i>	1300-1400
kachki	<i>Corica soborna</i>	700-800
Batasi	<i>Neotropius atherinoides</i>	650-700
Ayre	<i>Sperata aor</i>	1100-1300
Pabda	<i>Ompok pabda</i>	1200-1400
kakila	<i>Xenentodon cancila</i>	600-700

**Market Shares of Sun Dried Fish Products Based on their Size**

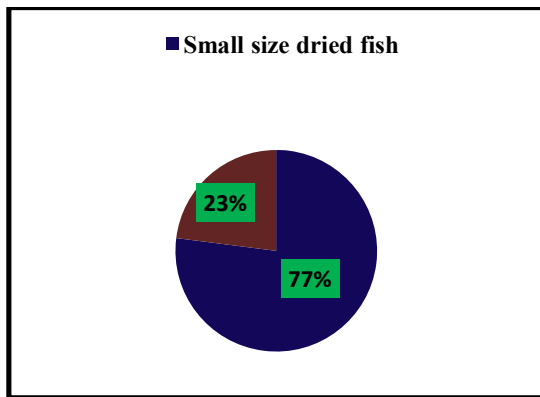
During the study period a total 22 sun dried fish species were available in the retail markets of which 17 species such as Puntti, Chanda, Tengra, Kholisha, Chingri, Chapila, Mola, Dhela, Meni, Guchi baim, Darkina, Bele, Taki, Kachki, Batasi, Pabda and

Kakila were recorded as smaller size, whereas 5 species such as Ayre, Shol, Baim, Boal and Gojar

were found to be larger size species. It was observed that the smaller size dried fish products composed of 77% of the total freshwater products (Figure 3). The acceptance of freshwater dried fish products found to be higher among the peoples lived in the rural areas than those of the coastal community, since the people

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of coastal community are likely to be more habituated with the marine dried fish products (Reza *et al.*, 2005).



**Figure 3.** Market shares of sun dried fish products based on their size in the retail markets of Sadar Upazila, Sylhet.

### Average daily selling of sun dried fish products in the retail markets

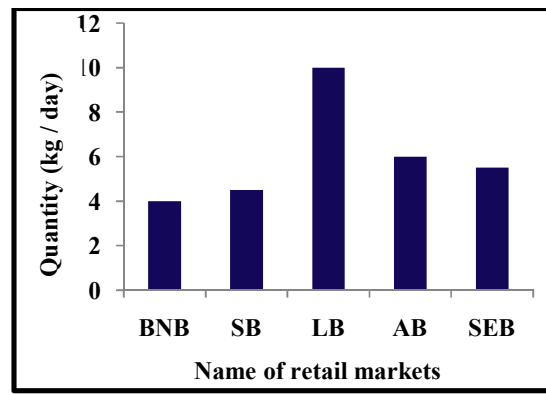
Figure 4 shows average daily selling of the traditional sun dried fish products. It was found that the selling of the products varied from market to market and ranged between 4-10 kg per day. The highest sell was found in LB and the lowest sell was observed in BNB. Whereas an average sells of the SB, AB and SEB were found 4.5 kg, 6.0 kg and 5.5 kg per day, respectively. The retailers reported that they collected 28-100 kg (approx.) of dried fish products from the *aradars* and retail them within 5-7 days. The turnover of the products in the different markets depends on several factors such as location of the market, price variation, and availability of the products. Khan (1995) reported that the average selling of dried fish in local retail markets of Mymensingh Sadar was 5-15 kg per day, which mainly depends on the availability of dried fish, consumer demand and market price. Reza *et al.* (2005) reported that turnover of the dried fish products in retailer levels vary from 5-7 days depending on the consumers demand.

### Constraints of the Dried Fish Retail Markets

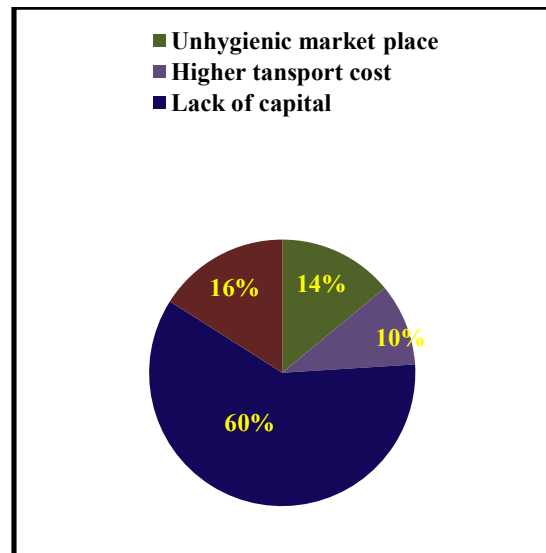
A number of constraints in the sun dried fish marketing system were reported by many retailers

### Conclusion and recommendations

during the study period. The lack of capital was identified as a major constraint by the highest (60%) proportion of respondents, whereas 10% respondents highlighted the higher transportation cost of the products as a single most constraint of sun dried fish marketing system (Figure 5). In addition, about 16% respondents emphasized the lack of storage facilities and 14% respondents notified unhygienic market place as a constraint in the local markets. Similar problems were also reported by Flowra *et al.* (2010). They identified some constraints such as poor transportation system, lack of storage facilities, improper weighing system, excess market tolls, lack of marketing facilities as well as political instability.



**Figure 4.** Average daily selling (kg/day) of dried fish products in the selected retail markets



**Figure 5.** Key constraints of the dried fish retail markets

It has been reported that sometimes the retailers faced various internal problems during selling of the products in the retail markets such as interfere by the muscle men and the local leaders (Amin *et al.*, 2012). Dried fish marketing plays an important role in the economy of Bangladesh. It is assumed that the fish drying in the Sylhet region is mainly traditional; therefore, resulting in the poor quality dried products in the peripheral markets. Training can be adopted to increase the awareness among dried fish producers on proper handling procedures and quality standards to ensure reduction in losses and improving the quality of products. Improvements for good quality products and higher storage life can be achieved by maintaining proper sanitation and hygienic condition in all stages of fish drying in the processing area. Easy to operate low-cost solar dryer can be build with cheap and locally available materials. Besides, marketing infrastructure for both wholesale and retail market of dried fish should be improved. The less involvement of middlemen and commission agents in marketing will also increase benefit to the fish producers. It is therefore necessary to provide institutional and organizational support, extension services and more research along with knowledge of dried fish marketing. Government should take necessary initiatives such as ensuring market facilities, quick transportation system, providing loan to the dried fish processors and sellers, and policies related to reducing the number of intermediaries for the further development of this sector.

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