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**LIVELIHOOD OF MARINE FISHER FOLKS IN TAMIL NADU WITH A DEEP-FOCUS**

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**Abstract:** Fish is an important part of staple diet and the major source of animal protein for a majority of countries. The effects of fluctuating demand for fish all over the globe and the changing structure of market are in desperate need of examination and necessary action. In lieu of the economic importance of fish, the present study was taken up in Cuddalore district to study the production, marketing and constraints of marine fisheries. A sample of 40 fishermen and 30 traders were randomly selected and interviewed. There are four types of fishing fleets used in Cuddalore district viz., (i) Catamaran with sails (ii) Catamaran with outfit motor (iii) Motorized Maruti boats and (iv) Mechanized boats. The non-mechanized boat brings more fish catch (19210 tonnes) and trawl netters stood first (16059 tonnes) among the gear-wise catch. Fishing community is divided into different class groups viz., the upper and lower community based on the technology of fishing. Fishermen are found to be unfit for long distance fishing voyages due to the craft-gear combination of fishermen are artisanal. On an average the fishermen are engaged in fishing effectively for eight to nine months. Low value fish were taken for home consumption by the fisher folks. About half of the whole sale traders of fish were under medium category with a transaction of an average of 1.03 tonnes of fish per day per trader. Auctioneer, primary wholesaler, wholesaler cum commission agent, retailer at consuming centre, vendors were found to be the market functionaries involved in the marketing system. The major constraint identified in the fish marketing was the forced sale of fish. Actions should be taken so as to establish dry dock and processing unit at the shore itself to create income and employment generation for the fisher folks.

**Keywords:** Fisher Folks, Fishing Fleets, Fishing Gears, Market Functionaries, Processing Unit.

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**Introduction:** Indian fisheries are an important component of the global fisheries, with India being the third largest producer of fish in the world and second in inland fish production (FAO 1998). More than six million fishers in the country depend on fisheries and aquaculture for their livelihood. India's share in the world production of fish has increased from 3.2 per cent in 1981 to 4.5 per cent at present. Fishery sector occupies an important place in the socio-economic development of the country. At an estimated eight million metric tons, the contribution of fresh water capture fisheries to total world fish production is small in comparison with marine capture fisheries and marine and in fresh water aquaculture. Nevertheless, fresh water fisheries have sustained annual growth of about two per cent worldwide (FAO 2002), and the potential for further increases in production is high in some systems.

Fish production in India has increased at a higher rate compared to food grains, milk, eggs and other food items. India ranks second in the world fish production with an annual fish production of about 6.9 million metric tonnes. The Sea Fisheries resources consist of a large variety of fishes such as Sardines, Mackerel and Prawns. Several other favourite varieties like Pomfrets, Seer fish, Indian salmon, etc., are also available in large quantities. Fishing is generally confined to the narrow coastal belt of about six to ten miles from the coast and the production is in the hands of nearly a million fishermen. The Coastal fisheries are largely seasonal

where surplus productions are obtained in some months and scarcity in other months. There has been a gradual shift in the production scenario from marine to inland fisheries in recent years. The importance of fish in diet lies in the chemical composition of the flesh, which is rich in protein and minerals like calcium, phosphorous and iron. Some fishes, in addition, have varying quantities of fat and oil. The small amount of fats present in seafood is not the surprising one if any one says that the intake of seafood is the nutritional insurance, the problem of protein gap in food is much more acute in populous country like India with chronic food shortage and malnutrition and the diet of a large number of masses constitutes cereals which contains carbohydrates to a major extent and other inferior type of food. Fish is a good solution to the problem of food.

**Marine Fish Marketing in Tamil Nadu:** Fish marketing system in Tamil Nadu has been slowly transforming itself from a primitive to a modern stage with increased facilities in transportation, communication and to lesser extent storage and processing. It can be fully developed for catering to the needs of the all-out effort for developing both capture and culture fisheries. On the one hand the pronominal glut in the catch of some or other species and the consequent drastic fall in prices still continuing at many small landing centres. On the other hand there has been a continuous increase in fish prices during recent years mainly due to increase in demand as against more or less in stagnant annual

production. A number of species which were not allowed to enter the market channel in earlier years have already entered into the commercial list. The continuous increase in fish price without any consideration in catch level indicates that there has been a definite increase in the demand for fish. In spite of all these, a bumper catch during a particular reason never helps the fishermen to get higher income and a very low catch in against the interest of both consumers and producers. Such chronic problems inherent in our fish marketing system could be solved through the formulation of a marketing policy based on the proper understanding on the prevailing marketing structure and its various complicated facets. The present study on fish marketing was carried out in the Cuddalore region of Tamil Nadu. The main objectives are (i) to study the production aspects of marine fisheries in Cuddalore district. (ii) to find out the channels involved and functions of domestic fish marketing in the study area and (iii) to study various problems relating to fish marketing system.

**Methodology:** The Cuddalore district was purposively selected as it ranks second largest coast and third in the overall fish productivity in Tamil Nadu. Cuddalore is considered as one of the major thirteen coastal districts of Tamil Nadu which follows fish production comprising of 49 fishing villages and 29 fish landing centres. Since the present study covers production and marketing of fish, the choice of selection lies based on the factors mentioned above. 40 fishermen were selected randomly to study the production and marketing of marine fisheries. The district has an area of 3678 sq.km. It is bounded on the north by Viluppuram District, on the east by the Bay of Bengal, on the south by Nagapattinam District, and on the west by Perambalur District. Cuddalore district had 53756 marine fishing folk living in the Coromandel Coast line. There are two major and 28 minor fish landing centres. Cuddalore Port is situated in Lat.110<sup>43</sup> N. and Long.790<sup>49</sup> E. This is placed at the confluence of the rivers Gadilam

and Paravanar discharging as combined river into the sea in the District of Cuddalore in Tamil Nadu. The ships anchor in midstream at a distance of about a mile from the shore and cargo is loaded and discharged at this place. There is a bar at the mouth of the river, which maintains a depth of 5' to 6' at low water. During the months of July to September the depth over the bar is reduced to about 3 to 4 feet. The district consists of three coastal blocks and three coastal centres, which comprises of 49 fishing villages 29 fish landing centres totally and contributes 12.43 per cent and 5.21 to the total in Tamil Nadu respectively. The coastal marine fish production of the district is 26000 tonnes, which contributes 6.63 per cent to the total production in Tamil Nadu. Coastal zone is a dynamic area with many cyclic processes owing to a variety of resources and habitats. Coastal plains and seas include the most taxonomically rich and productive ecosystems on the earth of the total coastal area (1076.0 km) of Tamil Nadu, Cuddalore district constitutes 57.5 km. Thus the district forms the universe for the study.

## Results and Discussion:

### Production of Marine Fish:

**Fishing crafts:** A fishing unit is composed of a boat and fishing gear. There are four types of fishing fleets used in Cuddalore district viz., (i) Catamaran with sails (ii) Catamaran with outfit motor (iii) Motorized maruti boats and (iv) Mechanized boats. Catamaran is the traditional boat and is essentially a sailing vessel. Maruti boats are made of fibreglass and meant for use with motors. The catamaran and maruti boats are beach-landing boats and mechanized boat is much larger where unlike artisanal fleets, fishing also mechanized and requires harbour to land or has to be anchored at sea. Fishermen use out - board motors that can be fitted and removed easily. They are small and light diesel motors that have long shaft with propeller attached to them. These long tails are fitted on a metal bracket at the end of the Catamaran or maruti boat.

S.No	Fishing craft registered	Number
1	Mechanized boats	975
2	Vallam	367
3	Catamarans	6549
<b>Fishing gears used</b>		
4	Gill net	53355
5	Trawl nets	992
6	Shore seine	28
7	Long line seine	238
8	Others	1006

Fishermen owning catamaran constitute the majority group, as there are 6549 catamaran owners in

Cuddalore district. There are 975 mechanized boat owners and 376 vallam owners. Catamaran owners may be the majority group but mechanized boat owners are economically dominant and powerful group.

**Fishing gears in Cuddalore district:** Fishing gears used by the sample fisher folks in the study area were collected and presented in Table 1.

It is observed from the Table 1 that the Gill net owners (53355) constitute majority followed by the trawl net (992) owners. Fishing gear used by the fishing community in Cuddalore consists of small gillnets, large drift nets, hook and line and trawl net. Gill nets are basically nets that are hung vertically in the sea and when a shoal of fish crosses them, they are caught in the mesh of net. Separate nets are used for different fish variety. The small nets are of nylon monofilament material and large nets are made with nylon multifilament. The small gill nets are essentially factory made. The large drift nets are long pieces of nets that are used in deep water to catch

larger species. These nets can be more than a kilometre long and use of these nets need special skills. Hook and line fishing are hand lines as well as long-lines. Hand lines are just a few hooks put on a line and long lines are large number of hooks put on a long line with baitfish. Trawl nets are bag shaped nets dragged on the sea bottom with two wooden boats that keep the mouth of the net open. Gill nets are predominantly used by large number of fishermen due to affordability.

**Marine Fish production:** The fish production using fishing craft and gear were collected and presented in Table 2. It is noteworthy to infer from Table 2, the non-mechanized brings more fish catch (19210 tonnes) because of number effect. However based on the gear-wise catch trawl netters stood first (16059 tonnes) because of its higher efficiency which is being operated by mechanized launcher. Gill nets and Tangle nets were the other important nets contributed for the fish production with 7865 tonnes and 2851 tonnes respectively.

Sl.No	Type of fishing craft	Marine fish production per year
1	Mechanized	10098
2	Non - mechanized	19210
3	Motorized	14806
4	Shore seine	909
	<b>Total</b>	<b>45023</b>
	<b>Type of fishing gear</b>	
5	Trawl net	16059
6	Gill net	7865
7	Seine net	780
8	Tangle net	2851
9	Lit net	74
10	Hook net	686
11	Bag net	66
	<b>Total</b>	<b>28314</b>

**Class structure:** Fishing community is divided into different class groups on the basis of the technology used on their boats. The people owning sailed Catamaran, Motorised Catamaran and Maruti boat represent one group despite the differences in their income. Mechanized boat owners form a different interest group, as they constitute an upper class in the fishing community. The division within the fishing community exists not only on the basis of technology used but also due to the conflict of interest. The conflict of interest lies in the fact that mechanized boat owners use trawl net that sweeps the sea bottom, affecting catch for the small fishermen.

The ownership between Catamaran and Maruti boat owners is essentially an individual or family affair. The crew will be composed of three to four family members as well as non - owners. The non - owners of the crew are not paid wages but share the net income after deducting the expenditure incurred for the boat. Boat owners may get an additional share. Sharing system exists even in the case of mechanized boat crew, but with difference in the proportion of share. The share of the boat owners is 65 per cent and the crewmembers get allowance for trip irrespective of the catch. Thus fishing community has a class division on the basis of ownership and technology use. Any rehabilitation or reconstruction programme

should take into consideration of the division of owners of non – mechanized boats and mechanized boats as well as the wage-earning workers. The wage-earning workers do not have any means of production excepting the labour, live below poverty line and deserve special attention in the rehabilitation and reconstruction activities.

**Fishing distance of the sample fishermen:** Fishing distance play a major role in deciding direct cost to fishermen by way of icing, fuel and labour days. It has also considerable effect on production and thus influencing marketed surplus of fish. Table 3 brings out the distance of fishing by the sample fishermen.

S.No.	Fishing distance (nautical mile)	No. of fishermen	Percentage to total
1.	Up to 5	11	27.5
2.	(6-10)	22	55
3.	Above 10	7	17.5
	<b>Total</b>	<b>40</b>	<b>100</b>

From Table 4, it could be seen that, the fishing distance of range up to five were 27.5 per cent, whereas the distance of six to ten nautical miles had a percentage of 55, and fishing distance above ten nautical miles constitutes about 17.5 percentages of fishermen. It is evident from the table that the major fishing activities are within near shore areas. This could be the craft-gear combination of fishermen are artisanal i.e. either operated manually or partially

mechanized because of its small scale nature. In most cases they are unfit for long distance fishing voyages. **Number of fishing days in a year:** The number of days of fishing by fishermen *Si-ne qua non* to know the employment generation through fishing. This information may be useful to device related employment program during idle days of fishing. The distribution of fishing days in a year for the sample fishermen were analysed and the results were presented in the Table 4.

S.No.	Fishing days	No. of sample fishermen	Percentage to total
1.	< 150	6	15
2.	(151-250)	22	55
3.	Above 250	12	30
	<b>Total</b>	<b>40</b>	<b>100</b>

From Table 4, it could be observed that, fifty five per cent of the sample fishermen has fishing days of between (151-250) in a year, fishermen fishing for more than 250 days in a year constitutes thirty per cent to the total, whereas only fifteen per cent of the fishermen goes less than 150 days of fishing in a year.

On an average the fishermen are engaged effectively for eight to nine months. April and may are generally lean period, in which fishing through gear is banned to allow regeneration of fish. However, line and hook fishing is undertaken during these months. Besides fishermen avails weekly rest and celebrate festivals.

#### Marketed surplus of sample fishermen:

Quantity produced (kg)	Value (Rs)	Quantity retained (kg)	Quantity retained in percentage	Marketed surplus (kg)	Marketed surplus in percentage
10.5	525	2.6	25.00	7.9	75.00

(Figures in the parenthesis represent percentage to the total)

It is clear from Table 5 that the average quantity of fish catch by small scale fishermen was 10.5 kilogram with an average value of Rs.525 per day. The quantity retained by the fishermen for household consumption was 2.6 kilogram. The average

marketed surplus was worked out to 7.9 kilogram. Around 25 per cent of catch is retained for home consumption. Usually low value fish will be taken for consumption by the fishermen.

**Marketing of Fish in Cuddalore district:** The

major portion of the internal marketing takes place through three channels. The auctioneers of the primary market and the commission agents of the secondary market are also involved in the marketing process without taking possession of fish. Marine fish marketing is also characterized by the presence of many marketing channels for different varieties of fish. In each channel, the number of intermediaries between the primary producer, namely, the fishermen and the ultimate consumer varies depending upon the quantum of landings, the effort involved in carrying out the marketing functions like assembling, storing, grading and transportation.

Fishermen used different modes of transport depending upon the quantities of fish available and distance from the landing centre. Generally fish will be transported by tricycles, minivans, trucks and railways. For short distance, tricycles and minivans are preferred. Trucks and railways are used for long distance transportation of fish. The fish will be mixed with crushed ice on transportation to avoid deterioration. While transporting through railways, the fish will be packed in the Palmarah leaf baskets at the rate of 50 kg/basket along with ice whereas in rest of the cases it is transported in bulk. There are also mobile retailers with cycles and head loads. The fish is being transported within a radius of up to 1000 km from the landing centre.

#### **Features of fish market:**

**Primary Markets:** Cuddalore fishing harbour is the major mechanised fish landing centre which is situated about three kms away from the wholesale market towards south. Mechanised boats, gill-netters and catamarans mostly land their catches in the morning. The port markets functions at two spells every day. The morning market at this landing centre functions from 6.00 a.m. to 10.00 a.m. and the evening market from 2.00 p.m. to till late in the evening. A fish market scene would seem totally chaotic to an unfamiliar observer. However, a few regular visits following an understanding of the specific roles make methods of market visible. About 1500 intermediaries are involved in different marketing activities at this centre as Auctioneers, Retailers, Bulk purchasers, Wholesalers and Commission agents.

The primary wholesale fresh fish port market is the key institution in the fish marketing system and the commission agents who control it are the key functionaries. The port market is essentially a clearing house of fish where 'arrivals' are matched against the 'demands' through the mediation of the price mechanism. The merchants and commission agents rely on their past experience and knowledge of previous situations in judging the market. Since fish is highly perishable the market for fresh fish is very

short run in nature. The supply is inelastic and price is influenced to a greater extent by demand. When negotiations or auction process starts the first indication of the strength of the demand in the market is felt. In general, price fluctuates around an unknown but underlying 'equilibrium price'. The equilibrium price refers to here means the price at which a maximum number of transactions have taken place. The fish will be segregated based on varieties right from landing centre and the initial rate will be fixed based on the supply of a particular variety of fish. The timing of arrival of fish is very important. The early arrival of fish receives higher bid and there is every chance for price to decline for late subsequent arrivals.

**Wholesale Market:** The big market, which lies in the heart of Cuddalore town, the only wholesale market in the region is five kilometres away from the primary market of Cuddalore old town. This market has become very prominent as many other businesses like grocery shops, fruit shops; vegetable shops, hotels etc. have come up in its surroundings. The transactions of the wholesale market start at 7.00 a.m. and end by 8.00 p.m. Retail businesses are also undertaken in this market. In addition, dry fish marketing is also done. There are about 1,000 people involved in fish marketing here, Out of them about 100 retail traders are undertaking dry fish marketing. The inflow of fish to this market is not only from Cuddalore old town landing centre, but also from many other landing centres located along the coasts of Cuddalore region, neighbouring districts of Tamil Nadu and other states like Kerala and Andhra Pradesh. The mode of disposal of fish in the market is mainly by auctioning. The auctioneers retain some fish as their commission. The fish taken by them are sold there itself and they get nearly Rs.200 to Rs.300 per day. Retail traders from different markets in the city and from village markets participate in auctions, after the transactions, they carry the fish to various retail markets by cycles, rickshaws, Auto rickshaws and buses.

**Retail Markets:** These are about ten retail markets located in the Cuddalore region. Out of them two retail markets namely, Thirupapuliur, and Cuddalore O.T markets were selected for this study based on the distance from primary and wholesale markets and the volume of sales. As regards Thirupapuliur retail market, there are about 100 retail traders in fresh fish and about ten engaged in dry fish. The inflow of fish into this market is mainly from Devananpattinam, Pudhukuppam port markets. The mode of transport is van, motorised tricycles and autorickshaws. The distance between the retail market and the landing centres ranges from two to ten kms. There are about 80 retail traders of fresh fish

and ten dry fish traders in the Cuddalore O.T. fish markets. The inflows of fish to this market are from Thazhanguda, Soananguppam, Sothikuppam port markets. The fish are brought by motorised tricycles, van and buses.

**Market structure:** The size distribution and quantity transacted of fish in the selected wholesale market is given in Table 6. The selected traders were grouped into three categories viz. small, medium and large based on the quantity of fish handled per day.

It was found that 55 per cent of the whole sale traders of fish were under medium category with a

transaction of one to two tonnes of fish per day with an average of 1.03 tonnes of fish per day per trader. On the other hand the small traders contributing 30 per cent of the total number of traders transacted only about eleven per cent of quantity and an average; they handled only 0.44 tonne per day. Larger traders who occupied fifteen per cent of the total number of whole sale traders transacted almost 39 per cent of the quantity and the average deal per day for larger trader was 3.38 tonnes.

S.No	Size class (tonne/day)	No. of traders	Percentage to total no. of traders	Quantity transacted (tonne/day)		
				Total quantity		
				Quantity	Percentage quantity	Average
1.	Small (up to 1)	9	30	4.00	11.42	0.44
2.	Medium (1.01 to 2)	17	55	17.50	50.00	1.03
3.	Large (>2)	4	15	13.50	38.58	3.38
Z	Total	30	100.00	35	100.00	4.85

**Marketing channels:** Landing centres of marine fish are scattered all over the coast. But consuming centres are spread over the interior parts located far and wide from the landing centres. Fish is often carried over long distances to the consuming points by various means of transport. In the study area fish pass through three channels to reach the ultimate consumers.

The flow chart indicating the three marketing channels found in the study area is presented below:

**Marketing channel I:**

Producer → retailer → consumer

In marketing channel I, there exist only the producer, retailer and consumer. This marketing channel is considered to be most beneficial to the consumer, because of having low channel length, without any interference of much intermediaries.

**Marketing channel II:**

Producer → auctioneer → retailer → consumer

In the marketing channel II, there exist an auctioneer, who takes appreciable amount of money as commission from the fishermen. Here, the gross marketing margins for the retailers were greatly influenced by the commission agents or the auctioneers.

**Marketing channel III:**

Producer → Primary wholesaler → secondary wholesaler cum commission agent → retailer → consumer

In the marketing channel III, there involves wholesaler at landing centre level, wholesaler cum

commission agent and a retailer at consuming centre. This channel is considered to be the lengthiest out of the three.

**Market functionaries:**

**Auctioneer:** The auctioneer is an important functionary in the marketing channel. As the fish is landed in the primary market or brought into the wholesale market, the auctioneer disposes the fish through auction on behalf of the fishermen producer. For getting auction right, the auctioneer usually advances loan to the fishermen. For carrying out this function the auctioneer is entitled to certain commission, which normally comes to three to five per cent of the sale proceeds. The fishing units were initially owned by the fishermen with government assistance. Subsequently in case of gear loss or damage or with the hike in cost of operation or sometimes the fishermen have to land with empty craft, all these factors forced fishermen to borrow from auctioneer who are called as "Vattakarar" in the local language. Fishermen were given loan by the auctioneer to the tune of up to Rs.50,000 per fishermen with a binding that the fish caught would be directly sold to them which are popularly known as 'boat-tying arrangements'. The credit provided by the auctioneers does not bear any explicit interest charge. Similarly, the commission charge is same irrespective of the amount borrowed. This appears to be the reason why many tied craft owners tend to borrow from the auctioneers for all purposes (Firth, 1966). Auctioneers are benefited in two ways. Firstly,

the fishermen who have taken loan are bound to sell the catch only through them and secondly, they get comparatively high returns to the amount advanced as the value of fish taken by them generally exceeds the current interest rate. Among the various market functionaries, the auctioneer enjoys the highest status.

**Primary wholesaler (PWS):** The PWS buy the fishermen by way of auction at the port market. The transference of title to the wholesale market in the town are through the Commission Agent-cum-Wholesaler who sell the fish on behalf of them. The Commission Agent makes arrangement to sell the fish to the Retailers in the market or to the fish Vendors and collect commission from the PWS depending upon the quantity of fish and the prices sold.

**Wholesaler-cum-Commission Agent (WCCA):** The Wholesaler-cum- Commission Agent (W.C. C A.) receives fish from the primary wholesalers (PWS) who bring fish from the landing centres to the secondary market and sell it to the retailers / vendors in the secondary market. For this service W.C.C.A. takes a commission from the PWS who bring fish from the landing centres. The commission varies depending on the nature of species. Usually the commission comes to three to five per cent of the sale proceeds. This is a case of W.C.C.A. acting as a commission agent. Sometimes, W.C.C.A. purchases fish from the primary market and sell it to the retailers in the secondary market. This is a case of W.C.C.A. acting as Wholesaler.

**Retailer at Consuming Centre:** These Retailers procure the fish from the Wholesaler-cum-Commission Agents at wholesale market. Sometimes they purchase fish from the port markets directly and take it to retail outlets and sell it. At the retail level, generally the fish are sold both at whole form (smaller varieties) and fillet form.

**Vendors:** These are the mobile category of retailers. They purchase fish from the Wholesaler-cum-Commission Agents at the wholesale market or directly from the primary market in open auction. The vendors are mostly women who carry fish directly to the consumer households particularly in rural pockets, while other retailers generally market at specified market places.

However, these market functionaries change their role in title transference depending upon market surplus and hike in prices. A close observance of market intermediaries in the trade of fish in the district implied that there is no perfect adherence to their role in performing marketing function as 'middle man'. To the extent some of the marketing functions can be combined or performed by the same agency, the number of intermediaries in marketing channel can be reduced. Hence, it is said that middlemen in the marketing can be eliminated but not their functions.

**Problems Marketing**

Table 7. Constraints in fish marketing		
S.No.	Problems	Mean score
1.	Forced sale of fish	74.70
2.	Price fluctuations in fish	67.33
3.	Packaging and Transportation of fish	61.44
4.	Collision among commission agents and auctioneers	42.84

**of Fish System:**

A close examination of the Table 7 revealed that the main problem in the selling of fish by the fishermen was found to be forced sale of fish with a mean score of 74.70. The tie-up arrangements were discussed in detail under the functioning of fish market. The fishermen were in the clutches of auctioneer and have no say simply at the receiving end in the price realisation. Next important problems in selling were price fluctuations, packaging and transportation and collision among intermediaries. These problems fetched a score of 67.33, 61.44, and 42.84. When there is high price, it is obvious that the fishermen are

benefited but there are cases of low price, particularly when the catch has higher proportion of low value fish. However, there are also problems due to packaging and transportation, since fish being highly perishable has to be iced and immediately transferred to distant places, even during odd hours. This has resulted in increased marketing cost with a mark-down in the price realised by fishermen. Collision among traders also found to be a negative effect in few cases of fishermen. The other problems include lack of sufficient capital, proper storage facilities and

ice factories, technical knowledge, proper transport facilities,

**Conclusion:** Over the recent years fish production and marketing in Cuddalore district has been transforming itself into a modern stage despite the infrastructure constraints and inherent complications in the marketing system. The small scale fisher folks have no say in price fixation. The role of middlemen in fish marketing system is continuing unabated due to the absence of institutional involvement. The involvement of several middlemen in the marketing chain is detrimental to the interest of both the

producers and the consumers. The market power concentration of domestic trade of fish is in the hands of few and hence found to be oligopolistic. The detrimental effects of middle men involvement and the low price realisation for fish should be rectified through government interventions and policy measures. But then, the services of intermediaries cannot be neglected It can be taken over by the financial institution in the similar fashion to avoid exploitation. Since the annual income of sample fishermen were found to be low, efforts should be taken to establish dry dock and processing facilities at the shore itself.

### References:

1. K.K.P. Panikkar and R. Sathiyadas (1988)., "Marine Fish Marketing in Tamil Nadu" *Central Marine Fisheries Research Institute*, Cochin.
2. Panikkar K.K.P and R. Sathiyadas (1985)., Fisherman Shares in Consumer's one rupee - A Case Study, *Harvest and post- Harvest Technology of fish*, p.no 704-707.
3. R.Sathiyadas and K.K.P Panikkar (1986)., A study on marketing structure and price behavior of Marine fish in Tamil Nadu.
4. Rao P.S., (1983), Fishery economics and Management in India, Pioneers Publishers and Distributors, Bombay, p.no: 201.
5. Gauraha A.K, A.Verma and Banafar (2005)., "The urban fishermen cooperative society in Chattisgarh".
6. Treats to the Marine Environment, (1998), "Ministry of Information and Broadcasting", *Yojna* September, Mumbai.
7. Cooperative perspective (1990)., "VMINCM Interview text of editor", Jan-March, Pune.
8. Macmillan Encyclopedia of the Environment (1997), Vol 2. Kellert, Black and Halley, New Delhi.

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