CHAPTER - VI

MANAGEMENT OF FISH MARKETING

In earlier days the term marketing of fish meant 'buying and selling of fish' at the landing centre. After the Second World War, the concept and functions of fish marketing have taken a new role in business activities. The fisheries have now become highly industrialised in all advanced fishing nations. The new marketing techniques have been adopted so as to sell more fish. The modern fish marketing system lays emphasis in meeting the existing demands for fish, besides tapping the potential demand in the important markets.

In many advanced countries the improved methods of fish marketing are being adopted with the advancement of fisheries development. A progressive fish marketing system will also provide remunerative price to the primary producer though the interest of the consumers is also protected. The fish marketing needs modernization in all the developing countries including India. In Singapore and Philippines, the fish marketing is completely in the hands of private merchants. In Sri Lanka, fish marketing is in the private hands though Government has
extended some support to co-operative enterprises. There is much exploitation of fish producers by fish merchants in Malasia, Indonesia and Philippines. The whispering auctions and cloak auctions are the usual features in Manila (Philippines). Similarly in Hong Kong, bidding is usually done by forming ring amongst buyers. In India, the bidders show some gestures with fingers for their consent for buying at Kanpur and Agra. In Bombay fish markets for the auction of certain species of fish under a vernacular word 'Kodi'. In Malabar area of Kerala State, 'Kalli', a local measure is used for the disposal of sandines and mackarels. In fish markets of Haryana, the fish is sold by 'Kachha maund' and 'Pucca maund' of fish. The marketing of any produce, mainly depends upon the availability, consumption and demand.

**AVAILABILITY, CONSUMPTION AND DEMAND OF FISH**

The demand and consumption of fish depends on the availability, as well as the fish eating population in India.

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4. Kalli means 508 maunds approximately.

5. Kachha maund means 44 kilograms while Pacca maund is of 40 kilograms.
As per Census of 1951, 82.7 per cent of the total population inhabited in rural areas and out of these 46.7 per cent were fish eating. Similarly out of 17.3 per cent inhabitants in urban areas, 43.5 per cent were fish eating. Percentage of fish eating population in rural area is more as compared to the urban area. The percentage of fish eating population increased with the increase of population in the country. As per Census of 1961, 1971 and 1981, the fish eating population in rural area has increased to 50.5, 53.6 and 57.1 per cent respectively. The fish eating population in urban area has also increased to 46.0, 48.7 and 51.8 per cent as per Census of 1961, 1971 and 1981 respectively. In both rural as well as urban areas the percentage of fish eating population has increased. Out of 6,840 lakh population in India, as per 1981 Census, 3,820 lakh were fish eater i.e. 55.8 per cent. The fish eater consumes 93 per cent fish by cooking households while only 7 per cent by other way. The fish is cooked at home by 50.5 per cent fish eating population.

The fish eating population in Haryana is 15 per cent which is less, as compared to neighbouring States like Punjab 19.15 per cent, Rajasthan 18.7 per cent, Uttar Pradesh 44.4 per cent and Delhi Union Territory 65.7 per cent. As per fish statistics, out of total fish production in the country, 69 per cent fish is consumed as domestic consumption (65.8 per cent in houses and 3.2 per cent outside houses), 14.8 per cent used by
feed manufactures, 2.2 per cent by other uses and 14.4 per cent is exported to other countries. The per capita fish consumption in Metropolitan cities is 24.8 grams per day while in urban and rural areas, it is 30 grams per day and 23 grams per day respectively. The average fish consumption in urban areas is more as compared to metropolitan and rural areas. The per capita consumption of fish varies from State to State and within each State from region to region. In general, fish constitutes an important item of food in the diet for the people living in the coastal regions and in the Eastern States of the country comprising, West Bengal, Orissa, Assam, parts of Bihar and Union Territories of North-Eastern India. In other parts of the country, fish is only a supplemental food. The per capita consumption of fish in India at present is 3.2 kilograms per year as compared to World 12.3 kilograms per year. In view of the importance of the fish as a food component being consumed by more than 60 per cent and looking at the facts, we can now calculate tentatively the consumption of fish in the

future. Following table gives data about the future consumption of fish as food component which has been shown in Table-1.

### Table - 1
Fish Consumption in India

<table>
<thead>
<tr>
<th>Year</th>
<th>Population (lakh)</th>
<th>Fish eating population (lakh)</th>
<th>Fish Production (Tonne)</th>
<th>Fish for human consumption (Tonne)</th>
<th>Per capita availability of fish (Kilogram/year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1961</td>
<td>4390</td>
<td>2180</td>
<td>961000</td>
<td>663000</td>
<td>3.05</td>
</tr>
<tr>
<td>1971</td>
<td>5480</td>
<td>3890</td>
<td>1851600</td>
<td>1277600</td>
<td>3.10</td>
</tr>
<tr>
<td>1981</td>
<td>6840</td>
<td>4220</td>
<td>2444000</td>
<td>1686000</td>
<td>3.20</td>
</tr>
<tr>
<td>1991*</td>
<td>8065</td>
<td>4758</td>
<td>3666000</td>
<td>2530000</td>
<td>5.31</td>
</tr>
<tr>
<td>2001*</td>
<td>9354</td>
<td>5893</td>
<td>5499000</td>
<td>3795000</td>
<td>6.44</td>
</tr>
</tbody>
</table>

* The projection made on the basis of present trend of growth rate.

The requirement of fish forms as one of the main component of animal protein in diet computed 11 kilograms per year per person. It is revealed from the above that the per capita availability of fish is 3.05 kilogram per year in 1961 which increased to 3.20 kilogram per year in 1981 and is projected to be 6.44 kilogram per year by 2001 which is only 41.5 per cent

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1. Information personally collected from the Ministry of Agriculture, Government of India, New Delhi during the course of study.

of the requirement. Keeping in view the average 5 per cent
growth rate of fish production the projected fish production
in 1991 and 2001 is 3666 and 5499 thousand tonne respectively.
The fish consumption in India has been shown in Figure-I.

In many developing countries traditional system of fish
marketing is adopted. The methods and practices in trade
dealings are based on some customs. These practices have
remained unchanged and unimproved over decades. The fish
marketing is normally done at the collection centres which are
mainly situated in the area of fish landing. The Indian
Institute of Management, Ahmedabad has studied the fish market­
ing practices in Uttar Pradesh, Bihar, Maharashtra, Andhra
Pradesh and Karnataka. The Institute recommended that all the
markets require modernization.¹

DEFINITION OF FISH MARKETS

Fish has peculiar feature of its own and gives a big
strain and stress on the method of its marketing. The fish
landing centres, particularly marine fish, are invariably
isolated from good markets, which mean supplies during peak
season in those areas without adequate demand. The improvement
in fish marketing and distribution can very well eliminate some

¹ Indian Institute of Management, Inland Fish Marketing in
CHAPTER VI

FIGURE I

FISH EATING POPULATION IN INDIA

--- RURAL

--- URBAN

PERCENTAGE

1951 1961 1971 1981
CENSUS OF YEARS
of the depressed products of mal-nutrition where people live on subsistence level, by supplying fish at reasonable prices. Fish may not be consistently demanded by few customers due to its peculiar small. It is an act of fishery technologists to prepare the odourless fish product for wider consumption. Thus the fish 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.

FISH MARKETS IN HARYANA

Haryana is a land-locked state having only 15 per cent population of fish eater. Hence, there is no well organised fish marketing system in the state. For promoting intra-state marketing, the Department of Fisheries, Haryana has imposed a condition while auctioning the fishing rights to the Fish contractors that every fish contractor shall establish a fish shop in the area of his jurisdiction for supplying fresh fish to the local people. In spite of efforts made by the Department, 85 per cent of the produce is despatched to the other fish markets like Saharanpur, Delhi and Howrah for sale. However, four fish markets were selected for the present studies. The pattern of marketing of fish in the State i.e. Ambala, Karnal, Panipat and Sonepat, keeping in view the resources and importance of the cities.
ANALYSIS OF CASE STUDY OF FISH MARKETING IN HARYANA

1. Structure of Fish Markets

(a) Ambala Fish Market: Ambala is one of the district headquarters of the State having total population 5,22,829 as per Census of 1981. The rivers, Tangri, Markanda, Yammuna, Ghaggar, Sarswati, Omla, Chutang, Rakshi are passing through this district. There are three main drains having a length of 193.30 kilometres which also form the good source of fisheries. In addition to this, Western Canal system as well as two reservoirs having 44 hectares also form the good source of fisheries. The fishing in this region is a seasonal. There are two wholesale and seven retail shops in Ambala Cantonment. Of course, one wholesale shop belongs to the government fish contractor. The fishermen community is practically negligible in the district whereas 884 persons are engaged in fishing trade in addition to 223 fish farmers are doing fish culture. Ambala district contributes 3.2 per cent to the total fish catch every year. On an average 70 per cent fish is contributed by the natural waters while rest by bunds, micro-water sheds and ponds. Ambala is a big city which is well connected by rail and road. The fish markets are very premitive type having no organised system of drainage, lighting, water supply, storage, sanitation etc. Average fish arrival in market is 300 tonnes per year. The fish from Gobindsagar, Ropar Headworks and Chandigarh is also received to this market
which contributes only 20 per cent to the total arrival. During winter season, marine fish like pumphrets and surmai also imported from maritime states such as Gujarat and Maharashtra. The marine fish contributes only 10 per cent of the total fish sale. It is also observed that on the demand of local population cat fish such as Mulli and Seenghara also imported from Rajasthan and Uttar Pradesh States. Yammuna Nagar is small town of this district has one whole-sale and two retail shops, which are practically the assembling centres to export fish to Saharanpur fish market. About 90 per cent of the total fish assembled at Yammuna Nagar fish market is sent outside the State. Although, there are 3 cold storages and 7 ice plants, yet not much contributes to provide facilities to fisheries business.

(b). Karnal Fish Market: This is a district headquarter of Karnal district having total population of 7,15,174 according to the Census of 1981. It is situated on the bank of Yammuna river which form the eastern boundary of the district. In addition to river Yammuna, Chautang and tributaries of Yammuna form the good seasonal fishery. There are 14 drains having the length of 270.20 kilometers in the district in addition to some artificial lakes like Karna and Hallipark. There is a good network of canal system comprising, Western Yammuna canal system, Bhakhra canal system, Augmentation canal system. About 68 per cent of the total catch is contributed from notified waters(public waters). There are 13 landing centres
on the river Yammuna in this district, out of which Chandra and Davipur constituted 17.3 and 16.8 per cent to the total catch. There are five fishing shops out of this one wholesale and the rest are retail shops. The wholesale shop belongs to Government fish contractor who received the total catch from the notified waters. Approximately 500 tonnes fish is arrived at this market annually. Good consignment is also received from Kurukshetra, holy city which has good resources of fisheries. The fishing in this area is seasonal, however, regular supply is maintained by the pond and lake fisheries. There are 810 fishing workers and 867 fish farmers in the district.\(^1\) Karnal has good outlet for fish consumption being having National Dairy Research Institute and Central Saline Soil Research Institute in the town. The town is well connected with rail and road and having its own small airport for the landing of small aeroplanes. There are 3 cold storages and 5 ice plants but only 10 per cent of ice is being used in fishing business. There is no cold storage facilities for fish business. Fisheries department had also a small retail shop at Kama Lake for 4-5 years to supply the fish to the local people at concessional rates which were comparative low than the general market rates. This shop had to closed down in the year 1979 when the fishing rights of Kama Lake were taken by Haryana Tourism Corporation.

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About 40 per cent of the total produced from this area is sent to Delhi fish market for sale.

(c) **Panipat Fish Market**: Panipat is a tehsil headquarter in Karnal district. It is an industrial township having a total population of 4,83,285 as per Census of 1981. There is good fish eating population in the National Fertilizer and Thermal Plant in the town. The town is well connected with main roads and rails. The fish market of Panipat is a sub-fish market of Karnal fish market. There are only two fish shops in the town. One is wholesale fish market owned by Government, fish contractor and other is wholesale-cum-retail shop owned by private person. The total annual assembling of catch is about 500 tonne. Out of which 50 per cent is sent to Delhi fish market. Except Sanoauli bridge there is no good landing centre on river Yamuna in this area. About 60 per cent catch is received from canals and drains and balance is from village ponds. Although there are two cold storage and three ice plants but not much contributes to the fishery business.

(d) **Sonepat Fish Market**: Sonepat is a district headquarter of Sonepat district having 5,77,426 population as per Census of 1981. It is situated on the bank of river Yamuna. It is an industrial town and about 40 kilometers from National Capital. In addition to river Yamuna and its tributaries, there are 10 main drains covering 316.30 kilometers. There is
a good net-work of canal. There is one main reservoir having area 300 hectares. There are 434 fishing workers and 402 fish farmers in the district. There is one wholesale fish market owned by a Government fish contractor and four retail shops. On an average 400 tonnes fish assembled at these shops. Out of this, 60 per cent catch is from natural waters while balance is from ponds. About 80 per cent of the total market arrival is despatched to Delhi fish market. The fish markets have no sufficient provision of drainage, sanitation, lighting, water supply etc. There are six ice plants from which 20 per cent of ice is used for fishery business. There are two cold storage but provides no facilities to fishery trade.

II. Preparation of Fish Markets

The fishermen visit the fishing grounds and fortunate to strike a catch tends to bring the produce to the nearby market for sale as soon as possible. In some cases the fish catch may be of the good size and variety acceptable to the customers while in some cases it may be poor. There are no effective means for regulating the catch or forecasting the varieties of the fish that would be landed. The quantity of catch is also uncertain, therefore, creates gults and shortages which affect the fish marketing and pricing of fish. The fishermen who actually catch fish play only an unsignificant role in the disposal of catches. Their role is only to hand over the fish
catch to fish merchants at the landing centres for sale. The final distribution and marketing of catch is done by commission agents who step in at this stage.

III. Fish Marketing Procedures

(a) Sale Proceed at Markets: At the landing centres, the fish is sold in many ways. Although, it is not possible to draw an exact time of demarcation between different methods of marketing in India. At the landing centres, the fish is assembled and sorted out by the agents or wholesales or fishermen's group leaders. At Chilka lake area, Orissa State, the fish is collected by the leader of fishermen party who is known as 'Bahana'. Similarly, in the Kakinada area, Andhra Pradesh State, the fish is mostly collected by the "Pettamdars", whereas in Kerala "Thurvilarya". In Gujarat and Maharashtra the primary collector are known as "Tindel". The fresh water fish in most of the cases is sorted out species-wise and also size-wise. Then fish is packed in ice and kept in bamboo baskets or wooden boxes for despatch to the distant markets particularly in Calcutta. These activities are done by the agents on behalf of the wholesalers or on behalf of the commission agents. In some cases, the primary co-operative fish marketing societies directly consigns the fish to the

private traders. It is observed in Haryana that no packing or sorting is done at landing centre. The fish is filled in empty gunny bags and transported to the nearest fish market for disposal. The fish before reaching to the market is handled by 5-6 middlemen in case of fresh water whereas 3-4 persons in case of marine. In Haryana only 2-3 persons handle fish because the owner of water is generally a commission agent in case of notified water. Of course, in case of private owned waters or ponds, the number of middlemen increases. By and large the prevalent methods in fish marketing are given below :-

(i) In the primary fish markets, the fishermen or producer directly sell fish to the buyers without having intermediaries. In many places the buyers may be wholesalers or fish merchants or middlemen. In the Southern States particularly in Maharashtra, Andhra Pradesh and Tamil Nadu, the women who belong to fishermen's family traditionally sell fish in retail markets unlike the upper eastern or northern India. The prices are usually negotiated between individual fisherman, seller and buyer.

(ii) The fishermen send fish to the commission agents as consignments. The commission agents i.e. 'aratdars' auction the fish and the gross sale proceeds are remitted to fishermen after deducting various marketing charges.

(iii) Selling of fish is also done by contact method. The
prices are fixed before the fishing season starts. The traders make some agreement for the delivery of catches by fishermen at stipulated prices. All the fish caught is disposed of at the fixed price. In Gujarat, The Mandela Committees are formed where the fishermen's representatives, Government representatives and traders assemble and fix the price based on the previous year's prices and also to some extent on the Bombay fish market prices. In this case generally, prices do not fluctuate much.\(^1\)

It is observed that the fish being perishable commodities are brought nearest fish markets and mostly cleared daily in Haryana. In all markets the fish is put for sale without gutting and cleaning. However, the sorting is done size-wise and group-wise. There are two main groups 'Chilkar' and 'Nanggi'.\(^2\) Different heaps are made before sale by auction. Live fish 'sol' and 'Mangur' are sold in live condition in water. It is usual practice in almost all the fish markets in Haryana that the entire catch assembled at the wholesale fish markets for disposal by auction to the merchants and the retailers between fixed time from 9.00 A.M. to 11.00 A.M. except the Panipat fish market where no fixed timings. Catches brought from distant places to other than Panipat fish market after the disposal hours are stored in ice and placed for sale in next morning.\(^3\) The fish is generally auctioned in small


\(^2\) Chilkar and Nanggi mean fish with scale and without scales respectively.

heaps. The vendors or retailers assess the weight of fish and give the bid as per his estimate only. The fish put to sale is never weighed at fish markets except Ambala where bid is given per kilogram of fish. The bid is released to the highest bidder for the particular heap and weighed after the auction. The spoilage starts in fish no sooner it is taken out of water. Hence, the care is taken at every stage to maintain the quality of fish. It is observed that unpreserved fish become unsaleable within eight hours in Haryana. Due to lack of well organised fish market in Haryana, almost entire catch is being sold in fresh conditions.

During the period of study the number of fish markets not increased in Haryana. There are several variables in fish marketing practices in Haryana. These includes sale, preservation, pricing method, partnership, selling price by variety, payment and borrowing by producers from fish merchants. There are many channels of flow for sale in Haryana.

(b) Sale Proceed at Production Centres: The fish producers sell their produce at the ponds site to the rural masses at the time of harvesting. It is not popular practice and only a fraction of total production is sold.

(c) Sale at District Headquarters: The producers bring their produce to the district headquarters and sell fish door to door as vender. It is also not a popular practice and only small
quantity is sold in this manner.

(d) **Intra-Districts Marketing** : Although there is a Government contractor shop at every headquarter but fish is transported from one district to the popular fish market of other district with the idea to have good price. The fish produced in Kurukshetra is transported either to Ambala or Karnal fish markets. Similarly fish from Jind and Hissar is brought to Panipat fish market. The fish from Rohtak district is brought to Sonepat while fish from Gurgaon district to Faridabad fish market for sale.

(e) **Sale of Fish at the Fish Markets, Outside the State** : It has been observed that good portion of fish is sent to Delhi or Howrah fish markets for sale. It is observed that more than 85 per cent of the fish farmers of Haryana sent their produce to fish markets outside the state.

IV. **Fish Marketing Intermediaries**

There are many fish market intermediaries in Haryana from fish producers to consumers forms a complicated net work which is given below :-

<table>
<thead>
<tr>
<th>Fish Market Intermediaries</th>
<th>Notation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fish farmers</td>
<td>FF</td>
</tr>
<tr>
<td>Fishing workers</td>
<td>FW</td>
</tr>
<tr>
<td>Fish farmers-cum-contractors</td>
<td>FFC</td>
</tr>
<tr>
<td>Fish farmers-cum-contractor-cum-whole-sellers</td>
<td>FFCW</td>
</tr>
</tbody>
</table>
(a) Fish Market Network: There are various network in fish marketing system in Haryana which are not understandable and in systematic manner. A model has been designed keeping in various persons engaged in fish marketing. The fish producers or fishermen have various options to adopt the channel to minimise the middle-men. The present model of fish marketing in Haryana has been shown in Figure-II. The options with fish producers or fishermen for the sale of fish are as under:

1. Sold fish directly to consumers.
2. Sold fish through commission agents.
3. Auction the fish to fish contractors.
4. Sale the fish to fishing worker adopting royalty system.
MODEL OF FISH-MARKETING
The first person in the channel is fish farmer/fish producer and last is consumer. Lesser the gap between two will produce more profit to both. The market intermediaries take the profit at various stages and the cost of fish increases. The merchandise charges are exorbitant and prevalent practice is very cumbersome in Haryana.

(b) **Merchandise Charges**: The commission agents recover the following charges for clearing and selling the consignments brought by fish producers.

(i) **Clearance and Cartage Charges**: These charges includes the cost incurred by the commission agents for assembling the produce at the various landing centres and further transporting them to the fish markets.

(ii) **Packing and Ice Charges**: The cost of basket, gunny bags and ice are charged from the producer for landing to the fish market. It is observed that in very few cases the ice is used from landing centre to fish market, however, storage in ice is done at shop.

(iii) **Octroi and Terminal Taxes etc.**: These expenses are charged from the producers to pay such taxes to municipal committee etc.

(iv) **Charity**: The prevalent practice is to take out a fish weighing approximately 2 kilograms out of a lot of 40 kilograms,
on the pretext that its sale proceeds shall be utilized for donation to religious institutions. This fish is sold at the end of the auction and no record of the same is ever kept.

(v) Commission : During marketing proceedings 7 per cent commission is charged on the gross sale value of fish from the purchasers. At Panipat fish market 3 per cent extra commission is also charged from the producers.

(vi) Miscellaneous Charges : The cost of the supervision by the commission agents and other un-foreseen charges are received under this head like postage, telephone charges, munshiana etc.

(c) Details of Market Expenses : During the course of study of Karnal Fish Market during the year 1985-86 and 1986-87, various chargeable expenses on the sale of fish are given in Table-2.

Table - 2
Chargeable Expenses on Sale of Fish

<table>
<thead>
<tr>
<th>Item of expenditure</th>
<th>Amount (Rupees)</th>
<th>Percentage to total charges</th>
</tr>
</thead>
<tbody>
<tr>
<td>Price of fish at the rate of Rs.7/- per kilogram for 40 kilogram</td>
<td>280.00</td>
<td></td>
</tr>
<tr>
<td>Transport charges</td>
<td>12.00</td>
<td>18.30</td>
</tr>
<tr>
<td>Empty gunny bags/boxes/baskets and packing charges per 40 kilogram</td>
<td>10.00</td>
<td>15.25</td>
</tr>
<tr>
<td>Ice and storage charges</td>
<td>8.00</td>
<td>12.20</td>
</tr>
<tr>
<td>Municipal Committee charges</td>
<td>2.00</td>
<td>3.00</td>
</tr>
<tr>
<td>Overhead expenses/charity per 40 kilogram of fish</td>
<td>14.00</td>
<td>21.30</td>
</tr>
<tr>
<td>Commission at the rate of Rs.7/- of price</td>
<td>19.60</td>
<td>29.95</td>
</tr>
<tr>
<td>Total marketing expenses</td>
<td>65.60</td>
<td>100.00</td>
</tr>
</tbody>
</table>
(i) Total expenses including original cost of fish

Rs.345.50

(ii) Percentage of market expenses on 40 kilogram of fish

23.50

(iii) Average retail price at the rate of Rs.11/- per kilogram for the sale of 40 kilogram fish

Rs.440.00

(iv) Margin of profit over the purchase price of 40 kilogram fish

Rs. 94.40

(v) Percentage of profit to retailers

27.30

(vi) Percentage of marketing charges and profit of retailer on the initial cost of 40 kilogram of fish

57.20

(d). Margin of Profit at Various Levels: A detailed study was conducted during the course of research to work out the margins of profits earned by marketing intermediaries at various levels.

(i) Primary Fish Producer: The primary fish producer is a fish farmer who culture fish in his own pond or leased pond. It is estimated that there are 4,038 fish farmers in the Haryana State by the end of 1986-87. It is observed that 44.6 per cent of the total fish production comes from pond culture. Hence, fish farmer plays an important role in fish marketing process. A case study was conducted of four fish farmers regarding the assessment of production cost, exploitation cost and marketing procedures. In this regard a proforma was designed and information was collected personally from the fish farmers and compiled. The design of questionnaire and proforma is attached at Appendix-B. The abstract of the information...
regarding the cost of production of fish and other expenses on sale of fish are given in Table-3.

<table>
<thead>
<tr>
<th>Name of the farmer</th>
<th>Expenditure on fish culture (Rs.)</th>
<th>Fish production (Kg)</th>
<th>Cost of production per kilogram of fish (Rs.)</th>
<th>Expenditure on exploitation and transportation of fish per kilogram (Rs.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shri Lakhbir Singh, Village Shekhpura, District Karnal</td>
<td>3800.00</td>
<td>1900</td>
<td>2.00</td>
<td>2.50</td>
</tr>
<tr>
<td>Shri Sultan Singh, Village Gonder, District Karnal</td>
<td>11500.00</td>
<td>4694</td>
<td>2.46</td>
<td>3.00</td>
</tr>
<tr>
<td>Shri Mohinder Singh, Village Sikri, District Karnal</td>
<td>11200.00</td>
<td>4640</td>
<td>2.43</td>
<td>2.50</td>
</tr>
<tr>
<td>Shri Ram Sarup, Village Butana, District Karnal</td>
<td>19212.50</td>
<td>8416</td>
<td>2.31</td>
<td>2.15</td>
</tr>
</tbody>
</table>

Average 2.30 2.55

The cost of fish production as projected by Fisheries Department, Haryana is Rs. 2.43 per kilogram. But the actual expenditure on the production of one kilogram of fish as per survey comes out to be Rs. 2.30 per kilogram. The average

1. Government of Haryana, Development of Fisheries in Haryana (Chandigarh: Fisheries Department, September 1985).
exploitation and transportation cost of one kilogram of fish up to the market comes out to be Rs.2.55. Hence the profit to the fish farmer is given below:

- Cost of production of one kilogram of fish: Rs.2.30
- Exploitation and transportation of fish per kilogram: Rs.2.55
- Total expenditure on one kilogram of fish: Rs.4.85
- Average whole-sale rate of fish per kilogram: Rs.7.00
- Net profit for one kilogram of fish: Rs.2.15
- Percentage of profit to fish producer in selling one kilogram of fish: 44.33%

(ii) Fish Contractor: As per policy of Haryana Government, the fishing rights of notified waters are leased out to the fish contractor for catching fish for one year under Haryana Fisheries Rules, 1966 and Punjab Fisheries Act, 1914 in the open auction. The fish contractors have to pay the amount of auction in three instalments. The fish production and income from the notified waters which are auctioned to fish contractors during the last five years have been given in Table-4.

<table>
<thead>
<tr>
<th>Year</th>
<th>Fish production from notified waters (Kilogram)</th>
<th>Income from notified waters (Rupees)</th>
<th>Cost of one kilogram of fish (Rupees)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1980-81</td>
<td>19,33,000</td>
<td>18,53,556</td>
<td>0.96</td>
</tr>
<tr>
<td>1981-82</td>
<td>18,38,000</td>
<td>22,25,804</td>
<td>1.20</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>-------</td>
<td>-------</td>
<td>-------</td>
<td>-------</td>
</tr>
<tr>
<td>1982-83</td>
<td>22,70,000</td>
<td>18,82,947</td>
<td>0.83</td>
</tr>
<tr>
<td>1983-84</td>
<td>33,96,000</td>
<td>28,61,791</td>
<td>0.85</td>
</tr>
<tr>
<td>1984-85</td>
<td>49,08,000</td>
<td>24,43,620</td>
<td>0.50</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1,43,45,000</strong></td>
<td><strong>1,12,67,713</strong></td>
<td><strong>4.34</strong></td>
</tr>
<tr>
<td><strong>Average</strong></td>
<td><strong>28,69,000</strong></td>
<td><strong>22,53,544</strong></td>
<td><strong>0.87</strong></td>
</tr>
</tbody>
</table>

The amount paid by fish contractor to Haryana Government in lieu of auction money for one kilogram of fish, Rs.0.87

Expenditure for one kilogram of fish on exploitation and transportation, Rs.2.55

Total expenditure on one kilogram of fish, Rs.3.42

Average sale of fish for one kilogram at wholesale rate, Rs.7.00

Net profit to fish contractor on one kilogram of fish, Rs.3.58

Percentage of profit to fish contractor on one kilogram of fish, 104.70

(iii) **Profit to Fishing Worker** : Although there is no fisherman community in Haryana, yet the persons engaged in fish capturing activities are known as fishermen. The number of identified fishermen in Haryana by the end of 1985-86 were 12,392. There are various methods for the exploitation of fish:

(a) Primary fish producer auction the fish pond to the fishermen parties.

(b) The fish pond is auctioned for exploiting for one kilogram of fish.
(c) The fishermen parties exploit the fish on 50:50 basis.

The average transportation and exploitation cost comes out to be Rs.2.55 per kilogram of fish. During survey, the average distance from landing centre or fish pond to fish market is 68 kilometres. It is observed after discussion with fish farmers and fish contractors that average cost of packing and transporting of one kilogram of fish from landing centre/fish pond site to fish market is Rs.0.45 per kilogram of fish. Hence, exclusively exploitation cost is Rs.2.10 per kilogram of fish.

In Karnal Tehsil a fisherman worked maximum for 361 days in a year and average fish catch per fisherman per day is 19.3 kilogram. After discussion with fishermen parties, the average expenditure on fishing per fisherman per year is given in Table-5.

<table>
<thead>
<tr>
<th>Expenditure and Income to Fishermen Parties</th>
</tr>
</thead>
<tbody>
<tr>
<td>Depreciation of nets' cost (One drag net, two phaslas, one castnet, 5 handnets, 6 khallas)</td>
</tr>
<tr>
<td>Depreciation cost of crafts etc. (simple boat)</td>
</tr>
<tr>
<td>Depreciation cost of temporary hutment etc.</td>
</tr>
<tr>
<td>Recurring cost over ropes, threads and other materials</td>
</tr>
<tr>
<td><strong>Total</strong></td>
</tr>
</tbody>
</table>

The average cost of fisherman per day for exploitation Rs. 7.50

Average expenditure in exploitation of one kilogram of fish Rs. 0.40

Average charge of exploitation per kilogram of fish Rs. 2.10

Net profit to fisherman per kilogram of fish Rs. 1.70

Percentage of profit to fisherman 425.00

(iv) Profit to Fish Commission Agent: The fish commission agent who is primarily a fish whole-seller, comes in the picture when the produce arrives at the fish market. In Haryana, fish contractor does the work of commission agent as well as of whole-seller. The 'Pucca Arhait' system of fish sale is not prevalent in fish markets in Haryana. The average expenditure of fish commission agent in Karnal fish market in 1985-86 per year and profit earned has been shown in Table-6.

<table>
<thead>
<tr>
<th>Expenditure and Income to Fish Commission Agents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rent of the shop                              Rs. 4,800.00</td>
</tr>
<tr>
<td>Salary to a munshi                            Rs. 8,400.00</td>
</tr>
<tr>
<td>Salary to a supervisor                        Rs. 8,400.00</td>
</tr>
<tr>
<td>Salary to two labourers                       Rs. 12,000.00</td>
</tr>
<tr>
<td>Electric and water charges                    Rs. 1,800.00</td>
</tr>
<tr>
<td>Overhead and unforeseen charges               Rs. 1,800.00</td>
</tr>
<tr>
<td><strong>Total</strong>                                     <strong>Rs. 37,200.00</strong></td>
</tr>
</tbody>
</table>
Average expenditure on one kilogram of fish as 274.3 tonne fish arrived during 1985-86 Rs. 0.14

Income towards commission on the sale at the rate of 7 per cent for per kilogram fish Rs. 0.49

Miscellaneous charges at the rate of 5 per cent on sale of one kilogram of fish Rs. 0.35

Net income on one kilogram of fish Rs. 0.84

Net profit on one kilogram of fish to fish commission agent Rs. 0.70

Percentage of profit to commission agent 500.00

(v). Profit to Retailers: The retail sale of fish is done at the retail shop which are five in number at Karnal. The retail marketing of fish is in the private hands. In Panipat and Ambala, the retail fish shops are allotted by the Municipal Committees. Thus the retailers have to abide the rules and regulations of local Municipal Committee. The retailer decides the retail price of fish on the basis of the market arrival and its demand by the consumers. Moreover, he includes the amount of expenditure incurred by him viz, transportation from wholesale market to the sale point and other unforeseen charges to be spent during the day and also by covering the risk of suspected spoilage. During the course of study of Karnal retail market during 1985-86, the average profit earned by the retailer is given in Table-7.
Table - 7
Profit to Retailers

<table>
<thead>
<tr>
<th>Description</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average wholesale price of one kilogram of fish</td>
<td>44.33 per cent</td>
</tr>
<tr>
<td>at the rate of Rs. 345.60 per 40 kilograms</td>
<td></td>
</tr>
<tr>
<td>Average retail price of one kilogram fish</td>
<td>104.70 per cent</td>
</tr>
<tr>
<td>Profit of retailer on one kilogram of fish</td>
<td>425.00 per cent</td>
</tr>
<tr>
<td>Percentage of profit on one kilogram of fish</td>
<td>500.00 per cent</td>
</tr>
<tr>
<td>by retailer</td>
<td>27.20 per cent</td>
</tr>
</tbody>
</table>

In case of capture fishery the production for one kilogram of fish is Rs. 0.87 and consumers purchase at the rate of Rs. 11.00 per kilogram, hence the margin is Rs. 10.13 per kilogram. While in the case of culture fishery, the production cost of one kilogram of fish is Rs. 2.30 and sale price is Rs. 11.00, thus it creates the margin of Rs. 8.70 per kilogram of fish. The profit earned at various levels from primary produce to consumer is given below:

- Fish farmers: 44.33 per cent
- Fish contractor: 104.70 per cent
- Fishermen/Fishing workers: 425.00 per cent
- Fish commission agent: 500.00 per cent
- Fish retailer: 27.20 per cent

It is observed that maximum profit is earned by the fish contractors, fishing parties and fish commission agents. The profit earned by fish farmers and fish retailers are
moderate. In any way fish consumer is exploited. There are four possible channel of flow of fish from producers to consumers. Shorter the chain more the profit at particular stage.

V. Fish Marketing Channels

The earning in selling fish by fish producer is different in adopting different channels of fish sale.

(a) Channel-I: If fish producer sells fish directly to the consumer at the pond site, the total expenditure is incurred by the fish farmer on raising one kilogram fish and exploitation would be Rs.4.45. If fish farmer sell the fish at the rate of Rs.11.00 per kilogram then the net profit gained by him is Rs.6.55 over every kilogram of fish. Thus fish farmer earns 147.2 per cent net profit.

(b) Channel-II: If fish producer sells fish through retailer then cost of production, exploitation, packing and transportation on one kilogram of fish comes out to be Rs.4.85. The retailer purchases fish at the rate of Rs.8.65 per kilogram and then profit to the producer is Rs.3.80 per kilogram of fish i.e. 78.4 per cent.

(c) Channel-III: If producer sells the producer to wholeseller at the rate of Rs.7/- per kilogram of fish then he earns Rs.2.15 on one kilogram of fish i.e. 44.3 per cent.
(d). **Channel-IV**: If fish producer sells his produce through commission agent where 3 per cent commission is also charged from the seller then net profit to the fish producer comes out to Rs. 1.94 per kilogram of fish i.e. 40 per cent.

Thus by adopting different channels of fish sale, the producer earns minimum profit i.e. 40 per cent and maximum profit i.e. 147.2 per cent depending upon the channel adopted by him.

VI. **Price and Price Determinator of Fish**

The fluctuation in fish price is very prominent. The changes are so frequent to predict any trend. There may be one price in the morning while another in the evening in the same market. Sometimes prices change at short intervals of time i.e. from minute to minute. The prices not only due to the sudden supply and demand of particular variety of fish but also due to prices of other varieties in the market. The perishability tendency of fish have definitely a role to play in determining the price of fish at the markets. The fish price often vary from spot to spot in one fish market where many auctions are taken at a single time. When fresh fish reaches early in the morning a high price is quoted. Generally, the fish prices fall as the day advances.¹ The uncertainty of

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supply and demand plays a great role in price determination. In the fish markets at the time of auction, the pace of selling fish is so fast that it cannot permit news of low prices. There is a great price risk because of high perishable tendency of fresh fish. The fish markets are having certain timings. Generally, the auctioneers start the bidding price based on the experience. It is also observed that some buyers in some instances purchased one type of fish at a higher price from one particular agent while some other brought the same fish at a lower price from a neighbouring agent, which indicated the big variation in prices. In all the fish markets of Haryana prices do not go down according to the theory of demand and supply during glut season. This may be due to the ignorance of the seller and buyers about the fish arrivals in the markets. It is also observed that the theoretical equilibrium price level mechanism may not strictly apply at least in short run period for whole market in its practical connotation. The large quantity of fish used to come to Bombay Fish Market early in the morning, generally disposed off at a higher price. This was mainly due to the anxiety of buyers who wanted to take the fish to retail market as early as possible for the fear that there would not be any sale after 9.00 A.M. to 10.00 A.M. in retail markets. The demand of fish is usually high in the


2. Ibid.
morning in Haryana, therefore, the retail buyers are prepared to pay high price for without bothering about the increase of supply and lowering of rates in later part of the day. Time factor plays a prominent role in almost all the fish markets in Haryana except Panipat. It is also observed that increase in market arrival cannot create a study demand of fish. Therefore, there is a wide range of fluctuation in prices which indicates the instability in selling and purchasing of fish.

In all the fish markets of Haryana, one shop belongs to Government fish contractor who also acts as a commission agent or wholeseller. He receives whole consignment from notified waters which are taken by him on lease for fishing. Thus he receives about 55 per cent of total arrival. The catch from natural waters comprises most of cat fish which are liked by the local meat eater in the State. Thus, there is a monopoly of the fish contractor in fixing the prices of fish. It is also observed that some of the retailers always chinch to a specific agent even if they would get fish at some cheaper rates from other merchants due to the fact that they get some credit facility from the fish contractors.

The demand of fish in Haryana is steady as only 15 per cent of the population is fish eater. It is, therefore, there is hardly any increase of demand of fish during glut period. Moreover, during shortages, the local people select other
alternative of fish such as meat or fowl instead for purchasing fish at higher rates.

For any extremely perishable commodity like fish, the method of auction is most feasible because it reflects the tendency of consumer's demand in the wholesale market through the retailers. The fish producers and fishermen hardly gets any remunerative price for the produce in wholesale fish markets where the monopoly of fish contractors exist. Normally, the producer shall not sell his produce at the lower rates foregoing his profit with the fear of blockade of money and spoilage of fish. The wholesale distributive machinery in Haryana is not sufficient due to less number of merchants in this trade. It is seldom possible either for producer or seller to impose a higher price at the wholesale markets. The short-term changes in demand and supply are responsible for frequent price variation to some extent. The long term demand and supply are the important factors in bringing down the cost of production for the whole industry.

The aggregate supply of fish in the short period, theoretically speaking, will remain constant over a momentary time and space; and even if there is some change in actual supply and demand of fish will remain constant for finding out the equilibrium market price. Under such circumstances, if there is a high demand, it will give a higher price and vice-versa.
Huge supply of fish normally means that, if there is unchanged demand, buyers will ask for fish at a very low price. The low price can be increased if any public agency or Government purchases the excess supply of fish by giving a higher support price. So as to regulate the price of fish, the report on fishery policies in Western Europe and North America have rightly observed, "Measures aiming at stabilizing first hand prices, it may be justified, inter alia, on account of the heavy fluctuation in catches in many countries. With the aim of contributing the overall economic stability in the industry, for which it is necessary that the fishermen receive an adequate return for catches, the Government or the industry itself of Member countries have established more or less elaborate measures." In Norway, for instance, a minimum price policy was introduced by the sales organisations, which are co-operatives in character, in consultation with the government. When fishermen/fish farmer's in the past were virtually unprotected against heavy fluctuations in the prices caused by frequent changes in supplies, price support measures were introduced. All the fish produced in Norway cannot be sold lower than the minimum price i.e. first hand wholesale prices, stipulated under the Raw Fish Act, 1951. The White Fish Authority and Herring Industry Board of the United Kingdom now

called Sea Fish Industry Authority and the Agriculture Marketing Board of Sweden have also adopted such price measures in regulating price of the fish.\(^1\) The need for a similar minimum price system is highly required in Haryana to give a boost to fishery trade.

A detailed study was conducted to see the price pattern of fish in Haryana after survey of four main markets situated at Ambala, Karnal, Panipat and Sonepat during the years 1985-86 and 1986-87. It was observed that average retail price during the year 1985-86 was Rs.11.00 per kilogram while Rs.11.25 per kilogram in 1986-87. The wholesale price was Rs.8.35 per kilogram and Rs.9.50 per kilogram in the year 1985-86 and 1986-87 respectively. The retail as well as wholesale prices during the year 1986-87 were higher than the prices of preceding year. The increase in retail as well as wholesale prices was 2.3 per cent and 13.3 per cent respectively. The retail price was higher by 31.8 per cent than the wholesale price during the year 1985-86. Similarly, the gap between wholesale and retail prices during 1986-87 was 18.5 per cent. The gap between retail and wholesale prices reduced during 1986-87 which is a good sign for the market development. The average wholesale and retail prices of cat fish group were higher than the other groups. The trend of fish prices in

different fish markets in Haryana is shown in Annexures-II and III. The average prices in Haryana during the study course is given in Table-8.

<table>
<thead>
<tr>
<th></th>
<th>1985-86 Wholesale (Rs./kg)</th>
<th>1986-87 Wholesale (Rs./kg)</th>
<th>1985-86 Retail (Rs./kg)</th>
<th>1986-87 Retail (Rs./kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>In all the markets</td>
<td>8.35</td>
<td>9.50</td>
<td>11.00</td>
<td>11.25</td>
</tr>
<tr>
<td>Major carp group</td>
<td>8.70</td>
<td>10.70</td>
<td>11.40</td>
<td>12.40</td>
</tr>
<tr>
<td>Cat fish group</td>
<td>10.50</td>
<td>10.80</td>
<td>12.50</td>
<td>12.55</td>
</tr>
<tr>
<td>Miscellaneous group</td>
<td>5.80</td>
<td>7.50</td>
<td>9.10</td>
<td>9.20</td>
</tr>
</tbody>
</table>

The increase in wholesale and retail prices was 23 per cent and 9 per cent respectively for major carp group. The increase in the wholesale and retail prices for cat fish group during 1985-86 and 1986-87 was 2.8 and 0.4 per cent respectively. The wholesale as well as retail prices of cat fish group were high than the other groups during both the years. The increase of wholesale and retail price of miscellaneous group was 29.3 per cent and 1.0 per cent respectively. The pricing trend is different in the different fish markets in Haryana. There are various factors which affect the price of fish.
(a). Factor Affecting Prices: The following are the main factors influencing the prices of fish in Haryana State.

(i) Elasticity of Demand: Delhi and Saharanpur fish markets play most dominant role on the price of fish in Haryana. Haryanavis are basically vegetarian, hence most of produce is sent to Delhi or Saharanpur fish markets. Therefore, whenever there is a demand of fish in Delhi and Saharanpur fish markets, the price of fish in Haryana tends to rise. Delhi fish market plays so much role that even in period of no demand of fish at Delhi fish market, the fishing is stopped in Haryana. During the particular days near festivals, the fish consumers in Haryana take no fish due to religious conception such as 'Norate and Sarad'. Similarly to take no fish in the English months where 'R' not fall in the word also plays important role in affecting the price pattern in the month particularly May, June, July and August.

(ii) Type, Sex, Weight and Quality of Fish: The demand of cat fishes being more in Haryana, therefore, the price is generally more as compared to other groups. Large size and fresh fish also fetches good price in the markets.

(iii) Distance of Procuring Centres to Markets: The distance of procuring centre to fish markets also plays an important role in the pricing of fish. Low catch is normally transported by buses early in the morning. In number of occasions the
bus conductor refused to allow the fish to be placed in the bus. The fishermen tend to hide it from the conductor and pack it in such a way to escape from the eyes of the conductor. Such a case was observed during the survey of Panipat fish market where a fisherman brought the fish from Munak Head to fish market appeared to be a bundle of clothes. With the result of that the quality of fish generally get spoiled. The larger the distance so covered, the greater would be the spoilage which naturally has adverse bearing on the fish price.

(b) **Study of Fish Price in Various Markets of Haryana**

The pattern of prices of fish in different fish markets in Haryana are given below:

(i) **Fish Market Ambala**: The average wholesale price in Ambala fish market during the years 1985-86 and 1986-87 was Rs.10.40 and Rs.10.27 per kilogram respectively. Similarly, the average retail price of the corresponding years was Rs.13.10 and Rs.12.10 per kilogram respectively. The wholesale price of fish during 1986-87 was lower by 1.25 per cent than the wholesale price of 1985-86. Similarly the average retail price during the year 1986-87 was 6.9 per cent low than the year 1985-86. The average wholesale as well as retail prices of cat fish group were higher than other groups during both the years under study. During the year 1985-86 the margin between wholesale and retail price was (+) 26 per cent while
the margin in the year 1986-87 was (+) 17 per cent. Thus gap between wholesale and retail price was reduced by (+) 9 per cent during the two years. The average wholesale as well as retail prices of cat fish group showed the increasing trend during the two years, while the retail price of major carp group was higher in 1985-86 than the year 1986-87. The average wholesale as well as the retail price of miscellaneous fish group during the year 1986-87 was lower than the year 1985-86. The wholesale as well as the retail prices were remained stable from October 1985 to March 1986. There was a sudden rise in price of major carp in the month of June, 1985. The price of major carp was again stable from November, 1986 to January, 1987. It is observed that price of major carp group was higher in winter months as compared to other months in both years. The wholesale price fluctuated between Rs. 9/- to Rs.11/- per kilogram during 1985-86 while Rs.10/- to Rs.13/- during 1986-87. Similarly the fluctuation in retail price was from Rs.12/- to Rs.14/- per kilogram during 1985-86 and Rs.11/- to Rs.14/- during 1986-87.

The cat fish group dominates the other groups of fishes so far as the prices are concerned. The wholesale and retail prices of cat fish group were Rs.16/- and Rs.18/- per kilogram respectively in the month of September, 1985. The rates were remained stable from October, 1985 to March, 1986 in the year 1985-86. During the year 1985-86, cat fish price was
never lower than any group of fish. The price of cat fish was
low in the months of April and May, 1985 as compared to other
months. During the glut season i.e. monsoon where 27.7 per-
cent fish arrived to this market showed no change in price.
During the year 1986-87, the price was high in the months of
July, August, November, December, 1986 as compared to other
months. During the months of January and February, 1987 the
price of cat fish group was lower than major carp group. The
prices of major carp as well as the cat fish were same in the

The price of miscellaneous group of fishes was remained
low as compared to other group during both years under study.
The price of miscellaneous group was found lower during the
year 1986-87 as compared to 1985-86. The highest price of this
group was during the months of September, October, 1985,
January and March, 1986. During the months of April, May and
June, 1985 the price remained low. The fluctuation of prices
of this group for wholesale and retail were Rs.7/- to Rs.9/-
per kilogram and Rs.10/- to Rs.12/- respectively during the
year 1985-86. Similarly the price fluctuated from Rs.6/- to
Rs.10/- per kilogram and from Rs.8/- to Rs.12/- respectively
for wholesale and retail, during the year 1986-87. The price
of miscellaneous group in the month of April, 1986 was the
highest competing the price of major carp group. The price
during the months from August to November, 1986 and March, 1987
was lowest as compared to other months. The trend of wholesale and retail fish prices are shown in Figures-III and IV.

(ii) Karnal Fish Market: The prices in Karnal Fish Market showed the upward trend. The average wholesale and retail prices of fish during the year 1985-86 increased by 1.2 and 1.5 per cent respectively during 1986-87. The margin between wholesale and retail market fish prices during 1985-86 was Rs.3.05 per kilogram which was reduced to Rs.2.16 per kilogram during the year 1986-87. The wholesale as well as retail prices of cat fish group were highest during both the years as compared to other groups of fishes.

The prices of wholesale and retail of major carp group fluctuated between Rs.5/- to Rs.11/- per kilogram and Rs.8/- to Rs.14/- per kilogram respectively during 1985-86. Similarly, prices fluctuated between Rs.5/50 to Rs.12/- per kilogram and Rs.7/- to Rs.13/- per kilogram respectively during 1986-87. The highest price was in the months of February and March, 1986 and lowest was in the month of April, 1985. The price remained stable in the months of May, June, July, 1985; from August, 1985 to December, 1985 and January, 1986. The price in the month of December, 1986 was highest. The price in the months of April and May, 1986 was lowest. The wholesale and retail prices were equal in the month of February, 1987. The price of cat fish group showed the upward trend. The average wholesale and retail prices during the year 1985-86 rise by (+) 2
percent and (+) 5 per cent respectively during 1986-87. The whole sale and retail prices during 1985-86 fluctuated between Rs.8/- to Rs.14/- per kilogram and Rs.10/- to Rs.16/- per kilogram respectively during 1985-86. Similarly, during 1986-87, the whole sale and retail prices fluctuated between Rs.8/- to Rs.14/- per kilogram and Rs.9/- to Rs.14/- per kilogram respectively during 1986-87. The price was highest in the months of February, December, 1986 and January, 1987. The price was lowest in the months of April to July, 1985 and April and May, 1986. The price remained stable in the months of June to August, 1985 and from September to November, 1986. The prices of whole sale and retail were equal in the month of February, 1987.

The price of miscellaneous group of fish also showed an upward trend. The average whole sale and retail prices of fish during 1985-86 raised by (+) 55.8 per cent and (+) 12 per cent respectively during 1986-87. The margin of whole sale and retail prices were Rs.4.20 per kilogram during 1985-86 while it was Rs.1.90 per kilogram during 1986-87. The average wholesale and retail prices during 1985-86 fluctuated between Rs.3/- to Rs.7/- per kilogram and Rs.6/- to Rs.10/- per kilogram respectively during 1985-86. While in the year 1986-87 the wholesale and retail prices fluctuated between Rs.5/- to Rs.10/- per kilogram and Rs.6/50 to Rs.12/- per kilogram respectively. A stable but higher price was noticed during
the months of August, 1985 to February, 1986 and January, 1987. The price was low in the months of April to July, 1985 and from April to May, 1986. The price of miscellaneous group was the same as that of major carp in the month of January, 1987. The trend of wholesale and retail fish prices are given in Figures-III and IV.

(iii) Panipat Fish Market: The price at Panipat Fish Market showed an upward trend. The average wholesale price was Rs.8.50 per kilogram and retail price Rs.11.15 per kilogram during the year 1985-86 which increased by (+) 11.8 per cent and (+) 2.3 per cent during 1986-87. The margin between wholesale and retail prices was Rs. 2.65 per kilogram and Rs.1.90 per kilogram during the years 1985-86 and 1986-87 respectively. The average price of cat fish group remained higher in the year 1985-86 while price of major carp was higher in 1986-87.

The wholesale and retail prices of major carp fluctuated between Rs.7/- to Rs.11/- per kilogram and Rs.10/- to Rs.14/- per kilogram respectively in the year 1985-86. While in the year 1986-87, the wholesale and retail prices fluctuated between Rs.7.50 to Rs.12.50 per kilogram and Rs.9/- to Rs.14/- per kilogram respectively during 1986-87. The highest price of major carp group was in the months of November, December, 1985, February, 1986 and from September to December, 1986 and January, 1987. The lowest price was from May to

The price of cat fish group showed the downwards trend. The wholesale and retail prices of the year 1985-86 were down by (-) 14.3 and (-) 6.0 per cent respectively in the year 1986-87. The margin between wholesale and retail prices were Rs. 2/- and Rs.2.75 per kilogram in the years 1985-86 and 1986-87 respectively. The highest price of this group was in the months of November, December, 1985, November and December, 1986 and January, 1987. The lowest price was in the months from June to August, 1985, April and May, 1986.

The price of miscellaneous group of fishes showed an upward trend. The wholesale and the retail prices for the year 1985-86 were raised by (+) 40.6 and (+) 9.0 per cent in the year 1986-87. The margin between wholesale and retail prices were Rs.3.00 and Rs.1.25 per kilogram in the years 1985-86 and 1986-87 respectively. The highest price of the fish was in the months of April, October to December, 1985, November, December, 1986 and January, 1987. The lowest price of the fish was in the months of June 1985 to September, 1985, March and May, 1986. It is very interesting to note that the prices of miscellaneous group were same as that of cat fish group in the month of September, 1986. The trend of wholesale and retail prices of fish has been shown in Figures-V and VI.
(iv) Sonepat Fish Market: The price in Sonepat fish market showed upward trend. The wholesale and retail prices of the year 1985-86 were raised by (+) 37.2 and (+) 17.6 per cent in the year 1986-87. The margin between wholesale and retail prices were Rs. 2.30 and Rs.1.35 per kilogram in the years 1985-86 and 1986-87 respectively. The price of cat fish group was highest during 1985-86 while it was lower than major carp group in the year 1986-87.

The wholesale and retail prices of major carp were higher by (+) 57.5 and (+) 36.0 per cent in the year 1986-87 than the prices of preceding year. The margin between wholesale and retail prices were Rs.2.00 and Rs.1.00 per kilogram in the years 1985-86 and 1986-87 respectively. The wholesale and retail prices fluctuated between Rs.5/- to Rs.10/- and Rs.8/- to Rs.13/- per kilogram respectively during the year 1985-86. While these fluctuated between Rs.8.00 to Rs.12.50 for wholesale and Rs.13.00 to Rs.16.00 per kilogram in 1986-87.

The highest wholesale price was Rs.10/- per kilogram whereas the highest retail price was Rs.13.00 per kilogram during 1985-86. The highest prices were in the months from September to November, 1985 i.e. Rs.14/- for wholesale and Rs.16/- per kilogram for retail was noticed. The lowest price was noticed in the months of January to March, 1986 where it was Rs.5/- per kilogram for wholesale and Rs.8/- per kilogram for retail during the year 1985-86. It is a abnormal
phenomenon. The lowest price i.e. Rs.11/- per kilogram for wholesale and Rs.13/- per kilogram for retail were noticed in the months of April, 1986 and March, 1987.

The cat fish group also showed an upward trend of marketing. The average wholesale and retail prices during 1986-87 were higher by (+) 10.5 and (+) 3.3 per cent than the preceeding year. The margin between the wholesale and the retail prices were Rs.2/- and Rs.1.45 per kilogram in the years 1985-86 and 1986-87 respectively. The wholesale and retail prices fluctuated between Rs.6/- to Rs.12/- per kilogram and Rs.8/- to Rs.14/- per kilogram respectively in 1985-86 while in 1986-87 it fluctuated between Rs.8/- to 11/- per kilogram and Rs.9.50 to 14/- per kilogram. The price of cat fish group was higher in the months of April, November and December, 1985 and January, 1986. The lower price was noticed in the months of August to October, 1985 and October, 1986.

The miscellaneous group also showed the upward trend. The wholesale and retail prices in the year 1985-86 were increased by (+) 50.0 and (+) 13.2 per cent in the year 1986-87. The margin between the wholesale and retail price was Rs.3/- per kilogram and Rs.1.70 per kilogram respectively in the year 1985-86 and 1986-87. The wholesale and retail prices fluctuated between Rs.4/- to 7/- per kilogram and Rs.7 to 10/- per kilogram respectively during 1985-86. While the wholesale
and retail prices fluctuated between Rs.6/- to 9/- per kilogram and Rs.8/- to 10/- per kilogram respectively in 1986-87. The highest price was in the months of November, 1985, November, 1986, December, 1986 and January, 1987. The lower price was noticed from June to October, 1985 and January to March, 1986 and May, 1986. The trend of wholesale and retail fish prices have been shown in Figures-V and VI.

(c) Inferences of Fish Price Trend in Haryana

After the study of four main fish markets in Haryana State, the following inferences were drawn:

(i) The average wholesale price of all kind of fish in Haryana is Rs.8.92 per kilogram.
(ii) The average retail price of all kind of fish in Haryana is Rs.11.10 per kilogram.
(iii) There is a price rising trend in the sale of fish. The rate of increase in wholesale and retail price is (+) 13.0 per cent and (+) 2.3 per cent respectively.
(iv) In general the margin of profit to retail fish merchant from (+) 31.7 per cent to (+) 18.5 per cent.
(v) The wholesale as well as retail fish prices in Ambala fish market were higher as compared to other fish markets.
(vi) Ambala fish market showed downward trend of fish prices.
(vii) The rates were lower in Sonepat market as compared to other markets.
chapter vi

figure v

whole sale fish price

panipat market

sonipat market
On an average the fish price of cat fish group remained high as compared to other groups of fish.

In Panipat and Sonepat fish markets the price of major carp fish was higher than cat fish group in the year 1986-87.

In particular months, the prices of miscellaneous fish group were equal to that of major carp or cat fish group in Ambala, Karnal and Sonepat fish markets.

The price of fish is not affected by the market arrival i.e. glut season or shortage season.

The fish price during winter months from November to February is higher as compared to other months of the year.

The margin of profit to fish parties, fish contractors and fish commission agents are more as compared to other marketing intermediaries.

There is no support to fish markets by the Government.

The fish markets in Haryana are not regulated by any law.

STRATEGY FOR FISH MARKET DEVELOPMENT IN HARYANA

Since all the fish markets in Haryana are not organised in well manner, a thrust is required to reform the markets by modernising the traditional fish marketing methods by introducing new management techniques. The strategy of fish market management can be created by analysing the present pattern of marketing, setting the objectives, developing the fish demand,
formulation of new plan, marketing operations and market control which has been given in Figure-VII.

There are many environmental opportunities for fish marketing in Haryana as there are many places where fish is not marketed. The Tourist Complexes established by Haryana Tourism Corporation where good fish sale stall can be established. Likewise, in Universities Campus and Sports School such stalls can be set-up. This kind of environmental possibilities exist in many areas and more areas can be find out by conducting survey.¹

A fishery firm can take up a relevant marketing action in which it is likely to enjoy a differential advantage over the firms. This is because of its experience and technical resources available with the firm. A fish firm in Haryana can set up ice plant and net fabricating unit to give a boost to the fish marketing process.

A particular firm can have the specific advantage by dealing the particular kind of fish. In Haryana, cat fish group is in great demand particularly in winter season. The need of people can be met by importing cat fish from neighbouring states and exporting the major carp group in lieu of this. It can also explore the possibility of marketing of major carp

STRATEGY OF FISH MARKET DEVELOPMENT IN HARYANA
as well as miscellaneous group side by side the cat fish.

Core marketing need to be designed for the market development. This system has three types of classifications:

(i) Intensive growth
(ii) Integrative growth
(iii) Diversification growth

(i) Intensive Growth: Some opportunities are hidden in the present marketing efforts or traditional marketing which have to be explored. The following methods can be adopted to intensify the growth in the market.

(iia) Market penetration: It includes the more aggressive fish marketing efforts to increase the sale of fish. These efforts include the publicity of the fish by various methods to depict the nutritional value. In general Haryanavi, is a vegetarian and to inculcate the habit of fish taking requires more efforts. It has been accepted throughout the world that the fish is rich in protein and phosphorus. Fish is considered as one of the best nervous tonic. Fish can be supplied instead of meat products in schools and colleges messes. In addition to this, a number of people who like to take but do not know the process of cooking and fish recepies. Short term courses can be conducted by the Food Processing Institutes in the State to impart the knowledge of fish cooking. Free distribution of palatable fish products can be distributed to the general public.
to create taste. Sale can also be promoted by changing the nomenclature of major carp as vegetarian fish which can fetch more attention of the people who are basically vegetarian in Haryana.

(ib) Market development: Efforts of present fish sales from those markets can be diverted to new markets where new sale centres can be opened in different areas. Identification of the regions, according to consumer's taste is necessary so that new segmented market may be approached for future marketing of fish or fish products. In Haryana the possible areas can be railway stations, bus stands, tourist complexes etc.

(ic) Products development: The main hindrance in the sale of fish is its peculiar ordour. New fish products can be evolved which have no smell and can give a good taste to the consumer. Improved fish products in Haryana can be created like fish Bournvita, Fish Biscuits, Fish Fillets, Fish Fingers, Fish Wafers etc.

(ii) Integrative Growth: The basic fish market may be combined with another concern unit by making backward or forward or norizontal integration.

(iia) Backward integration: A firm selling fish may seek the ownership in other firm who is supplying fish or fish products. A wholesaler can combine with the commission agent or can do
the work of fish exploitation. In Haryana 425 per cent profit is gained by the fishing parties for the exploitation of fish. As the fishermen population in Haryana is negligible and the fishermen parties who belong to neighbouring states have the monopoly. Similarly the fish commission agent earns 500 per cent profit. Thus by clubbing the wholesale with the commission agent as well as fishing workers the number of intermediaries will be reduced and would provide more profit to producers to wholeseller and consumers.

(iiib) **Forward integration** : The fish production and distribution are the two main components of fish marketing. The fish marketing machinery if combined with the distribution authority then market development would be easier. If the wholeseller combines with retailer and fish hawker then the inter-competition between channel who tends to earn more profit can be reduced. Thus consumer would get food fish at reasonable price which would promote the marketing in future.

(iiic) **Horizontal integration** : A fish firm can join hands with other parallel firms who are producing ice, baskets, packing material etc. so that the competition can be reduced to stabilize the market.

(iii) **Diversification of Growth** : The fish markets should also take up the act of diversification of products for promotion of the market.
(iii) Concentric diversification: Introducing the products which are technically and market synergies with the present fish commodities can promote the fish marketing. The introduction of new products like 'fish ham' and 'fish sausages' may attract more customers. This type of change will also create interest to the new customers who intends to take fish in Haryana. This will help in inculcating habit of fish taking among Haryanavis.

(iib) Horizontal diversification: If a new product like frozen fish kheema or fillets are supplied along with the chilled fish that would create more customers. If the dressed fish is also sold along with the raw fish then more customers would be attracted as the dressing of fish for non-traditional fish eater is tedious task.

(iic) Conglomerate diversification: It comprises to add new product to the new customer because of deficiency of old one. In Haryana, the heavy demand of cat fish can be substituted by live fish or Rohu fish by common carp.

In addition to above, the following factors must be taken into account for the development of fish markets in Haryana.

(1) Setting up of Firm Object: The objectives of a firm should be clearcut with the firm's target to obtain the goal. The strategy should be designed in such a manner that firm
objectives can be achieved easily.

(ii) **Segmentation**: Market segment is the basic factor that every market should have different needs, tastes, styles and links of the buyers. No single type of fish and fish product would satisfy all buyers. The market segments like, geographical situation, use of the products, types of buyers etc. must be taken into account.

(iii) **Marketing Positioning**: A particular pattern of market concentration can give the maximum results to achieve the main goal. The firm cannot go to all places even if there are opportunities. It should go after viable positions. The main features are as under:-

(a) Market segment is of sufficient current size.
(b) Segmented market is not over occupied by present competition.
(c) It should have the potential of growth.
(d) Segmented market has some relative unsatisfied needs in which a particular firm can serve well.

It is observed that one type of marketing of product is not economically advantageous, but in combination with two or three products, marketing becomes economical. If a retail fish merchant sales aquarium fish and other meat products like eggs and meat etc. then market of all the products would increase.

(iv) **Market Entry Strategy**: It is seen that many fish
merchants leave the trade when they are enable to have the notified waters on lease from the Government. The Government should render support to them who have the thorough knowledge of the trade. The established firm should have technical staff for conducting survey.

(v) Marketing Mix Strategy: This is one of the main factor to see the response of the buyers toward the product. Advertisement for sales promotion and feed back method should be adopted to make the people familiar with the fish and firm. The people of Haryana are unaware about number of fish products which can give a good market in future. These products should be tried in public at reasonable rates.

(vi) Timing Strategy: Proper timing is the important factor for promotion of fish markets. If a regular fish customer takes a particular variety of fish then he may be asked to try the fish of other kind also, which might create a good taste for him and thus the market would expand.

(vii) Formulating Plans: A firm and sound planning is necessary to obtain the objectives of the firm. The commitment of targets should be achieved with full efforts. A sale target based on the past experiences, areas, regions etc. be fixed. The market budget should be based on the targets. The Fisheries Department, Haryana while auctioning the fishing rights of notified water should also fix the sale target of
exploited fish. Government should render the help to the contractors in achieving the targets.

The management of fish markets in Haryana is not up to the mark. The pattern of marketing is traditional. All the existing markets in Haryana need improvements in working on the basis of modern management techniques as already mentioned. All the components of the marketing such as production, exploitation, transportation, preservation, distribution and even technique of using fish as food requires improvement for the promotion of fish marketing system in Haryana State. The Fish Farmers' Marketing Co-operative Societies should be formed in Haryana for performing the combined fish marketing activities.
### ANNEXURE - I

Fish Eating Population in India

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<th>Year</th>
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### ANNEXURE - II

**Case Study — Average Wholesale and Retail Prices of Fish in Various Fish Markets of Haryana State during 1985-86 and 1986-87**

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**Source:** Abstract of the data collected during the course of study.
### ANNEXURE - III

**Case Study — Average Retail and Wholesale Prices of Fish from April, 1985 to March, 1987**

(Rupees per quintal)

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</table>

1987

| **January** | 1400 | 1200 | 1300 | 1200 | 1600 | 1200 | 1400 | 1400 | 1300 | 1500 | 1400 | 1300 | (1300) | (1000) | (800) | (1000) | (1200) |
| **February** | 1400 | 1200 | 1200 | 1200 | 1400 | 1000 | 1200 | 1100 | 1000 | 1500 | 1300 | 800 | (1300) | (1000) | (800) | (1000) | (900) |
| **March** | 1200 | 1200 | 800 | 1000 | 1200 | 1000 | 1000 | 1100 | 1000 | 1300 | 1050 | 800 | (1000) | (1000) | (600) | (800) | (900) |

Source: Information personally collected during the course of study.

Note: Figures in brackets represent wholesale prices.