and communication facilities and other infrastructure. There is a need to provide these without delay, if the plans are to be made more effective.

In order to overcome these difficulties inherent in the fisheries economy as well as in the plan implementation, the state must intervene and shoulder the responsibility without help of politician for including changes through positive programmes. A committee may be appointed consisting of experts relating to fisheries science and fisheries economics, policy makers and other officials relating to fishing industry, representatives of fishing entrepreneurs and fishermen, to go into the details of various aspects of fisheries development for efficient use of the resource for the benefit of the people of the state.

CHAPTER V

MARKETING AND ITS PROBLEMS

Marine Fisheries in India play an important role in the economy of the country. It helps in augmenting food supplies, generating employment, raising nutritional level and earning foreign exchange. More than 60 per cent of people in India consume fish as a food item. Fish is considered exceptionally valuable from the nutritional point of view, as it contains a
high percentage of readily digestible animal protein. As the agricultural food producing land resource is limited the increasing share of future food supply needs, especially of developing country like India, may have to be met from fisheries. Thus the development of exploited and unexploited marine fisheries resources and its effective management offer a promising solution to the food and malnutrition problem of our country. Fish is, perhaps the cheapest source of protein and also the most efficient among farms in converting feed into nutritious food. It has been estimated, approximately 10 per cent of the world supply of animal protein is contributed by fish.\textsuperscript{456}

At the outset, the activity of fishing was defined as an interactive process between the stocks in the sea, the process of locating and catching them and the final stage of actually marketing the produce.\textsuperscript{457}

At present the movement of fresh fish from the coastal area is mostly confined to short distance to inland areas and big towns. In the early days, the movement of fish was done on cycles and head-loads. Cyclists carry about 120 to 150 pounds of fish at the rear to a distance of 30 to 35 miles. The containers generally used by the trade are baskets gunny bags and wooden cases. It may be stated that practically no ice is used in such transport by cycles or head loads. The result is that the fish reaches the consumer in an advanced state of spoilage and the fishermen are also put to a


great difficulty because fish was perishable or uncertain commodity. Now-a-days the fish could have prevented with advantage had they only used the preservation and chilling during transport.\textsuperscript{458}

In making road is very important. Most of the fishing villages are inaccessible by road and the problem of transport is all the more acute. This is a major hindrance to the development of the fishing industry. Fish being a perishable commodity, quick transport is imperative to fetch good prices to the producer. Construction of link roads connecting the fish landing centres with the main road for quick transport will ensure better prices for the catches. Due to this reason, the Government implemented the new roads during the Five Year Plans.

The income of fishermen depends on their ability to dispose profitably to their catch. Marketing of fish has its own difficulties and good prices depends on their trip in to far seas. Some of the difficulties in the disposal of fish, are the following:

(i) Supply of marine fish is highly uncertain.
(ii) A few fishermen on certain days strike a big catch and return to the shore soon.
(iii) Others may not be fortunate and may return only after a longer stay and at a time inconvenient for marketing the catch.

\textsuperscript{458} \textit{Madras Information}, Vol.XV, No.1, January 1961, p.27.
Similarly, on some days the fishermen secure a heavy catch while on other days they have to return with a very poor one. Thus there is no effective means of regulating the supply of marine fish.

The consumers prefer fresh fish and usually judge the quality of the fish by examining the eyes, gills, sheen and above all by the smell. They consider fish as ‘fresh’ only when the flesh is firm and elastic and when the eyes are full and prominent with a fat black pupil. If fish is exposed for 10 to 12 hours they need proper treatment. On certain festival days demand for fish will be greater than on ordinary days and on certain auspicious days like New Moon, Karthikai, Egadasi people refrain from non-vegetarian food. On the former occasion prices run high and on the latter low prices will prevail in the market.459

The time of landing has also its influence in price determination. Generally higher prices are quoted for marketing arrivals then for fish landed in the evening. Even though the size and type of fish caught have also their influence in the market, they are not as important factors in determining the price of sea fish and a fresh water varieties. This is because most of the sea fish market straight way.

The nature of fish is like hunting. They don’t know their size of the catch and availability of species. Fertile fishing ground to sea fish also had to predict the size and volume of catch. It differs from other occupations especially with agriculture. Yielding in agriculture is very limited to one

time, two times and rarely three times, but in fishing, fishermen have used to go for fishing every day and sell the fishes in the day itself or cannot preserve it to sell it later. Everyday they earn money or lost their nets and other fishing vessels accidentally and there is a possibility of total absence of catch. They invest frequently or almost everyday and it is very short period of investment. In the case of agriculture, yielding is once per year, and their investment is also a long term based and cultivable fisheries require high investment. Fishing is a catch without prediction of resources available.\textsuperscript{460}

The fisheries sector provides gainful employment to many million skilled and unskilled persons in different activities. Many of them are engaged in fishing operations as full time and part time workers. Others are engaged in marketing, repairing, making nets and boats, salt manufacturing etc.

Besides providing direct employment, the industry is also an important income generator, as it supports canneries and processing establishments, gear and equipments manufactures, boat yards, refrigeration and ice-making plants and transport services. Hence the National Planning Commission has proposed to give special attention to the fisheries sector to augment fish production as it is one of the sectors eminently suited to assist a large mass of economically weaker and backward sections of the society.\textsuperscript{461}

\textsuperscript{460} Interview with Thiru. A. Francis, Fisherman, Mulloorthurai, on 15\textsuperscript{th} June 2006.

Down to the bottom the sea has different soil. Each soil accommodate different variety of species. Muddy soil is the best place for prawn; rock place is for lobster and sandy soil has relatively less fishes, in which, there have been numerous varieties of species living and also in other waters. These fishes can be classified into pelagic (surface living fishes) demersal (bottom living fishes) on the basis of its living places. Some time in some places a huge prawn may available and few days later there will be nothing. Also other species will come with big shoal, but some time no fishes will appear.

Each fish has different value in markets, taste difference, preference by consumer, need different fishing gear to catch them. One species will be highly valuable than other species. This will cause changes in other markets, which means, the superior will be treated as an inferior in other places. It depends upon the choice of the consumer and time of arrival in marketing. Some fishes are very good for fresh consumption and some for dry canned. In the tropical sea water there are enormous varieties of species, but less in number. Fishermen did not know which market is suitable for him. He finds the market after he caught the species. The species also decides the market and trade. Despite his commodity has right to certain region, he can’t say that this species is mine, has no rights at all. 

During the season fishermen used to move towards the rich fishing ground follow that the fishermen is being practiced mostly in coromandel coast. Before the mechanisation in artisanal fisheries,

462 Interview with Thiru. N.Peter, Fisherman, Thoothoor, on 6th June 2006.
fishermen are unable to return to their village. So they stay in the migrated village itself. But now they are able to return in the day itself. Migration place will be new for fisherman but he adjusts to market his fish in strange place.

Season is very important for fishing. In a good season fishermen get higher catch at the same time during the lean season he wouldn’t get any catch or very less catch. Some time or most of the time he wouldn’t go for fishing due to rough wind. Season will not be uniform in all places and it differs from place to place, coast to coast. During the peak season volume of catch would be very high. It will reduce the price. Demand for and supply of the fish will fluctuate, but not uniform price which will be given by trader is also not constant. Fishermen’s income depends upon the season. During the lean season he will be unable to go for fishing, if at all he goes he wouldn’t get much fish. This situation compels him to borrow money from different sources and make contact with trader for credit and other fishing related help.

Because of fishermen’s every day transaction they need money to invest on gear, craft, diesel, ice, ration, family expenses, death and other religious function. It forces them to look for different credit sources available to him. Credit may be available from formal institutions and informal institutions. Formal institutions are bank and co-operative societies and informal institutions are private money lenders, pawnbrokers and traders. Fishermen approach the easily accessible resource. In this situation, traders comes to the help to fishermen. Fishermen looking for credit and traders looking for fish contact each other. They exchange fish and
money as per the prices for fish fixed. Fishing style itself need credit. The fishermen have to buy that kind of net which requires replacement on and often for that he needs money. 463

Trader concern is to set the price in buying and selling with margin as he wishes. So he always calculates while buying the fish, whether it is possible to sell with margin or at least without loss. Since the market is very competitive he needs to look to buy fish. Some possible factors influence the landing price. They are (i) arrival time of fish to the landing centre; (ii) absence of transport facility; (iii) more volume fish reach at landing centre; (iv) absence of seller in fishermen family; v) fish sale to trader who gave an advance; (vi) fish sale to trader who had not give advance; and (vii) fish sale to relatives. 464

Many types of markets prevail and each has different features such as perfect competition, monopoly, oligopolistic competition and monopsony. Large number of buyers and large number of sellers are engaging in fish landing centres and there is a perfect competition. According to this market condition, producer will spend for advertisement to bring it to the consumer’s knowledge. But here, produce itself is an attractive one and fish liked by fish eating population and trader will bring it to the fish consumer. So it is not necessary to spend money for advertisement expenditure. Absence of advertisement cost motivated will not add any additional cost on fish price at the landing centre.

463 Interview with Thiru. F.Maria Robinson, Fisherman, Kanyakumari, on 10th July 2006.
464 Interview with Thiru. G.John Doss, op.cit., on 7th October 2006.
If the entry is restricted by any local institution then market structure will change. If one trader or monopoly market only available at the landing centre he has rights to fix unanimously, with a possibility to reduce the price for fishermen.\textsuperscript{465}

If the fish has come at busy time, it can be sold out immediately in good price. Otherwise, it wouldn’t get better price and also the fishermen have to spend money serration. So he will add the additional cost on his commodity. Then the price for the commodity will be increased.

If the fish landing centre is located in a remote area and absence of transport facility fishermen do not want to take risk to sell in other market. Trader also concern about the quick disposal. Under this situation the price will be very less.\textsuperscript{466}

The problem of marketing are more serious than those of production for the small fishermen. They face many bottlenecks and constraints in marketing their daily catch. Since there is no organised disposal of fish, they are forced to accept the unjustifiably low price quoted by the middlemen. The small fishermen have a problem of consolidating their position in the market, where they have to face the competition from motor boat owners, who maintain well planned transport and storage facilities. These also provide them with an opportunity to indulge in speculating of the fish market both by them and the small fishermen.\textsuperscript{467}

The small fishermen’s market is unorganised in the sense that there are no objective criteria to dispose of their products. In most

\textsuperscript{465} Tamil Nadu - An Economic appraisal, 1955.

\textsuperscript{466} Interview with Thiru. A.Maria Cruze, Fisherman, Ramanthurai, on 5\textsuperscript{th} September 2006.

\textsuperscript{467} C.Selvaraj, Small Fishermen in Tamilnadu, Madras, 1975, p..26.
cases, disposal of catch is performed on the shore. The price at which they sell is very much lower than the normal price, in the market centres. Lack of knowledge, motivated by the need for early and quick liquidity, a fisherwomen or man does not transport the catch to sell at the price which would add an extra rupee to their small earnings. They do not realise the extent of the profit made by the middlemen.\textsuperscript{468}

Transport being one of the major constraints in fish marketing of small fishermen, they can not increase their income by selling their catch in the market centres. They engage in distress sales. This gives place to large scale activities of middlemen who take advantage of the fishermen’s ignorance of market movements. They take as much as 50 per cent of the net sales proceeds from the small fishermen for their services.

There are four ways in which the catch may be disposed. First, selling it on the shore, second, through the co operatives, third in the market proper and lastly selling the catch to the money lenders. The income of the small fishermen is lowered by the fact that it resort to the first and the last method of sale.\textsuperscript{469}

In the marketing sphere, co operative societies play a dynamic role in stepping up of the activities. If the marketing presents a positive trend then small fishermen would deliver their landings in the market centre. This, of course, calls for a satisfactory system of transport. In this regard co-operatives can also perform the dual function of advancing loans as well as marketing.

They can thereby keep a check on the flow of the catch into the wrong channels. At every level the co-operatives should also be engaged in market surveys and research. On the organisational side it is recommended that specialised small fishermen’s co operatives be set-up at the primary level. By that the spatially related and contiguous \textit{kuppams} be serviced by District Small Fishermen’s Co-operative Societies which will in turn be financed and supervised by the State Small Fishermen Co-operative Societies.\textsuperscript{470}

\textsuperscript{468} Ibid.
\textsuperscript{469} Ibid., p.27.
\textsuperscript{470} Ibid., pp.38-39.
The Intermediaries play an important role in the fish marketing. In marine fish marketing there are six types of intermediaries and their role and operation are very important. They are: i) auctioneer; ii) commission agents (purchase); iii) wholesaler; iv) commission agents (sales); v) retailer; and vi) vender.\(^{471}\)

In a global perspective, the marketing problem presents a more complex picture with the requisite investment in the infrastructure, the introduction of large fishing vessels to exploit the deeper waters and expansion in the processing capacity in different coastal regions of the state. Exports of marine products can be stepped up considerably.

The Tamil Nadu Exporter of Marine Products will have to face both internal and external competition in selling his product in U.S, Japan or for that matter in any foreign market. He suffers i) from want of financial institutions exclusively meant for the fishing industry, as are available in other maritime countries; and ii) lack of marketing organisation and market research facilities.\(^{472}\)

Another problem of fish marketing is inadequate ice plants and cold storage facilities. Facilities are also provided to store their fish in the cold store. So that the fishermen can conveniently market his produce and thus regulate it during seasons of glut and save his commodity which otherwise would have to be thrown off as spoilt fish or converted into inferior quality cured products. The consumer also benefits by such a procedure. In that he gets his fresh fish in prime quality at the proper time and there is a greater quality of good fish to go around the people. The Railway authorities have also introduced refrigerated fish van on long distance routes in the south.\(^{473}\)


Preservation of fish salting is one of the age-old practices adopted by fishermen. In early days the fishermen were drying fish in the sun light as the process is simple and handy. During the monsoon, when sun drying is difficult, they used salt. To preserve excess fish catch in our country icing, chilling and freezing of fish are adopted and they are comparatively recent developments in the processing industry. In spite of the advantages of preserving fish by these latter methods and marketing them in a fresh state being widely known, still salt curing of fish is resorted. The reason for the persistence of the practice are the inadequacy or non-availability of icing or freezing or storage facilities in fishing centres. The high cost of such preservation becomes a point wherever facilities exist, conservation preventing both fishermen and consumers from using iced or chilled fish. All these factors seem to weigh in favour of the fishermen salting their excess. The prospects of a better market in neighbouring countries like, Ceylon, Malaysia and Burma induce them to go in for fish curing rather than marketing the fish in a fresh condition in the country of production.

Preservation of fishes are developed stage by stage. Canning is a new method followed by the present day exporters. Canning is the best method applied for preserving sardines, mackerel and prawns and is practiced on a limited scale in one strata only in Madras. The fishes are decapitated and thoroughly washed after which they are put in saturated

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475 C.Selvaraj, op.cit., p.28.
brine and then dried. In the last stage, fishes are packed in cans filled with oil. At present, because of the transport shortage fresh fish is consumed in areas located near the coast, or in the neighbouring of landing places. Refrigerated railway wagons and freezing facilities for movement of fish in good condition to consuming areas will ensure a balanced relationship between demand and price.\(^\text{477}\)

The common defects noticed in the present exports are use of impure or low quality salt, improper curing by not using the right quality of salt for the maximum period to enable the salt to strike through insufficient drying, improper packing and storage, contamination with sand, poor quality of the originally taken for fish curing. The fish thus cured is of unwholesome quality and emits an offensive odour due to bacterial spoilage. It is unattractive to consumers due to molds, fungus and insect attack the powdery nature of the flesh due to impure salt on insufficient drying or use of tined fish for curing.\(^\text{478}\)

All these defects can easily be set right only if the curer takes proper care at every stage of curing. The fish should be cured in separate premises with conditions maintained strictly. Only fresh fish of prime quality should be used for curing salt of sodium chloride not less than 96 per cent should be used and fish must be salted in good quantities of salt for the prescribed minimum period. The fish should be washed well both before and after curing and after draining should be dried in the sun in raised platforms or on mats spread over such barbecues with intermittent turning over to

\(^{477}\) C. Selvaraj, *op.cit.*, p.28.
ensure uniform drying. The final product should not be above 30 or 35 per cent of moisture and should be firm and white in appearance. This should be properly kept in storage without admixture with sand or contamination with insects or rodents. Special wooden boxes lined with waterproof lining should be used for packing fish for export. By adopting these methods preserved fish of uniform high quality can be easily obtained and the market will get firmly established.

Madras, with a coast line of 620 miles is estimated to land 50,000 tons of sea fish out of which nearly 3\(^{1/5}\) of the total catch is salt cured during 1960’s. There are 17 government fish curing yards and a number of private fish curing premises. The practices in vogue are pit curing or tub curing or dry salting. There is also considerable export of cured fish from Tamil Nadu State to Sri Lanka and special products like dried prawns, maws and shark fins are exported to Burma, Malaysia and Singapore. The chief ports of export are Tuticorin, Dhanushkodi, Madras, Nagapattinam, Kilakarai and Thondi.\(^{479}\)

In addition the fish is preventing some other methods like, salting, pickling, smoking, dehydration, icing and refrigeration are practiced to a large extent.\(^{480}\)

Cold storage facilities are essential for keeping fish in fresh condition till they are marketed. The provision of such facilities help fishermen to wait for better prices for their catches as otherwise they would have to

\(^{479}\) Ibid.
\(^{480}\) Ibid., Vol.VI, No.9, September 1952, p.12.
sell them at whatever price offered to them on the day of the catches. Hence
the government sanctioned a scheme for the installation of ice-plants-cum-
cold-storage. The work of construction of the building to the ice plants had
been entrusted to the Public Works Department.\textsuperscript{481}

The scheme for the provision of ice plants and cold-storage units for
preservation of fish was one of the important schemes in the Five Year
Plan of the Fisheries Department. The provision of cold storage at
important landing centres enable the landing of catches at any time of the
day without fear or loss of spoilage. This also helped fishermen to put in
more fishing hours on the fishing grounds and thus
increase their catches. The government had, therefore, planned the
setting up of ice plants and cold storage in fish landing and marketing
centres. With this object in view a scheme was included in the Sixth Five
Year Plan. For provision of ice plants and cold storage facilities continued
in the Tenth Five Year Plan also and a provision of Rs. 8 lakhs had been
made for the entire plan period.\textsuperscript{482}

Triplicane is one of the busy areas of Madras. In this hustle
and bustle the ‘Vivekanandar Illam’ called The ‘Ice House’ was built in
1842. This castle like structure was used for storing ice. Refrigerators
were unknown. Fredrick Tudor of Boston, U.S, ‘was a pioneer ice
exporter, harvesting the ice on the ponds that dotted’ New England. It was in
1833 that Tudor sent his first ice shipment of 180 tons, packed in sawdust, to

\textsuperscript{481} G.O.Ms. No.1430, Food and Agriculture Department, dated 15\textsuperscript{th} April 1958, TNA.
\textsuperscript{482} G.O.Ms.No.1387, Food and Agriculture Department, dated 25\textsuperscript{th} April 1964, TNA.
India. Tudor made a profit from this consignment and soon established the Tudor Ice Company, Calcutta and then in Madras and Bombay.

For nearly 40 years the company prospered in Madras, with the Ice-house as its depot. Then ice makers set up business in the city, manufacturing ice by steam process and Tudor’s export empire collapsed. Then the Ice House was sold to Bilgiri Iyengar, an advocate. He remodeled the house and provided it with innumerable windows in the circular walls to make it fit residence, and named it ‘Castle Kernan’, as a tribute to Justice Kernan of the Madras High Court. This building was auctioned in 1906. The Vivekanandar mutt could not afford to buy it and subsequently the mutt was shifted. Therefore, the castle changed many hands. In 1963 the Government took over the building and renamed it as ‘Vivekanandar Illam’. The mutt made efforts to acquire the building, but in vain.483

According to the plan targets of the scheme government had sanctioned the erection of 8 plants in Madurai, Pulicat, Tanjore, Kovalam, Punnakayal, Cape Comerin, Colachel and Idinthakarai. Hence, there was spontaneous welcome from the fishermen wherever ice plants were put up and that the fishermen were eager to have ice plants in their vicinity, as they found it very difficult to get ice from the nearest town, where only commercial plants for ice were available.

The Director of Fisheries, therefore, felt that it was necessary to install a few more ice plants during 1964-65 under a part II scheme to meet

483 Interview with Thiru. P.Rajan, Fisherman, Pudukkadai, on 15th October 2006.
the needs of fishermen adequately. Hence Director of Fisheries submitted proposals for installation of one 5 ton ice plant-cum 15 ton cold storage at Muttom and the installation of 50 ton capacity frozen storage with 2 ½ to 3 ton capacity deep freeze unit and 1 ton capacity flake ice machine at Ennore under the part II scheme for 1964-65.

The plant and freezing unit at Muttom, Kanyakumari District, served Rajakamankalam, Pillathope and Muttom fishing villages. The godowns and curing sheds were constructed by the Fishermen Co-operative Societies according to the type design approved by the Director of Fisheries.484

Fish curing yards is very important for preservation of fish, before the advent of ice plant, cold storage and freezing facilities the fish curing yards were established. The fish curing yards was one of the schemes included under the Third Five Year Plan of the Fisheries Department. It envisaged improved method of curing of fish in the fish curing yards of the state. Rupees 9 lakhs had been provided for this scheme under the Third Five Year Plan. The Dry Fish Industry of the states is a good earner of foreign currency especially from Ceylon and Malaysia.

In 1950 the government sanctioned a scheme for issue of salt at the fish curing yards at subsidised rates of Rs.1-4-0 a mound to attract curers to the yard and to produce good quality cured fish under hygienic conditions. The scheme had been a conspicuous success in the transactions of the fish curing yards. Yards had improved a great deal since the

484 G.O.Ms.No.1387, Food and Agriculture Department, dated 25th April 1964, TNA.
introduction of the scheme. During the year 1952, most of the 69 fish curing yards in Madras state had recorded an increased quantity of fish brought in for curing. In 1952-53 tons of fish were brought to the yards for curing and the quantity of cured product let out was 33,030 tons.\textsuperscript{485}

To avoid national loss due to spoilage of fish, the curers must be given an idea of the roles performed by chemical action. The cause of enzymes and bacteria to spoilage of fish and the modern methods adopted for preventing such spoilage and preserving the fish in good condition. Improved methods of preserving fish by sun drying, dry salting, pit curing, brining, Colombo curing and smoking to the curers are the proper methods of curing suited to local conditions. The fishermen of our country, besides being illiterates are also ignorant of chemical reactions and technical details which really helped in enhancing the quality of dry fish. It was, therefore, quite essential that various methods of curing, packing, storing and marketing of dry fish were demonstrated to the fishermen and curers and adequate training was imported to them in this field. For this purpose, two posts of Inspectors of Fisheries were sanctioned. One Inspector was at Nagercoil and another one Nagapattinam.

The Inspector of Fisheries at Nagercoil visited all the fish curing centers in Kanyakumari and Tirunelveli districts, while the Inspector of Fisheries at Nagapattinam visited all the centres in Thanjavur, Ramnathapuram and Chingleput districts. He demonstrated to the curers who came to the fish curing yards for curing fish, the various improved

\textsuperscript{485} G.O.Ms.No.747, Food and Agriculture Department, dated 8\textsuperscript{th} March 1961, TNA.
methods of curing. They stayed in each yard for a week or ten days, assemble all the curers and demonstrate to them the improved methods.486

Fish is a commodity which is subject to rapid spoilage. The principal causes of fish spoilage are by bacterial action and autolysis. Under ideal growth conditions bacteria multiply about once in every 20 minutes. At the rate a single bacterium will multiply into 68,000,000,000, (sixty eight thousand millions) in 12 hours. Ideal conditions such as high temperature exist in our country. Autolysis is the self-digestion of the fish by enzymatic action.

In 1950’s the quantity of fish lost by spoilage can be roughly estimated at about one third of the total landings. Even after the fish are brought to the roadside, there are no arrangements to take the catches speedily to the markets. In this race the bacteria which decompose the fish, and man who is eager to take it as food in the best condition, every minute counts. So in 1952 the government sanctioned the purchase of fourteen motor vans for conveying fish from the fishing hamlets to markets in cities and towns.487

The sea, no doubt, if properly exploited, would produce enormous quantities of fish. The primitive methods adopted by the fishermen make it impossible to go for out in the sea and fish in good condition. The efforts are being made to introduce mechanised crafts and provided transport.488

486 Ibid.
During 1949, there were 114 fish curing yards in the Madras presidency. The total quantity of fish brought to the yards was 1,411,927 mds, the quantity of salt issued 227,373 mds and the quantity of cured fish removed from the yards was 896 575 mds. So the total revenue of the department for the year amounted to Rs.9,18,788-0-1 and the expenditure to Rs.25,01,266-15-9 as against the revenue of Rs.14,73,203-14-9 and expenditure of Rs.20,67,599-6-3 during the previous year.\textsuperscript{489}

The government formulated a scheme for the grant of subsidies to local bodies and Fishermen Co-operative Societies for improvement or remodeling of fish markets in the states. So this scheme envisaged the grant of subsidies for the construction and improvement of markets to the municipalities and panchayat unions and for construction of model markets at important centres. In this scheme Rs.68,200/- was sanctioned by the government.\textsuperscript{490}

In 1968-69 the government of India sanctioned a cost of Rs.210.00 lakhs for the construction of fishing harbour at Tuticorin under the centrally sponsored schemes and the construction of fishing harbour at Madras at a cost of Rs.388.50 lakhs as a central scheme. The Tuticorin harbour is intended to provide berthing facilities for about 400 mechanised fishing boats, 50 traders drawing a maximum of 13’ of water.\textsuperscript{491}

\textsuperscript{489} \textit{Ibid.}, Vol.III, No.5, 15\textsuperscript{th} March 1949, p.20.
\textsuperscript{490} \textit{Madras Administrative Report, 1966}, Madras, 1967, p.239.
In the same year, the fish canning factory at Tuticorin was started with production capacity of 5,000 cans per day. In 1968 June 10th the freezing plant at Ennore was leased out to Indo-Marine Agencies for a period of five years. The annual lease amount was Rs. 1,20,000/-.

The government sanctioned and provided additional R.C.C. Jetty at Rameswaram which was estimated to Rs.12,500/- and the work was completed in 1971-72.

In 1970-71 the construction of Ice Plants were sanctioned during Third Five Year Plan and subsequent Annual Plans. They are, freezing unit at Tuticorin, ice plant at Cape Comorin and Idinthakarai, ice plant at Muthupet, Sethu Bavachatram, Adirampattinam, Thoothoor, Enayamputhenthurai and Kadapakkam.

The ice plant at Mandapam, Rameswaram, Mettur Dam, Tuticorin, Punnakayal, Madurai, Muttom, Neelankarai, Pulicat, Kovalam, Thanjavur, Thirumullaivasal, Nagapattinam and Portonovo produced a total quantity of 886 tonnes of ice in 1970-71. A sum of Rs.88,793.33 was realised as sale proceeds of ice. A sum of Rs.10,631 was also realised as cold storage charges by the plants concerned. A total quantity of 174 tones of fish and other products was stored in the cold storage. During the same year, the construction of fishing harbour and jetties was...

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493 G.O.Ms.No.38, Forests and Fisheries Department, dated 23rd January 1974, TNA.
494 G.O.Ms.No.121, Forests and Fisheries Department, dated 7th March 1974, TNA.
continued at Tuticorin, Cuddalore, Nagapattinam, Rameswaram and Mandapam.\textsuperscript{495}

In 1970-71, the Fisheries Department implemented several schemes to improve the fish landings of both marine and fresh fishes to preserve the handlings in fresh condition by providing ice-cum-cold storage plant, quick transport facilities to transport immediately the fish from the landing centres to the fish consuming centres.

To assist the local fishermen in direct marketing by transporting the catches to the market and by supplying fishing requisites and fishing implements at fair prices, nine Co-operative Fish Marketing Unions have been started and the same year it established eight District Fishermen Cooperative Federations, organised at Nagercoil, Tuticorin, Ramnathapuram, Madurai, Thanjavur, Cuddalore, Chinglepet and Madras.\textsuperscript{496}

The recommendation of the Fisheries Department, the Tamil Nadu Fisheries Development Corporation (TNFDC) was established on April 11\textsuperscript{th} 1974. The corporation took over commercial activities such as construction and supply of mechanised boats, processing and marketing of catches, and operation of fishing trawlers from the fisheries department.\textsuperscript{497}

\textsuperscript{496} G.O.Ms.No.121, Forests and Fisheries Department, dated 7\textsuperscript{th} March 1974, TNA.
\textsuperscript{497} S.George & G.S.Gupta, \textit{op.cit.}, p.906.
In 1974-75, Tamil Nadu Fisheries Development Corporation had taken over the following activities from the fisheries department. They are, boat building yards, ice plants, cold storage, frozen storage at Ennore, Mandapam and Tuticorin complexes. Fish-meal plant at Mandapam, canning factory at Tuticorin, acquisition and operation of fishing vessels and trawlers and organisation of marketing of fish and fishery products.\(^{498}\)

The activities of TNFDC can be structured into four categories viz., supply of fishery inputs, fishing, processing and marketing. The supply of fishery inputs includes supply of mechanised fishing boats, out board motors, FRP and GRP boats and diesel. For the construction of mechanised fishing boats TNFDC owns about four boat building yards, two in Madras, one each in Nagapattinam and Mandapam with a total construction capacity of 170 boats per annum.\(^ {499}\)

TNFDC imported two Mexican trawlers of 23 mts, for its deep sea fishing costing Rs.80 lakhs. These boats operate from Madras, Mandapam and Tuticorin bases in the state and occasionally from Vizag base in Andhra Pradesh. These two vessels have started fishing from May 1978. Besides these vessels, the corporation owns fishery rights of five reservoirs.

The processing section of the TNFDC opens two type of processing facilities, freezing plants and fish meals plants. Most of the freezing plants are attached to ice plants, cold storages and frozen


\(^{499}\) P.S.George and G.S. Gupta, op.cit., p. 907.
storages. It established there freezing complex are Ennore, Mandapam and Tuticorin.

TNFDC, probably, the only operation which has restricted it marketing activity to the internal marketing of fish. The major objectives of the corporation in undertaking the marketing of fish were to supply fish in hygienic condition at a reasonable price and to popularise consumption of unconventional varieties of fish. For marketing of fish the corporation runs about 25 fish stalls in the state. Madras city has 8 stalls, maximum in the state. The sales consist of 15 per cent inland water fish and 85 per cent marine fish.\textsuperscript{500}

The government sanctioned an expenditure of RS.86,500/- towards the installation of a 3 tones Flake Ice Plant cum-cold-storage at Rameswaram.\textsuperscript{501} The infrastructural facilities consisting of processing plants, servicing facilities, approach roads, community halls, auction halls, fish packing hall, net making shed, water supply and power supply hall which are being provided in important landing centres, so as to facilitate proper handling, processing and transport of fish catches by the fisher-folk. These facilities are being provided at Pazhayar in Thanjavur district with an outlay of Rs.24.00 lakhs and Tondi with an outlay of Rs.5.60 lakhs also in Rameswaram.\textsuperscript{502}

\textsuperscript{500} Ibid., pp.907-908. 
\textsuperscript{501} G.O.Ms.No.228, Forests and Fisheries Department, dated: 24\textsuperscript{th} November 1973, TNA. 
To facilitate the coastal fishermen to reach the shore safely during nights from the fishing grounds guide lights are being installed in the selected fishing villages all over the Tamil Nadu coast. In 1983-84 the Government sanctioned a sum of Rs.11.10 lakhs to guide light facility in 40 fishing villages.\textsuperscript{503}

During the sixth plan period the government had sanctioned the establishment of fishing harbour/jetties at Chinna Muttom, (Kanyakumari District) Valinokam, (Ramanathapuram District) Kadapakkam, (Pudukottai District) and Pazhayar (Thanjavur District) at a total expenditure of Rs.441.32 lakhs.

In 1984-85 a sum of Rs.3.27 lakhs had been incurred for providing infrastructure facilities in Pazhayar, Valinokam and Tondi villages. Government of India also came forward to bear 50 per cent of the cost for affording infrastructure facilities in the Erawadi villages in Ramanathapuram district at a cost of Rs.25 lakhs.\textsuperscript{504}

During the sixth plan, government established the fishing harbours/jetties at Chinna Muttom, Valinokkam, Tondi, Kadapakkam, and Pazhayar, a total expenditure of Rs.441.32 lakhs. The fishing harbour at Pazhayar had been completed and put into operation from November 1986.\textsuperscript{505}

\begin{flushright}
\textsuperscript{503} Tamil Nadu State Administrative Report, 1983-84, Government of Tamil Nadu, 1985, p.98. \\
\textsuperscript{504} Ibid. \\
\textsuperscript{505} Tamil Nadu State Administrative Report, 1986-87, Tamil Nadu, 1988, p.151.
\end{flushright}
The infrastructural facilities like processing plants, servicing facilities and approach roads are being provided in important landing centres. The government provided a sum of Rs.12.6 lakhs at Muttom in Kanyakumari district.

During 1986-87 there are six ice plant-cum-cold storages functioning under the control of the department. Another three plants were leased out to the private parties. In the same year the government sanctioned a number of guide lights in 55 fishing villages. So far 38 guide lights had been installed enabling the fishermen to safely reach the shore with their crafts.506

In 1988-89 the government also sanctioned a number of guide lights in 58 fishing villages. So far 47 guide lights have been installed enabling the fishermen to safely reach the shore with their crafts during night time.

During 1988-89, the Centre and State Governments also sanctioned and established the above fishing harbours/jetties at Chinna Muttom, Valinokkam and Tondi at a total expenditure of Rs.902.10 lakhs.507

Landing facilities consisting of fishing harbours, jetties and other infrastructural facilities are being provide at suitable places in the state, in order to provide berthing and landing facilities for mechanised boats and trawlers facilities have been provided in nine centres. During 1989-90, the work on Tondi fishing harbour was expedited and it was nearing

506 Ibid., p.151.
completion. The construction work on fishing harbour projects at China Muttom and Valinokkam is in progress.\footnote{Ibid., p.49.}

In 1989-90 the Fisheries Department controlled five ice plants and one cold storage. The plants at Nagapattinam and Kilakarai were leased out. At the same year the government installed 52 guide lights in 58 fishing villages in Tamil Nadu.\footnote{Ibid., p.50.} In the year 2000 the government sanctioned the installation of Guide lights in 53 fishing villages.\footnote{V.Ramani bai, \textit{Kadal Vazhamum kadazhali Makkalum}, (Tamil), Sakthi Press, Chennai, 2001, p.179.}

The government proposed to establish fish markets \textit{Meenavar Angadis} in 10 places during 2000-2001 with auction hall and platforms for drying fish.\footnote{Tamil Arasu, April-June 2000, Government of Tamil Nadu, p.87.} The Government of Tamil Nadu had sanctioned a sum of Rs.182.00 lakhs to provide the above facilities for fishermen. These facilities are established in 10 districts like, Chennai, Kancheepuram, Cuddalore, Nagapattinam, Thanjavur, Pudukkottai, Ramanathapuram, Tirunelveli, Tuticorin and Kanyakumari. These facilities are helpful to the fishermen.\footnote{V.Ramani bai, \textit{op.cit.}, p.172.}

The development of fisheries and thereby the socio-economic condition of fishermen, quick transport facilities for fish in spoilt condition is essential. Earlier attempts for provision of these facilities by this department were hampered by the inadequacy of adequate

\footnote{\flushleft{\footnotesize\textit{Ibid.}}}
conveyance together with lack of fordable feeder, roads connecting the fishing hamlets with, a few fish transport vans were commissioned, but the efforts were intensified with the implementation of the plans when a fleet of vehicles were added not only hiring to the fishermen and Fisheries Co operative Unions and Federations but also for sale to them on hire purchase basis. The heavy transport vehicles were specially designed with racks in the middle and seats along the sides to transport not only a maximum quantity of 2 tons of fish but also the fisher folk accompanied their catches to the markets. These schemes not only helped to bring a large quantity of fish for the consumers to the markets, but also saved a large quantity from spoilage. Small transport vehicles like Lambretta (three wheelers) medium size vehicle of 3 tons capacity and bigger vehicles are sold to fishermen under this scheme.

Most of the fresh fish is marketed in fresh condition. Increased marketing of sea fish in fresh condition is necessary not only to meet the large demand of the public for fresh fish but also in the interest of small fishermen who will get a better return if the fish is marketed fresh. Many fishing centres have little or no means of communication with large markets in the interior. Quick transport facilities aim to enable the fishermen to transport fish with minimum of spoilage, to supply more fresh fish to the public for consumption at a price within the reach of everyone and to foster the spirit of Co operatives, Unions and Federations to hire these vehicles and earn profit for the benefit of its members as a whole.
The vehicles provided for transport of fish whether they are borne on the scheme for providing quick transport facilities or on any other scheme of the department are classified into a) small vans, b) medium vans, c) big vans and d) refrigerated vans.

The vehicles are allotted on hire purchase system by the Director of Fisheries based on the suggestions of the Assistant Director of Fisheries to deserving Fishermen Co-operative Unions and Federations. While recommending the case of a Society, Union or Federation, the Assistant Director should take into consideration the financial stability of the Society, Union or Federation, its earning in the past and whether the Society, Union or Federation is financially sound for the purchase of a motorised vehicle and to run it profitably, the availability of adequate fish load from the members and surrounding villages for transport to nearby markets.\footnote{G.O.Ms.No.1430, Food and Agriculture Department, dated 15\textsuperscript{th} April 1958, TNA.}

Fisheries, constitute one of the oldest industries in India. As an industry it has a great role to play for the welfare of the mankind. It supplies food for millions of people all over the world. The Fisheries Department of Tamil Nadu is one of the oldest in the country and the main administrative organisation responsible for developing the marine and inland fish potentials of Tamil Nadu. The fishing industry was an important source of income not only to the government but also the people.

India occupied the seventh place in the world in the total fish production according to the statistics of the F.A.O for the year 1970. India is also the second largest producer of shrimps in the world. Out of a world
total of 69.30 million tones of fish catch, India contributed 1.75 million tones. Tamil Nadu accounted for 16 percent of the country’s total fish production made up of 1.50 lakh tones of marine fish and 1.20 lakh tones of inland fish.

The pre-requisites for the development of marine fisheries are a precise knowledge of the resources, introduction of modern fishing methods, provision of trained man-power and their effective utilisation, creation of the requisite, infrastructure facilities like landing and berthing facilities for fishing boats and larger vessels, installation of processing plants for supplying marine products to consumers within the country in fresh, provision of transport and storage units and developing an export trade with a view to earn the much needed foreign exchange for the country. Marine fisheries thus cover a vast field for the application of science and technology.\textsuperscript{514}

Tamil Nadu is one of the important maritime states with rich inland and marine resources. Roughly one fourth of all marine export from the country is from Tamil Nadu. Hence, the department of fisheries functions with the twin objectives of developing and conserving the fishing resources and ameliorating the socio-economic condition of a large section of fishermen population, who depend upon fishing as their major means of livelihood.\textsuperscript{515}

\textsuperscript{514} G.O.Ms.No.196, Forests and Fisheries Department, dated 13\textsuperscript{th} November 1973, TNA.
\textsuperscript{515} Tamil Arasu, April-June 2000, Government of Tamil Nadu, p.86.
During the year 1972-73 a quantity of 252,900 tones of fish-meal was produced all over Tamil Nadu.\textsuperscript{516} In Tamil Nadu during 1979-80, the marine export products was estimated to be 2,16,659 tones. In the same year the quantity of fish 8,294 tones and value Rs.2,983.27 lakhs.\textsuperscript{517}

Tamil Nadu with a coastal line of nearly 1,000 kms. and a continental shelf of 41,4128 kms. has rich marine fishery potential. Tamil Nadu stands second in the total fish production in the country contributing 15 per cent of the total fish production.\textsuperscript{518}

During 1984-85 the marine fish production was 2.60 lakhs tones in Tamil Nadu.\textsuperscript{519} In 1986-87 the estimated annual marine fish production of Tamil Nadu was 2.50 lakhs tones.\textsuperscript{520}

Fisheries are of great economic significance to India and stand next only to Agriculture in the unorganised sectors. The income from fisheries was estimated during 1988-89 as 0.75% to the net domestic product of the national income.\textsuperscript{521} Export of fish and fishery products from India has earned about Rs.1375.89 crores as foreign exchange in 1991-92, of which prawn alone contributed the maximum share in the physical volume of exports.\textsuperscript{522} Intensive exploration and judicious exploitation of marine

\textsuperscript{517} Ibid., 1979-1980, Government of Tamil Nadu, 1982, p.120.
\textsuperscript{518} Ibid., 1983-84, Government of Tamil Nadu, 1986, p.96.
\textsuperscript{519} Ibid., 1984-85, Government of Tamil Nadu, 1987, p.100.
\textsuperscript{520} Ibid., 1986-87, Government of Tamil Nadu, 1988, p.151.
\textsuperscript{521} Tamil Nadu: An Economic Appraisal, 1989, p.13.
fisheries would help in further boosting our export trade in shrimps and other high value fish and fish products.

During 1989-90, the marine fish production of Tamil Nadu was estimated 2.89 lakhs tones.\footnote{523} Marine fish production has been estimated approximately that 10 per cent of the world supply of animal protein is contributed by fish. India has considerable resources for this protein rich food both from marine and inland water area. But sea fishing has been an occupation with coastal people of India from time immemorial, forming an integral part of the country’s maritime heritage. In comparison with the contemporary status of marine fishing in industrially advanced maritime countries, India’s progress has been tardy.\footnote{524}

The FAO predicted that by the year 2000 AD global demand for fish on the basis of existing trends in relative price and population growth would be around 114 tones. The projection reveals that the demand in developing countries would increase more rapidly than in developed countries. In the year 2000 the demand in developing countries alone was projected at 60 million tones.\footnote{525}

India is a seventh largest fish producing country in the world.\footnote{526} The first six being,, China, USSR, Japan, Peru, USA and Chile.\footnote{527} India has
a coastal line like of 8085 km with starts near Kandla in Gujarat in the west coast and ends at Gopalpur in West Bengal in the east coast with a total continental shelf 4,14,868 sq.kms.\textsuperscript{528}

The positive move towards a modernised marine fishing industry was made only after independence with result, there has been a significant expansion in the export of marine fish. Table 5.1 and 5.2 show the item wise and country wise exports of marine products from India.

<table>
<thead>
<tr>
<th>Sl.No</th>
<th>Country</th>
<th>Quantity/Value</th>
<th>1992-93</th>
</tr>
</thead>
</table>

\textsuperscript{527} Tamil Nadu Fisheries statistics, Endeavour and Achievements, op.cit., p. 1.
<table>
<thead>
<tr>
<th>Sl.No</th>
<th>Name of the Item</th>
<th>Quantity/Value</th>
<th>Year 1992-93</th>
<th>Year 1991-92</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Japan</td>
<td>Q 801.90</td>
<td>412.40</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>V 511.52</td>
<td>360.90</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Western Europe</td>
<td>Q 511.52</td>
<td>675.82</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>V 190.48</td>
<td>150.48</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>USA</td>
<td>Q 190.48</td>
<td>201.41</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>V 72.20</td>
<td>154.54</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Singapore</td>
<td>Q 72.20</td>
<td>154.54</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>V 190.48</td>
<td>190.48</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Hong Kong</td>
<td>Q 80.90</td>
<td>405.93</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>V 28.95</td>
<td>53.30</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>UAE</td>
<td>Q 28.95</td>
<td>53.30</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>V 80.90</td>
<td>405.93</td>
<td></td>
</tr>
</tbody>
</table>


Q: Quantity in tones; V: Value in Crores of Rupees
<table>
<thead>
<tr>
<th></th>
<th>Item</th>
<th>Q</th>
<th>V</th>
<th>V (in Crores)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Fresh Shrimp</td>
<td>Q</td>
<td>743.93</td>
<td>1180.26</td>
</tr>
<tr>
<td></td>
<td></td>
<td>V</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Fresh Fish</td>
<td>Q</td>
<td>753.76</td>
<td>232.41</td>
</tr>
<tr>
<td></td>
<td></td>
<td>V</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Fresh Squid</td>
<td>Q</td>
<td>303.64</td>
<td>151.90</td>
</tr>
<tr>
<td></td>
<td></td>
<td>V</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Fresh Cuttle Fish</td>
<td>Q</td>
<td>189.81</td>
<td>118.88</td>
</tr>
<tr>
<td></td>
<td></td>
<td>V</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Fresh Lobstores</td>
<td>Q</td>
<td>16.13</td>
<td>43.34</td>
</tr>
<tr>
<td></td>
<td></td>
<td>V</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Dried items</td>
<td>Q</td>
<td>42.33</td>
<td>18.02</td>
</tr>
<tr>
<td></td>
<td></td>
<td>V</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Live items</td>
<td>Q</td>
<td>573.00</td>
<td>3.49</td>
</tr>
<tr>
<td></td>
<td></td>
<td>V</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Others</td>
<td>Q</td>
<td>30.69</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>V</td>
<td>19.13</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td>Q</td>
<td>2086.02</td>
<td>1767.43</td>
</tr>
</tbody>
</table>

**Source:** “Fishing Chimes” July 1993, Global Fishing Chimes Pvt, Ltd, Vishakapatnam, P.3.

**Q**: Quantity in tones

**V**: Value in crores of rupees

Our marine exports appear to have reached a plateau. There was a fear that there may be a drop in the quantity exported in 1992-93. Deservedly the final figures have shown a rise in quantity and value of over all marine products exported from 1,72,000 tones in 1991-92 value Rs.1375 crores to 208602 tones in 1992-93 valued at Rs.1767 crores. However deep sea fishing is still in its infancy.
The total fish production both from inland and marine fisheries in India had increased from 280.65 lakhs tones during 1984-85 to 291.65 lakhs tones in 1987-88. The total marine fish production in India in the year 1990-91 was 38.4 lakhs tones alone. Though not very significant, total marine fish landing have registered an upward trend in the last ten years. Therefore, there are promising opportunities to exploit the sea which is an immense store house of human food. The exploit fully the sea food resources, man must turn towards the sea in order to meet the food and protein requirements of the population, with the introduction of the territorial waters, continental shelf, exclusive Zone and other Maritime Zones Act 1976. The fishing industry has assumed greater importance in India.

The following table 5.3 will show the growth in exports of Marine Products in India:

Table 5.3

Growth in Exports of Marine Products in India

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<table>
<thead>
<tr>
<th>Sl. No</th>
<th>Year</th>
<th>Quantity in Tones</th>
<th>Value (Rs.in Crore)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1991 – 1992</td>
<td>171.80</td>
<td>-</td>
</tr>
<tr>
<td>2</td>
<td>1992 – 1993</td>
<td>208.60</td>
<td>1767.43</td>
</tr>
<tr>
<td>3</td>
<td>1993 – 1994</td>
<td>244.00</td>
<td>2503.62</td>
</tr>
<tr>
<td>4</td>
<td>1994 – 1995</td>
<td>320.90</td>
<td>3536.64</td>
</tr>
<tr>
<td>5</td>
<td>1995 – 1996</td>
<td>327.40</td>
<td>3381.13</td>
</tr>
<tr>
<td>6</td>
<td>1996 – 1997</td>
<td>394.50</td>
<td>4007.63</td>
</tr>
<tr>
<td>7</td>
<td>1997 – 1998</td>
<td>398.20</td>
<td>4457.00</td>
</tr>
<tr>
<td>8</td>
<td>1998 – 1999</td>
<td>311.20</td>
<td>4334.00</td>
</tr>
<tr>
<td>9</td>
<td>1999 – 2000</td>
<td>390.70</td>
<td>5056.00</td>
</tr>
<tr>
<td>10</td>
<td>2000 – 2001</td>
<td>502.60</td>
<td>6296.00</td>
</tr>
</tbody>
</table>

**Source**: Foreign Trade Statistics of India Principal Commodities and Countries, (DUCL&S).

The Annual Fishery Potential of the Exclusive Economic Zone of Tamil Nadu is about 6,00,000 tones. Tamil Nadu, the southern state which is bestowed with a vast inshore coastal area is contributing much towards Blue Revolution. The untapped potential for mari-culture and coastal aquaculture, particularly, shrimp farming and mud crab culture is astonishingly enormous. Tamil Nadu is third largest marine fish producing state in the country not only to Kerala and Maharastra in that order. Fish

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533 *Exportable Fish and Fishery Product in Tamil Nadu Information Brochure*, No.7, Directorate of Fisheries, Madras, p.2.
and fisheries play an important role in the well being of the economy of Tamil Nadu.

The importance of fisheries from the point of view the state economy can be known from its contribution to four aspects given below:

i) Source of cheap animal protein
ii) Generator of mass employment both direct and indirect
iii) Income; and
iv) Earner of valuable foreign exchange.\footnote{C.J.Samuel, “Fish Export at Cost of Nation’s Health”, \textit{Indian Express}, 12\textsuperscript{th} October 1979, p.7.}

Fishing is a good source of self – employment to lakhs of fishermen and their families in coastal villages of Tamil Nadu. With regard to employment position in Tamil -Nadu, marine fishing carried on with traditional crafts in highly labour – intensive. An estimated 5,06,959 fishermen lived in the 442 fishing villages spread along the coastal line of 1000 km of Tamil Nadu in 1992.\footnote{Tamil Nadu Fisheries Statistics, 1991-92, op.cit., pp.1-2.} Number of persons in the state are engaged in fishing related activities, though on part time basis, like marketing of fish, making and repairing of nets, curing and processing of fish, sea – weed collection, chank collection and coral collection.

Fisheries are of considerable economic significance to the state. The contribution of income from fisheries was estimated at Rs.50.94 crores
during 1988-89\textsuperscript{536} which was 0.46 per cent of the net domestic product of the state, resulted in 0.56 per cent annual average growth rate and which formed 1.87 per cent of primary sector.\textsuperscript{537}

Over seas trade in fish and fish products has secured for the state 227.80 crores, foreign exchange during the year 1991 – 92 which formed 16.5 per cent of the foreign exchange earned by India in exporting fishery products in the same year. Out of the total fishery products exported, frozen shrimps top the fishery earnings to the tune of Rs.155.37 crores\textsuperscript{538} of foreign exchange. Export of fish and fishery products from India and Tamil Nadu are shown in Table:

\textbf{Table 5.4}

\textbf{Export of Fish and Fishery Products from India and Tamil Nadu}

<table>
<thead>
<tr>
<th>Sl.No</th>
<th>Financial Year</th>
<th>Quantity in Tones</th>
<th>Value in Rs.Lakhs</th>
<th>Quantity in Tones</th>
<th>Value in Rs.Lakhs</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1986 – 87</td>
<td>85843</td>
<td>46067.28</td>
<td>18053</td>
<td>6876.36</td>
</tr>
<tr>
<td>2</td>
<td>1987 – 88</td>
<td>97179</td>
<td>53120.00</td>
<td>13361</td>
<td>6619.39</td>
</tr>
<tr>
<td>3</td>
<td>1988 – 89</td>
<td>99777</td>
<td>59785.38</td>
<td>14965</td>
<td>10294.33</td>
</tr>
<tr>
<td>4</td>
<td>1989 - 90</td>
<td>110788</td>
<td>63476.23</td>
<td>18509</td>
<td>9974.01</td>
</tr>
<tr>
<td>5</td>
<td>1990 – 91</td>
<td>139419</td>
<td>89336.98</td>
<td>27340</td>
<td>16588.28</td>
</tr>
<tr>
<td>6</td>
<td>1991 – 92</td>
<td>171820</td>
<td>137589.00</td>
<td>24770</td>
<td>22780.00</td>
</tr>
<tr>
<td>7</td>
<td>1992 – 93</td>
<td>208602</td>
<td>176743.00</td>
<td>30963</td>
<td>33745.00</td>
</tr>
</tbody>
</table>

\textsuperscript{536} \textit{Tamil Nadu – An Economic Appraisal – 1989, op.cit., p. 10.}

\textsuperscript{537} \textit{Ibid., p.13-14.}

\textsuperscript{538} \textit{Tamil Nadu Fisheries Statistics 1991-92, op.cit., p. 79.}

**Table 5.5**

The Marine Fish Production from Tamil Nadu Coastal Districts

<table>
<thead>
<tr>
<th>S.No</th>
<th>District</th>
<th>YEAR</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Chennai</td>
<td>14868</td>
</tr>
<tr>
<td>2</td>
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**Source**: Tamil Nadu Fisheries Department, Endeavour and Achievement, 1999-2000.

Thus the foregoing analysis indicates that the problem of marketing fish are, inadequate transport facilities, lack of preservation, inadequate ice plant and cold storage, involvement of intermediaries, inadequate dry fish processing facilities. The co-operative societies are