CHAPTER I

DESIGN OF THE STUDY

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INTRODUCTION

The fishing industry is one of the oldest industries in India and it has a great scope for rapid improvement in the present day. But in many parts of India the fishing industry is still in a primitive stage. The changes which take place in the methods of fishing and in the handling of fish are not rapid enough to cope up with the increased needs of fish in India. Despite the earnest efforts made by the Central and the State Governments to improve the conditions of the fishing industry, the progress made in India is not very impressive when compared with the progress made by other countries in the world like Japan, Chile, Russia, China, the United States of America, Canada, the United Kingdom and Norway.¹

India has a coast line of 4,667 Km length (2,900 miles) and the total area of the continental shelf in the area of the sea with 100 fathom depth is 2,59,000 sq.km (1,00,000 sq. miles). In addition to the area of the continental shelf, modern methods of pisciculture could be introduced in 1,21,500 Hectares (2,99,280 acres) of mangrove marshes.²

The total annual catch of fish in India is over two and a quarter million metric tons. This is not a very impressive figure in comparison to the total annual world catch of over 50 million metric tons. Still India holds the seventh rank among the fishing nations of the world.
Fish is converted into fish meal which is famous as cattle-poultry feed and manure, food for plantations and valuable protein food for children. Fish meal is a highly valuable protein content stuff, regarding amino acid distribution. The essential amino acid is present to the maximum in fish meal and especially the vital ones - Rysine, Methonine and Crystine. Fish meal increases the growth of pigs and chicken by up to 20 per cent compared with those fed on vegetable diet.

The Fishermen in India are generally poor people. The caste system which had its influence until recently, has retarded fishing activity. The profession did not enjoy the status of other industries. For a developing country like India exports are very important and they play a vital role in the country's economic development. Fishing is a hazardous occupation and our fishermen have developed their natural skills to face the risks and hazards in the sea.

For over half a century till now dried or cured fish, prawn pulp and related products have been exported to the neighbouring countries like Ceylon, Burma and Malaysia. The products processed for export were not hygienically prepared and the revenue from export was not substantial. The demand in the foreign markets varied much and there were no efforts made to find out new markets. An impetus to the export of sea food came with the demand for shrimps and lobsters in the U.S.A. The very high
market value of shrimps in the U.S.A. attracted the businessmen with incentive and capital and the first consignment of shrimps to the U.S.A. was sent in 1953. So the Freezing and canning of sea food in Marine Product Export Development Authority in Cochin is of a recent origin, and has been almost entirely export oriented from the very beginning of 1950's. Attracted by the monetary returns of shrimp processing more and more factories sprang up along the West Coast of India, especially around Cochin. At present there are over 50 factories on the coast of Kerala and about 94 firms in India are engaged in shrimp processing and packing for export.

The earnings from the export of marine products realised by Marine Product Export Development Authority is about 27 crores annually and the efforts of the Governments are directed to increasing it to Rs. 40 crores annually by the year 1985. Shrimps are also exported by Marine Product Export Development Authority to Europe, Australia, New Zealand, Canada and Japan. Traditionally processed sea food like dried fish, dried prawns, sharkfins, fish maws and the like were also exported in a limited quantity by Marine Product Export Development Authority, Cochin. As early as 1950's freezing and canning factories opened in India in good numbers for processing of Shrimps. Now several countries of the world such as Japan,
the U.S.A., the United Kingdom, Germany, France, Belgium, Australia, Sweden, Denmark, Canada, Switzerland, Singapore, India and Spain are in our export lists.

Since the inception of planning in India, special attention has been paid to the development of fishing and allied industries because this sector is eminently suited to assist a large number of backward and economically weaker sections of the rural community. It provides an opportunity to bridge the gap between the availability and requirements of high quality protein subsidiary foods for internal consumption at reasonable process and it has export-potential. The development of fishing and allied industries has received even more attention in recent years because of the declaration of the 200 mile Exclusive Economic Zone by the coastal nations. With the extension of Exclusive Economic Zone, it has become necessary to go in for deep sea fishing but the country has neither the experience nor the infrastructure for the task. Efforts have been made to promote mechanised fishing and fish landing and harbour facilities provided by the Marine Product Export Development Authority's Development Trust Wing. But it has been observed that the mechanised trawlers, have been operating in the same area as country craft of Fishermen.
The total world catch of marine fish of Marine Products Export Development Authority has increased 2½ times more than the average catches of the Fifties. The total catch from the Indian Ocean shows a slight increase during this period, though this increase is nothing in comparison with the increase in the yield from the Pacific and the Atlantic Oceans. The most significant aspect of the world fishery statistics is the enormous increase in the catches from the Pacific Ocean. The commercial catches of fishes from Indian Ocean consist of both pelagic and demersal fishes. The pelagic fisheries show a dominance of Prawn culture. The rate of growth of fishes are relatively fast in warm seas as compared to that of the fishes of the temperate seas. Still another peculiarity is that the commercial catches in the absence of the gadoid fishes constitute the bulk of the catches from the Atlantic and Pacific Ocean.

The trend of the yield of fishes from the Indian Ocean has not kept pace with the increase in the world catches and it is generally reported that many off shore stocks are not exploited and many inshore stocks are underished. Among the countries, India is a leading country in marine fish culture. The total sea food catches in India is about 9,00,000 metric ton
per annum out of which nearly 70 per cent is from the West Coast of India. The Coastal fishing operation along the Coast of India by traditional craft the gear extends to a distance of about eight to ten kms from the Coast and the modern mechanised boats go as far as 15 to 20 kms from the Coast.

The Marine Product Export Development Authority provides more than 5000 fishing bouts all along the Coast of India and this is quite insufficient to meet the requirements of fishing over the entire continental shelf. The reasons for the marked difference in the yields from the two Coasts are to be sought in the differences in the physical, chemical and biological conditions of the Arabian Sea and Bay of Bengal. It is clearly known from the accounts pertaining to the nutrient and productivity that the water of the Arabian Sea is relating rich in nutrient as compared to the water of the Bay of Bengal.

The export of sea food is dominated by frozen, canned and dried shrimp, frozen lobster tails, frozen frog legs, shark fins, fishmaws and canned dried fish. The sea food industries of India are comparable to the best in any other part of the world. India is one among the seven major countries of the world.
The year 1985 witnessed an export of 9,05,258 tonnes of Marine Products, which earned over Rs. 10,526.26 million worth of foreign exchange to the Marine Product Export Development Authority in Cochin. The export declined both in quantity and value from the peak of 8,65,563 tonnes valued at Rs. 14,855.8 million in 1984, which shows a fall of 4,105 in terms of quantity or 64.04 million in terms of value.

The export of marine products by the Marine Product Export Development Authority has shown a steady growth since 1962, but India witnessed a marginal fall during 1985. Marine fishing and allied activities of the Marine Product Export Development Authority's fishing operations are limited to a narrow coastal belt about 10 to 15 kms width. It is evident that the increase in the availability of raw material can lead to greater production and so of higher export earnings from total exports about 85 per cent by value comprises shrimp in one form or other. In recent years the U.S.A., Australia, Japan and European Countries have been importing substantial qualities of frozen and cannel shrimp through Marine Product Export Development Authority. The Marine Product Export Development Authority, in fact, today is the today second largest supplier or shrimp to Japan. Large quantities and dried prawn and dried fish are exported to Ceylon, Africa and the Middle East Countries.
Export of most of the dried shrimp is effected through Cochin, Tuticorin and Bombay. The Marine Product Export Development Authority Cochin in the principle centre for production and export of shrimp. The Fishing industry is mainly located on the West Coast of Cochin which accounts for $\frac{3}{4}$ of the total fish products.

There are two aspects in searching for fish. The first in the location of the general area of potential productivity and the second is the specific location of fish and fish schools. The first aspect is research oriented and the second in the equipment oriented. The main tools for catching fish is the net or gear. Indian fishing and sea food industry is on the threshold of a very high expansion. The development project envisages the utilization of the latest modern technology through active collaboration with major international fishing firms. Up to date facilities for canning, freezing, mechanization of fishing boat, improving the methods of handling and preservation of modernization of fishing gear are offered at the fishing centre along the coast lines with the purview of the Marine Product Export Development Authority Cochin.

The main tool for catching fish in the gear (net). Depending upon the species to be caught, tend the depth of the water there are as many as 250 types of gear in use. The Marine Product Export Development Authority observes that there are different types of gear employed in catching the same type of fish in
different regions. The existing fishing gear of the Marine Product Export Development Authority can be classified into two types:

(i) Active Fishing Gear
(ii) Passive Fishing Gear

There are some incentives for exports, e.g., cash compensatory support. But the fishermen, by long large, are affected by the market fluctuations in catches. Besides the fluctuations in the income of the Fishermen, the rising prices of raw materials and the narrowing down of the margin between the cost of production and unit value returns are posing serious problems to the stability of fish processing and the export industry.

The Marine Product Export Development Authority had done very little to publicise the quality of our shrimps abroad. Because of the bad quality of materials and the entry of some unscrupulous suppliers into the business, the rejection rate on Indian Ports as well as on some of the Foreign ports was very high. Most processors and exporters felt that the Marine Product Export Development Authority should be more active in helping Indian processors and exporters, and in diversifying the products into markets other than Japan and the U.S. A. This can help of higher unit value realization.

The processors and exporters felt that one of the major problems was related to the information on space availability in the Marine Product Export Development Authority. It was also
found out that the exporters had faced problems with regard to freight. The Conference Lines which determine freight charge were freight from Indian exporters putting them to a disadvantage in the international market, particularly in the U.S.A.

The present study is an attempt to probe into the working of the Marine Product Export Development Authority Cochin and the extent of help rendered by the institute in the promotion of export and allied functions of the sea food industry in Kerala State.

1.2 SIGNIFICANCE OF CASE UNIT

The Marine Product Export Development Authority Cochin was constituted by the Government of India under the Marine Product Export Development Authority Act and it started functioning in September, 1972. Broadly, its functions are pertaining to the areas of development in off-shore and deep-sea fishing in general and to the increase of exports of the marine products from different areas. To day there is no State in India without a Marine Products Export Institution. The goal of establishing Marine Product Export Institutions has not been achieved fully.

Fish is a highly perishable commodity and spoilage starts immediately after the fish are removed from the fishing nets. The rate of spoilage is very fast in all tropical countries and
hence every possible care has to be taken to delay the process of decomposition. This is a stiffening of the fish and rigor mortis sets immediately after the death of the fish. So there is a need for foreign market to sell the perishable product after resorting to different types of preservation and processing of fishes. Spoilage is also caused by the enzymes in the tissue which continue their activity even after the death of the fish. The fish has to be brought to the shore in haste to avoid too much spoilage. As soon as the catch is brought to the shore, it is taken to the market for removal to a cold storage. The Marine Product Export Development Authority create a resistant movement among themselves and consequently only a few fishermen go over to the wholesale market to participate in the purchase.

The traditional practice of taking advance of money from the Marine Product Export Development Authority traders by the fishermen for undertaking fishing operation and meeting the day to day family expenses, has forced the fishermen to sell their produce to the Marine Product Export Development Authority traders. There is lack of awareness among the fishermen and they do not know that they can get a better price for their produce from the Marine Product Export Development Authority. Even though the Marine Product Export Development Authority helps to sell the produce without any market charge, the fishermen have to pay heavy loading and unloading charges to the traders.
The fish should be washed with clean water before preservation to remove the slime, flood and mud. Many fishing centres in India are still deficient in the essential requirements: an abundant supply of pure water, good road to expedite the transport of the catch to the interior markets and sufficient storage space during the peak fishing season.

When the fishes have to be stored for a long period of time deep freezing is done to ensure preservation without the possibility of undergoing any deterioration. The fishes are frozen to 40°C within six hours and stored at about 20°C. The fish thus stored keeps in excellent condition for several months. Deep freezing methods are employed in all the frozen shrimp and lobster chilli in processing factories. The institute namely the Marine Product Export Development Authority Cochin perform vital role in export of fish in different countries.

The Marine Product Export Development Authority Cochin is an organisation fully owned by Government of Kerala. The Government of Kerala transferred it to the corporation of some Commercial Institutions which were being run by the Department of Fisheries. It was subsequently taken up by the Marine Product Fisheries Sector.
The Marine Product Export (Department) Authority is there to serve the food industry from fishing to processing, packaging, storing, transporting and marketing—especially to the different markets all over the world. The Marine Product Export Development Authority is entrusted with this task to ensure a healthy growth of industry through judicious regulations, conservation and control. The important markets for fishing products from the Marine Product Export Development Authority are the U.S.A., Japan, France, the United Kingdom and Denmark. Certain agencies like trade promotion Team, Development Projects, Marine Product Export Promotion Council, Quality Control and pre-shipment Inspection and the like perform the pivotal role for the development of Marine Product Export Development Authority Cochin in Kerala.

Incentives are given to fishermen in addition to salary when their production rate exceeds pre-fixed targets. Management and union representatives in the Marine Product Export Development Authority had discussed in Nov. 1982 the modification of incentives schemes in this institute. The incentive scheme is introduced to increase production per shift. The Marine Product Export Development Authority should be given a minimum quantity of production per month and those who employ above the minimum level should be given incentives. This duration of production should be restricted to particular days.
Sale proceeds are mostly realised on consignment basis. Sometimes goods are exported only after receiving advance amount.

1.5 REVIEW OF PREVIOUS STUDIES

This study is the first of its kind and no study of this topic has been attempted so far. There are a number of studies undertaken by individuals and institutions relating to the export of fishing in the country. Such studies were highly useful to the researcher to identify certain variables for the present study.

John Kurien Roy in his study, "Towards an understanding of fish economy of Kerala State" has made a descriptive analysis of technology employed in fishing industry in Cochin. Such studies were highly useful to the researcher to identify certain different types of fishes and the export trend values of some foods.

Murchandi and Hiranand have studied the impact of marketing and exporting of fishes and market structure efficiency by estimating monetary gains accruing to the producers and export market created by the institutions.

A study titled "Prospects of Industrial Finance in Indian Fishing Industry" by Rao Honon made a qualitative assessment of agriculture and fishing market in India. She estimated their
Institutional finance with reference to its impact on the different aspects of fishermen, consumers and middlemen.

In his study on the "Marketing and Export by sea food in Gujarat" Johny P. Zappold has studied the working of fishing industry in the whole State. The main trust of the study concerned with the establishment and growth of sea food industry in the state along with the legal framework, their functions and financial position. The study brought to light the extent of the sales outside unregulated market area, the ultravires transactions, taking place within the limits of the market proper, the wide fluctuations in the rates of market fees and the like.

Another recent study on the "Fishing in Troubled Waters" D. Ponte Darryl analyses the economics of fishing and living conditions of fishermen and fishing in troubled waters in Cochin area. The study focussed its attention mainly on the socio-economic conditions of fishermen and it did not touch the other important areas like marketing, financing, transporting, packaging, preservation and price variations in marine fishing industries in Cochin.
Pranath Sanyal in his study "Handling, Storage, Processing of fishes explains the strategy of mechanisation, landing and harbour facilities adopted to improve the handling, storage, processing and transport of fishes. In this study, the performance of exporting of marine product was evaluated in terms of the following three criteria. 10

(i) Price advantage to fishermen
(ii) Reduction in cost of marketing
(iii) Amenities made available to the buyers and sellers, traders and fishermen in the markets.

The study found out that the fishermen were aware of the different exporting institution like Marine Product Export Development Authority, Cochin and Central Marine Fisheries Institute, Cochin.

R.R. Prasad in his study titled "prices of fish in internal market" has explained the development of fisheries and allied functions performed by the marine industries. Efforts have been made mainly to gear the realization of export potential. Per-capital income availability of fish in internal markets has not gone up significantly. The increase of prices has been more rapid than the indices of food articles and indices of all export varieties marine products commodities during the year 1980-81 to 1984-1985. 11 Therefore all efforts made to fisheries
and allied industries have much impact on nutritional status of the poor and rich people.

Further his study reveals that in India the price of fish is at its highest level in July and August. After November, prices decrease and reach their minimum in January and February.

1.4 SCOPE OF THE STUDY

The Marine Product Export Development Authority in Cochin have been established for the purpose of helping both fishermen and traders. Both fishermen and traders derive benefits from Marine Product Export Development Authority. But the present study does not aim at high lighting the benefits derived by the fishermen and foreign countries from the Marine Products Export Development Authority. The study concentrates on the Cochin Marine Product Export Development Authority's administration and allied functions.

The study also focuses attention on the working of the Marine Product Export Development Authority Cochin relating to the export of Marine Products.

1.5 OBJECTIVES OF THE STUDY

(i) To study the export of marine products in different areas and item-wise exports

(ii) To study the procedure of fish landing and determination of fish for export
(iii) To study the factors influencing marketing and allied functions performed by the Marine Product Export Development Authority - Cochin

(iv) To study the projects and development schemes for promoting export

1.6 METHODOLOGY AND TOOL OF DATA COLLECTION

The present study is a 'Case Study' based on secondary data. The secondary data were collected from the Marine Product Export Development Authority Cochin by the researcher.

1.7 GEOGRAPHICAL AREA COVERED

The study covers the Coastal District in Kerala State. The researcher has selected the area of study on the basis of co-operation and suggestions of the high officials of the Marine Product Export Development Authority Cochin and Export Inspection Agencies in Cochin.

1.8 COLLECTION OF DATA

The relevant data used in this study were collected only from secondary sources. Required secondary data were collected from the Marine Product Export Development Authority Cochin, Sea food export journal, Management of Marine fishing journal, Report on sea food export, Survey on landing of fishes, Industrial
Marino Magazines and the like. The researcher has frequently visited the Marine Product Export Development Authority Cochin and the data were collected from the institute. The main data for the study are only secondary in character.

1.9 PERIOD OF COVERAGE

The data relating to the Marine Product Export Development Authority in Cochin had been collected for the period of 10 years from 1975-1976 to 1986-1987.

1.10 FRAMEWORK OF ANALYSIS

For analysing the working of the Marine Product Export Development Authority in Cochin export trend and growth rate have been used. The various factors influencing the level of export in area-wise and item-wise in the Marine Product Export Development Authority have been analysed with the help of classification tables.

1.11 SCHEME OF REPORT

The thesis has been organised into six chapters. The first chapter with design of the Study. It includes Introduction, Significance of Case Unit, Review of Previous Studies, Scope of the Study, Objectives of the Study, Methodology and Tool.

The second chapter highlights the area-wise and item-wise export of marine products from Marine Products Export Development Authority, Cochin. It includes Introduction, Exports to Belgium, Exports to West Germany, Exports to France, Exports to Denmark, Exports to United Kingdom, Item-wise Exports, New-Items of Export, Port-wise Export and Summary.

The third chapter explains the procedure of fish landing and fish determination for export varieties. It includes Introduction, Fish landing Centres determined by the Marine Product Export Development Authority, Types of Boats in Operation and their Catches, Fishing Crafts and Fish Production, Fishing-Gear and Gear-wise Landings, Major Fishes Landing for Export, Fishing Craft and Fish Production Pelagic and Demersal Group of Fishes for Export, District wise and species wise Landings, District-wise Cumulative Landing and Summary.

The fourth chapter presents factors influencing marketing and allied functions performed by the Marine Product Export Development Authority, Cochin. It includes Introduction, Structure of Fish Market, Price spread and price determination, Marketing Administration, Storage Facilities, Assembling, Processing, Grading and Pricing, Filleting, Freezing, Packing, Transportation and Summary.
The fifth chapter deals with the Marine Product Export Development Authority's Projects and Development Schemes for promoting export of marine products. It also includes Introduction, Collaboration with Marine Product Export Development Council, Development Projects, Quality Control and Pre-shipment inspection, Trade Promotion Team, Trade Promotion Seminars, Brackish water Prawn Farming, Promotion of Export of Tropical Fishes, Standing Committee for export of Marine Products, Promotion of Deep Sea fishing projects and vessels, Common spoilage in Processed Fish, Training Programmes and Summary.

The sixth chapter deals with summary of findings the problems confronting the promoting of the fish market in foreign countries and suggestions for improving the working of the Marine Product Export Development Authority.
REFERENCES


