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Research Article

FISH MARKETS OF SURAT CITY: INFRASTRUCTURE AND CONSTRAINTS

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ABSTRACT

The study was highlighting on wholesale and retail fish markets of Surat city to evaluate the current structure and hygienic conditions of market. In South Gujarat, particularly Surat has lots of potential in fisheries. Fish production of South Gujarat was recorded 1.97 lakh ton during the year 2015 while 0.18 lakh ton was recorded only from Surat in the same year. Surat contributing 9% of total South Gujarat's fish production but compared to fish production wholesale and retail fish markets were found unorganized and unfettered. Basic facilities of wholesale and retail fish markets were not adequate regarding to platform, proper flooring, drainage system, lavatory, cold storage and preservation facilities. The study has publicized the less developed infrastructure and poor hygienic conditions of fish markets. The study also recognized the prominent role of middlemen in the market area. Different constraints of fish markets were identified and remedial measures have been given.

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INTRODUCTION

Fisheries sector has been recognized as a powerful income generator as it stimulates growth of a number of subsidiary industries and is a source of cheap and nutritious food (Chourey *et al*, 2014). Fish production plays an important role in socio-economic status of fisherfolks (NFPDB, 2011). The growth of fish production and development of fishery sector is highly dependent on an efficient fish marketing system. The demand for the fish and processed fish food is increasing very rapidly in the world having high nutritive value. Fish being an important commodity among aquatic organisms, ensures food and nutritional security. It also adds to the foreign exchange earning of the country by selling fish and fish products in international markets (Kumar, 2004). According to Alam *et al* (2010) fish marketing has a momentous role in fishery trade. Fish markets and the marketing system throughout the country undergo from several problems and constraints (Roy and Sen, 2016). There is practically no definite structure of fish markets in the country (Pandey and Chaturvedi, 1984). South Gujarat has 300 km coastline constituting 19% of Gujarat's coastline. Fish production of South Gujarat was recorded 1.97 lakh ton during the year 2015 while 0.18 lakh ton was recorded only from Surat in the same year (GFS, 2015). Surat contributes 9% of total South Gujarat's fish production. It has lots of potential in fisheries but compared to achievements in fish production, fish marketing system is very poor and highly inefficient

(Kumar *et al* 2008). Facilities and infrastructure in all types of fish markets are far from satisfactory level. (Gadhia and Talsania, 2013). Large number of intermediaries are involved before fish reach the hands of consumer (Sathiadhas and Narayanakumar, 1994).

Therefore aim of the present study was to find out the status of wholesale and retail fish markets of Surat city. Attempts were also made to know the hygienic conditions of wholesale and retail fish markets of study area.

MATERIALS AND METHODS

Personal visits were made to wholesale fish market located at Nanpura while retail fish markets at Nanpura, Golwad, Navsaribajar, Saiyadpura and Dilligate area of Surat city. Respondents engaged only in fish marketing from Surat city were chosen applying convenience sampling technique from the study area (Kothari, 2004). Information were also gathered from wholesaler and retailer to know the present status of fish markets regarding fish collection, distribution, preservation facilities, price fixation and hygienic condition of fishes.

RESULT

One wholesale and five retail fish markets of Surat city were studied to know the current status and hygienic condition of markets.

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Wholesale Fish Market

Nanpura the only wholesale fish market studied was centrally located in Surat city. It was constructed in 1950 by Surat municipal corporation (SMC). Total 68 traders were registered and allotted fixed place by SMC for fish trading from 6:00 a.m. to 10:00 a.m. The market was dominated by women wholesalers.

Trucks loads of fishes were brought to market early in the morning without cooling facility. Fishes sold in the wholesale market were brought from villages of Choryasi taluka (Bhimpore, Dumas, Hazira, Magdalla, Kavas and Ichchhapore), outside Surat city (Porbandar, Veraval, Jamnagar, Junagadh, Jakhao and Golai) and other states of Maharashtra, Andhra Pradesh and Kerala by road and railways. Approximately 40 ton fishes were marketed daily by wholesalers of Nanpura fish market. Live fishes were brought to the market in drums while dead fishes were packed in thermocol boxes. Fishes were sorted according to the species and size and sold in the market.

Fish distribution was at local and district level. Traders of Nanpura wholesale fish market sold their fishes to retailers of various local fish markets, fish markets of Valsad and Navsari, retail outlets, vendors, also to hotels and restaurants of Surat district.

Variety of freshwater fishes such as *Catla sp.* (catla), *Labeo sp.* (rohu), *Cirrhinus sp.* (mrigal), *Pangasius sp.* (pangas), *Oxygaster sp.* (chaliya), *Mystus sp.* (singala) and *Macrobrachium sp.* (sondhiya) were found to be sold in the market. Among marine water fishes viz., *Dasyatis sp.* (patara), *Atropus sp.* (bangda), *Stromateus sp.* (paplet), *Harpodon sp.* (bumla), *Parastromateus sp.* (halwa), *Polynemus sp.* (rawas, cheriyu, dara), *Muraenesox sp.* (vam), *Protonibea sp.* (ghol), *Scylla sp.* (karachla) and *Penaus sp.* (zinga) were commonly sold in Nanpura wholesale fish market. From these fishes, freshwater fishes *Catla sp.*, *Labeo sp.*, *Cirrhinus sp.* and marine water *Stromateus sp.*, *Parastromateus sp.* and *Muraenesox sp.* were brought from other states. Only *Clarius sp.* (magur) was found to be sold in live condition and fetched better price.

Hygienic conditions of wholesale market were very poor. Most of the fish merchants did not use ice or any chilling facilities while very few of them used meager amount of crushed ice during selling the fishes. Even there was no proper building for marketing. Only small platform was constructed in the market but wholesalers did not use for fish selling. There was no lavatory and washing facilities. The selling of fish was on the road without facility of electricity, water, drainage, storage room and proper flooring.

Price was fixed by wholesalers of Nanpura fish market. Fishes brought from Andhra Pradesh and other states fetched higher price compared to the local one due to quality and demand. Wholesalers earned commission from traders who sent their fishes from different parts of India to Nanpura wholesale fish market. They also got profit by selling fishes to retailers.

State Fisheries Department issued the license to all registered traders who paid Rs.1000/annum to the license issuing authority. The Sanitary officer of Market Department, Surat municipal corporation was periodically found to check the fish

quality and collect the revenue from the traders at the rate of Rs.5/10 kg weight of fishes. SMC provided a container for collection of spoilt fishes and waste of fish selling. Moreover, the market premise was washed everyday by the SMC mobile unit.

The National Fisheries Development Board (NFDB), Hyderabad had allotted a grant of Rs. 1.39 crore to Surat Municipal Corporation in the year 2011 for the construction of a modern fish market at Nanpura area of Surat city. There was a need to broaden the roads near the market to renovate the Nanpura fish market which would have affected the houses of local people. Residents of the area and wholesalers protested, SMC planned to shift the market from Nanpura to other place of Surat. Till date no modern fish market is constructed in the city.

Retail Fish Markets

Total five retail markets were found to be situated at Nanpura, Golwad, Navsaribajar, Saiyadpura and Dilligate of Surat city. From these, Navsaribajar and Saiyadpura fish markets were constructed in 1950 by SMC while other markets did not have any constructed area. Fishes were sold in retail markets from 8:00 a.m. to 11:00 a.m. in the morning and 5:00 p.m. to 8:00 p.m. in the evening.

There was no record of registered retailers of Surat city in SMC or Fisheries Department. Men and women both were involved in marketing but retail fish markets were dominated by women fish sellers.

Fishes were brought to retail markets from fisherfolks of Choryasi taluka (Bhimpore and Dumas) and Nanpura wholesale fish market of Surat city. Fishes were transported by vehicles without any cooling facility. Approximately daily 25 ton fishes were marketed by retailers. Live fishes were carried to the market in drums while dead fishes were packed in thermocol box, bamboo baskets and aluminum vessels. Fish distribution was carried out at local and state level. Retailers of Surat city sold their fishes to consumers and vendors. Prominent role of middlemen was observed in study area. Retailers of Bhimpore and Dumas sold their fishes to middlemen who supplied the fishes to retailers of study area and got low price.

Variety of freshwater fishes like *Catla sp.* (catla), *Labeo sp.* (rohu), *Cirrhinus sp.* (mrigal), *Pangasius sp.* (pangas), *Oxygaster sp.* (chaliya), *Mystus sp.* (singala), *Wallago sp.* (padhin), *Heteropneustes sp.* (singhi) and *Macrobrachium sp.* (sondhiya) were found to be sold in the market. Estuarine fishes viz., *Mugil sp.* (boyee) and *Hilsa sp.* (palwa) were sold. Among marine water fishes viz., *Dasyatis sp.* (patara), *Stromateus sp.* (paplet), *Harpodon sp.* (bumla), *Parastromateus sp.* (halwa), *Muraenesox sp.* (vam), *Protonibea sp.* (ghol), *Polynemus sp.* (rawas, cheriyu, dara), *Scoliodon sp.* (magru), *Tenualosa sp.* (modar), *Sardinella sp.* (kati), *Scylla sp.* (karachla) and *Penaus sp.* (zinga) were sold in retail markets of study area. Freshwater fish *Clarius sp.* (magur) and brackish water fish *Boleophthalmus sp.* (levta) were sold in live condition while *Harpodon sp.* (bumla) was sold in dried form. Infrastructure and hygienic conditions of retail fish markets were very poor. Proper building and flooring, facility of electricity, water drainage and storage room were not seen in any of the market. There was no lavatory and washing

facilities. Platform was constructed only in Navsaribajar and Saiyadpura fish markets. Retailers sold their fishes on the roadside without maintaining the quality of fish. There was no Government organized shop or outlet found from the study area. Government did not play any role in fixation of price. It was fixed by the retailers and varied from species, size, season and quality of fish.

SMC authority provided space to the retailers in all fish markets of Surat city. The Sanitary officer of Market Department, SMC was periodically found to check the fish quality and collect the revenue from the retailers at the rate of Rs.5/10kg weight of fishes. SMC also provided containers near markets of Surat city for collection of spoilt fishes and waste of fish.

DISCUSSION

An organized fish marketing system provides remunerative price to the producer and interest of the consumer is also protected. Floor of markets in Bobigny (France) and Bielefeld (Germany) were covered with tiles. Automatic doors were used in the markets. Restrooms were located away from the seafood Departments with the hand washing facilities and lavatory. Workers had to wear plastic boots, coats, caps and gloves in the fish market. Chemical solutions were available for the disinfection of boots, coats, caps and gloves. Routine health checkups of workers were carried out by the administration in all markets (Mol and Saglam, 2004). Findings of present study showed that fish sellers of study area were facing many problems like selling of fish was on the road without facility of electricity, water, drainage, preservation, storage room and proper flooring. There was no lavatory and washing facilities. Hygienic conditions were very poor. A similar study conducted in Liverpool fish market in Lagos State, Nigeria by Ayo-Olalusi *et al* (2010) which highlighted the major problems faced by fish marketers. These findings not only discourage people to purchase fish but also may cause health hazards.

Upadhyay (2008) studied two wholesale fish markets in the state viz., Battala in West Tripura District and Udaipur in South Tripura District and two retail markets viz., Lake Chowmuhan and Lembucerra fish markets. He observed that the fish markets were poorly endowed with basic infrastructure and services. The markets under study were lacking parking space, availability of drinking water and shelter for the fish farmers which are considered to be essential basic infrastructure of any fish market. The same has been supported by Flowera *et al* (2012). According to Deshmukh and Jawale (2014) fish marketing faced many problem such as highly perishable nature of fish, too many species, difficulties in supply and demand for transportation of fish, supply of electricity, inadequate supply of cold storage facilities, display of stall and in fish markets. Similar results were found in present study showing poor infrastructure and less developed wholesale and retail markets.

Major marketing constraints faced by the fishers as identified by Das *et al* (2013) in their study on two fish markets in the state (Battala wholesale fish market and Lake Chowmuhan retail fish market) had higher number of middlemen, high marketing cost, fluctuations in prices, poor storage facilities, lacking of market information on price, poor infrastructural facilities and absence of cooperative marketing. Similar results

were observed in current study shows due to intermediary's role, producers and consumers suffered for better revenue.

Ayo-Olalusi *et al* (2010) reported that the Liverpool fish market in Lagos state of Nigeria was mostly dominated by women and only few men were found to be involved in the market. Lawel and Idega (2004) found that 90% of women participated in fish marketing in Benue state. Similar observations were made in the current study. Wholesale and retail fish markets of Surat city were dominated by women indicated active participation of women in fishing sector.

CONCLUSION

Present study revealed that wholesale and retail markets of study area have remained unfocused since beginning. Markets were basically not structured and lacking basic facilities like building, flooring, drainage, electricity, preservation and storage room. Such facilities are essential for the health and wellbeing of fish sellers and consumers. It was also observed that hygienic condition of fishes was very poor in both fish markets of study area. Moreover the involvement of a number of middlemen in the marketing chain adversely affects the benefit of both fishermen and consumers. The study suggested for development of infrastructure and establishment of cold storage and proper preservation facilities in study area are required to maintain the quality of fishes and hygienic conditions of the market. The study also recommended to develop cooperative society and to curtail the role of middlemen to get better price for the fishes.

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