SIGNIFICANCE OF FISHING INDUSTRY IN KERALA

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CHAPTER II

SIGNIFICANCE OF
FISHING INDUSTRY IN KERALA

Fishing plays an important role in the economy of Kerala. Due to heavy pressure of population on land, per captia availability of arable land is dwindling. At the same time, the State fishery resources remain unexploited. The geographical feature of the State, the pattern of cultivation and the pressure of population have influenced the growth of fisheries in the State.

The geographical condition of Kerala differs from that of other states in India. Kerala is a small state tucked away in the southwest corner of India, enclosed between the high Western Ghats in the east and the Arabian Sea on the west. It has a land area of 38,863 sq.km. which is 1.18 per cent of the total area of India, but 3.1 per cent of the total population of the country is in Kerala.

The State has a coastal length of 590 kms which constitute 10 per cent of India's total coastline. Appendix-I reveals that of the total geographical area of 38.85 lakh hectares, net sown area is 56 per cent. Forest occupies 28 per cent. Agriculture and forest sectors together account for over 84 per cent of the total land area. This is depicted in Fig. 2.01. In view of high density of population, the pressure for non-agricultural uses is increasing. Appendix-I
also shows that land under non-agricultural uses was 7.79 per cent in 1992-93 and was increased to 10.10 per cent in 2001-2002. There was no perceptible improvement in the extent of land use for agriculture. In fact, the net-cropped area has declined from 22.50 lakh hectares to 21.91 lakh hectares between 1992-93 and 2001-02.

**Fig. 2.01. Land Use Pattern (2001-02)**

Moreover, the total area available for the cultivation of food crops is gradually decreasing due to the encroachment of plantation or non-food crops. It can be seen from Table 2-01 that the area under cultivation of food crops like rice and tapioca decreased during the period of 10 years from 1992-93 to 2001-02 while the area under cultivation of plantation crops like rubber increased during the period. This shows the tendency to convert the lands
which were earlier used for cultivation of food crops into plantation of non-food crops.

**TABLE 2.01**

*Area of Rice, Tapioca and Rubber in Kerala*

<table>
<thead>
<tr>
<th>Crops</th>
<th>Area (Hectares)</th>
<th>Increase/Decrease from 1999-93 to 2001-02.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1992-1993</td>
<td>2001-02</td>
</tr>
<tr>
<td>Rice</td>
<td>5,37,608</td>
<td>3,22,368</td>
</tr>
<tr>
<td>Tapioca</td>
<td>1,35,033</td>
<td>1,11,189</td>
</tr>
<tr>
<td>Rubber</td>
<td>4,44,096</td>
<td>4,75,039</td>
</tr>
</tbody>
</table>


During this period from 1992-93 to 2001-02 the production of food crops shows a decreasing trend. The following Table 2.02 reveals the production of rice and tapioca during these periods.

**TABLE 2.02**

*Production of Rice and Tapioca*

<table>
<thead>
<tr>
<th>Crops</th>
<th>Production (Tonnes)</th>
<th>Increase/Decrease from 1999-93 to 2001-02.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1992-1993</td>
<td>2001-02</td>
</tr>
<tr>
<td>Rice</td>
<td>10,84,878</td>
<td>7,03,504</td>
</tr>
<tr>
<td>Tapioca</td>
<td>26,29,127</td>
<td>24,55,880</td>
</tr>
</tbody>
</table>


When the production of rice was reduced by 3,81,374 tonnes, the production of tapioca was reduced by 1,73,247 tonnes during the period from
1992-93 to 2001-02. This shows that the internal production of food crops in the State is declining. Due to this grave situation, the State has to depend heavily on other states for its food requirements.

Moreover, the shortage of food requirements in the State is further aggravated by its ever-increasing population at an alarming rate. According to 2001 census, the total population in Kerala was 318.40 lakhs. Appendix-II shows that the population in Kerala was increasing at a higher rate than All India population rate from 1901 to 1971. But since 1981 the rate of increase in the population of Kerala has been less than the All India rate of increase. However, the population in the State in absolute figures shows an increasing trend.

Thus, the ever-increasing population always exercises heavy pressure on land which is indicated by density of population. The present density of population for Kerala is 819 persons per sq.km., whereas the density of population for India as a whole is 324 persons per sq. km. The density of population in Kerala was 747 persons as per 1991 census. That means, the density of population for Kerala has raised by 72 persons during the 10 years of 1991 to 2001. Among the Indian states, Kerala is in third position in respect of density, the first being occupied by West Bengal and the second by Bihar. This increase in population is another important factor that poses the problem of food shortage in the State.
Due to these unique features of the State like scarcity of food, increasing population, high density of population, development of non-food crops instead of food crops, it is high time for the State to concentrate on alternative source of food, if we want to tackle this grave situation. In this juncture, fisheries have a significant role as an alternative source of food.

Role of Fisheries

Kerala is physically the smallest but one of the most active maritime states of India. It is blessed with a long coastline and 44 rivers and a number of lakes, which constitute the inland fishery resources. The abundant supply of fish both from sea and inland waters helps a lot to reduce the severity of food scarcity in the State. Since ancient times, fish has constituted one of the major parts of the diet of Keralites. "It is estimated that about 70 per cent of the total fish production in the State is being consumed internally. The annual per capita consumption of fish in the State is about 20.02 kg which is higher than the national average consumption."²

When compared to that of the other states in the country, the per capita consumption of fish in Kerala is 6 times higher than the all India average. The number of houses in Kerala where fish is being used for consumption is 829 per thousand in villages and 812 per thousand in cities. The following

Table 2.03 reveals the monthly per capita consumption of fishes in Kerala and other states.

**TABLE 2.03**

**Monthly per capita consumption of fish in Kerala and other states**

<table>
<thead>
<tr>
<th>States</th>
<th>Villages</th>
<th>Cites and Towns</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Quantity (kg)</td>
<td>Fish consumption per thousand houses (No. of houses)</td>
</tr>
<tr>
<td>Kerala</td>
<td>1-06</td>
<td>829</td>
</tr>
<tr>
<td>Tamil Nadu</td>
<td>0-12</td>
<td>206</td>
</tr>
<tr>
<td>Karnataka</td>
<td>0-08</td>
<td>116</td>
</tr>
<tr>
<td>Andra</td>
<td>0-07</td>
<td>240</td>
</tr>
<tr>
<td>Gujarat</td>
<td>0-02</td>
<td>79</td>
</tr>
</tbody>
</table>

Source: Aasoothrana Sahayi (4) - Fisheries Sector -1998, published by State Planning Board - Govt. of Kerala.

This table reveals that in consumption of fish the State is far ahead of other states in the country. "It is often said that if the whole human population switched over to fish for staple diet, we could survive for millions of years even at the present rate of growth in population since fish resources are inexhaustible. If we don't exploit them they will be lost".3

According to John Kurian, about three quarters of the annual protein intake of the State's population is derived from fish.\textsuperscript{4}

"The per capita availability of protein originating from fish is 4 gram per day from 20 gram edible portion of fish while that from meat, egg and milk is only nominal. Since the diet of the people is mostly protein deficient and the cereal supplies only half of the requirements, there is a pressing need for stepping up food production in the State. Proper exploitation of the rich fishery resources of the State could go a long way to help solve the food problem of the State".\textsuperscript{5}

Thus, instead of meeting all the food requirements from land-based resources, we have to look into marine resources which are quite extensive in nature. Moreover, marine resources are renewable and replenishable year after year. Even if certain quantity of fish from the total stock in sea is exploited, it is self-renewing.

Fishery industry is a source of raw material to other industries. Fish manure serves as a source of oil for soap making. Fish skins can be converted into fine leather. Japan produces more than 200 varieties of fishery by-


\textsuperscript{5} Integrated Fisheries Development Project for Kerala - Project Report - Beypore. By Govt. of Kerala Development Department (1975).
products. The major by-products are fish oil, fish bones, prawn pickle, frozen crab, meat, etc.

**Fish Economy of Kerala**

The State has all the requisite natural endowments for building a strong and vibrant fisheries economy. They include a stretch of coastal belt extending over 590 kms. and an extensive inland water resource spread over 4 lakh hectares. The exclusive economic zone (sea spread up to 200 meters) lying adjacent to Kerala coast is around 40,000 square kilometers which is almost equivalent to the land area of the State. The district-wise details of coastline and continental shelf area of Kerala are presented in Appendix III.

The assessment of fishery resources made by the Central Marine Fisheries Research Institute reveals that there is potential for capture fishery to the extent of 11.50 lakh tonnes in the marine sector. According to the statistics for 2001-02, marine fish production in Kerala was 5.94 lakh tonnes which accounted for 20.48 per cent of the production of the country. Appendix IV gives the details of fish production in Kerala and in India as a whole.

The trend in marine production of Kerala reveals that the average fish production during 1980-1988 was 3.31 lakh tonnes per annum. In other words, up to 1988 the marine production was stagnating around 3.31 lakh tonnes per annum. Since 1989 the marine fish production has been increasing
and the average production from 1989 to 2001 was 5.80 lakh tonnes. This increase in fish production was due to the resource conservation measure viz., ban on monsoon trawling introduced by the State Government since 1989.

The fish production during 1980-2001 shows that Kerala contributes an average 21.53 per cent of India's fish production. Thus, Kerala is one of the principal fish producing states in India among the maritime states in the country. Appendix IV also shows that fish production in the State was hovering around 5.7 lakh tonnes during the last one decade. As for the last two decades the year 1990 recorded the highest marine fish production of 6.78 lakh tonnes. The lowest production during the last decade was in 1997 with 5.11 lakh tonnes.

Although the fish catch from the Kerala coast include more than 300 different species, the commercially important ones comprise only 40 species of marine fish. However, the success and failure of the fish production in the State is determined mainly by a few species like sardine, mackerel and prawns.

The quantity of the highly valued species in the total catch ultimately decides the income of the fishermen. Unfortunately, the share of highly valued species among the fish catches is still very little. Prominent among them are promfret, seerfish and prawn. Appendix V reveals the species-wise composition of fish landings in Kerala from 1992-93 to 2001-02. The annual
average production of these three species is 2338 tonnes (promfret), 5098 tonnes (seerfish) and 54497 tonnes (prawns). This constitutes 0.40 per cent, 0.89 per cent and 10 per cent respectively of the average fish production of the last ten years.

Of the average fish landing in the State during the last ten years, the annual average catch of oil sardine was 86,647 tonnes, constituting 15.20 per cent of average production. Oil sardine is the most important variety consumed mainly by poor sections of the society. Mackerel, another important low-valued item, mainly consumed internally constitutes 12.60 per cent of the average fish production of the last ten years. Since the production of low-valued species is more than that of the highly valued species, a major portion of our production is consumed internally. However, we have a leading role in the export of marine fishes.

EXPORT

Fishery is an important source of foreign exchange. Export earnings from fisheries sector in India have been from marine fisheries sector, which has grown to a major industry with a cumulative capital investment of around Rs.3350 crores and a gross annual income of Rs.8000 crores according to CMFRI. During 2002-03, of the total export earnings of the country, 2.6 per cent was from marine products.6

6 Economic & Political weekly - August 2-8, 2003 page 3223.
Though India ranked 4th among the fish producing countries, it occupies only the 17th position among the fish exporting countries of the world.

Kerala plays a major role in the export of marine products in the country. Appendix-VI gives the details of marine exports from India as a whole and from Kerala from 1992-93 to 2001-02. The performance of exports from India as well as from Kerala both in terms of quantity and value are also depicted in Fig. 2.02 and 2.03 respectively.

Fig. 2.02. Quantity of Marine Exports in India & Kerala from 1992-93 to 2001-02
From 1992 to 97 Kerala exports have increased considerably both in terms of quantity and value. However, the export of marine products from Kerala decreased from 92,288 tonnes valued at Rs.936 crores in 1996-97 to 89366 tonnes valued at Rs.948 crores in 1997-98. It shows a decrease of 3.17 per cent in quantity. But the value increased by 1.28 per cent because of hike in prices.

The export of marine products went up from 70641 tonnes valued Rs.817 crores in 1998-99 to 92,148 tonnes valued at Rs.1148 crores in 1999-2000. The overall export from the country also increased from 302934 tonnes valued at Rs.4627 crores to 343031 tonnes valued at Rs.5117 crores during this period. Also, during this period, the contribution of the State to the
export of marine products from the country has increased from 23 to 27 per cent, while in monetary terms, it was from 18 to 22 per cent.

The export performance of Kerala has shown a negative trend during 2001-02, both in terms of quantity and value. The marine export from the State during 2001-02 was to the tune of 72756 tonnes valued Rs.951 crores constituting 17 per cent in terms of volume and 16 per cent in terms of value of Indian marine products export. The export of marine products from the State during 2001-02 declined by 18.12 per cent in quantity terms and 9.08 per cent in rupee terms compared to the previous year's. The overall export from the country also declined during this period by 3.63 per cent in quantity and 7.56 per cent in value terms. The two reasons for the decline in export realisation could be the economic slowdown in one of the major markets, viz., Japan and crash in the price of back tiger shrimp in the international market. The State's share in the all India export has been declining in recent years. The share declined from 27 per cent in quantity terms in 1999-2000 to 17 per cent in 2001-02. But, the share in value has remained the same 16 per cent during the last two years. Yet, today Kerala continues to be the principal marine exporting state in the country. In short, though Kerala's share is coming down, export from Kerala has been generally on an upward trend except during 1997-98, 1998-99, 2000-01 and 2001-02.
When we compare the share of export quantity of marine products with the total quantity of marine landings in the State, it could be seen that export share is between 8.87 per cent and 17.49 per cent of the landings during the last 10 years, 1992-93 to 2001-02. Appendix VII shows the marine fish landings and their export from Kerala during the period 1992-93 to 2001-02. From 1992-93 to 1995-96 the share of marine fish export to the total fish production was increasing. However, in 1996-97 it decreased to 13.96 per cent. The highest percentage of export quantity to the total fish landings was registered during 1997-98 when the State exported 17.49 per cent of the total marine production. In 1998-99 the share of export to the total fish production declined to 12.13 per cent and was stagnating around 15.50 per cent in 1999-00 and 2000-01. In 2001-02 the State was able to export only 12.25 per cent of its total marine production. The marine fish landings and their export from the State during 1992-93 to 2001-02 are depicted in Fig. 2.04.
The major markets for Kerala's marine products are shown in Appendix VIII. European Union continued to be the major market for the marine products exported from Kerala with a share of 42.65 per cent in value and 44.61 per cent in volume during 2001-02, compared with the 35.30 per cent in value and 32.90 per cent in volume during 2000-01. Japan is the second largest market with a share of 12.29 per cent in quantity and 18.75 per cent in value. Exports to USA in 2001-02 were 14.34 per cent of the total volume of export and 17.50 per cent of the total value of export. It shows that the exports to USA declined both in quantity and value when compared to 2000-2001. China imported 5550 tonnes (7.63 per cent) of marine products and the value realised was Rs.63.66 crores (6.70 per cent) during 2001-02.
China's share during 2000-01 was much higher than that during 2001-02. The major export markets and their share are shown in Fig. 2.05.

**Fig. 2.05. Major Export Markets and their Share during 2001-02**

Although, the Kerala export of marine products consists of various items, the commercially important are four products, namely, frozen shrimp, frozen fish, frozen cuttle fish and frozen squid. The other products are frozen crab, live fish, dried fish etc. The item-wise export of marine products from the State both in terms of quantity and value are shown in Appendix IX.

Out of the total 72,756 tonnes of marine products exported from the State valued at Rs.950.55 crores during 2001-02, frozen shrimp ranked first. During 2001-02, the export of frozen shrimps was 28,023 tonnes and it came up to 38.52 per cent of total volume of export. In terms of value also, frozen shrimp occupied the prime position with the largest annual export worth Rs.549.48 crores and it was 57.81 per cent of the total marine export of the State. Thus, frozen shrimp is the most important item of export of Kerala.
Frozen cuttle fish is the second major item of export in terms of quantity and value. Its share was 18.99 per cent of total quantity of export and 16.12 per cent of the total value of export during 2001-02.

Frozen squid is in the third place the share of which was 16.93 per cent of the volume of export and 12.12 per cent of the total value of export during 2001-02.

Frozen fish is another important item of export, but in value terms it accounted for only 5.83 per cent of the total value of export during 2001-02, indicating that it is a low priced item. It also suggests that there is demand for low-valued fish in the overseas market.

Appendix IX also shows that the exports of these four product lines have shown an increasing trend both in terms of quantity and value over 1992-93 period. But, they have a declining trend both in terms of quantity and value compared to the previous year of 2000-01. However, marine sector still has a significant role from the point of view of its contribution to foreign exchange, besides serving to reduce the food problem of the State. There is also enough scope for further demand for marine products in the world market due to increased health consciousness.
EMPLOYMENT

Fisheries sector also provide employment. As fishing is a labour-intensive activity, it can provide much employment opportunity in its various sectors such as fish catching, processing, freezing, transporting, marketing and allied activities. Since present day fishing is mechanised and motorised it requires highly skilled and technically qualified hands for maintenance and servicing of fishing equipments. A boatful of fish can be caught by six or seven fishermen. In case of large OBM crafts, on an average, thirty to thirty five persons are engaged in fishing. But, it requires further carriers to bring the catch into the seashore. A number of persons are also involved in carrying to the ultimate consumers or to the major marketing centres. Compared to other areas of fishing, more people are involved in its transportation.

The estimated fishermen population in Kerala during 2001-02 is 10.75 lakhs which includes 8.28 lakhs in marine and 2.47 lakhs in inland sector. Appendix X shows the details of fishermen in the State. Alappuzha district is in the first place in the number of fisherfolk with a population of 1.81 lakhs followed by Thiruvananthapuram (1.76 lakhs).

But, Thiruvananthapuram is in the first place in the number of marine fisherfolk with a population of 1.74 lakhs followed by Alappuzha (1.16 lakhs). Of the total marine population, Malabar region claims 3,63,605
fisherfolk covering Trissur, Malappuram, Calicut, Kannur and Kasargode districts. This constitutes 43.92 per cent of the total marine population of the State.

The number of active fishermen during 1999-2000 was 2.26 lakhs which comprises 1.85 lakhs (82 per cent) in marine and 0.41 lakh (18 per cent) in inland sector.

This sector also provides employment to a very large number of people who are engaged in allied activities as beach workers, small traders, dried fish workers, peeling workers, fish processing workers etc.

Since fish is a perishable commodity, it requires to send the fishes from the producing centres to ultimate consumer market without waste of time. Hence, fish marketing function includes all those activities until the product reaches from the producer to the consumer. There is enough scope for employment in the field of preserving the fish with ice or freezing, salting, drying etc.

In a state like Kerala where unemployment is the crucial problem, fisheries sector plays a vital role in providing jobs to thousands. Moreover, the peculiar feature of Kerala's unemployment is that women outnumber men who seek employment through Employment Exchanges. The total number of women job seekers who registered their names in Employment Exchanges in Kerala as on September 2002 was 22.26 lakhs compared to 17.30 lakhs men
registered with Employment Exchanges. Hence, the women job seekers are more by 12 per cent than the men job seekers. In this circumstance, there is enough scope for employment of women in allied sector of fisheries. There is a large number of women employed in this sector as peeling workers, fish processing workers, factory workers, small retail traders, beach workers etc. Hence, fisheries sector provides more employment to a large number of women than any other primary sector in the State.

Many industries associated with fisheries can also absorb people for productive employment. Industries such as boat-building, net-manufacturing plants, construction of processing establishments, workshop for maintenance of boat, repair shop for engines, creating infrastructural facilities for preserving the fish and so on can provide very good scope for employment at fisheries.

A number of entrepreneurs have started export oriented processing units in the State. There are 124 freezing plants with the freezing capacity of 2154 tonnes per day in Kerala. The infrastructure facilities in the fisheries sector also generate employment to a large number of people.

Thus, fisheries sector contributes directly and indirectly to the generation of employment in the State, and such sectors must be given due importance to tackle the unemployment problem in the State.
The above discussion clearly shows that fisheries sector is of vital significance to the economy from the point of view of food-supply, foreign exchange earnings and employment opportunities.

Although Kerala boasts of highest quality of life in the country as measured by human development indicators, it is a fact that the State's fishing community has largely been left out of the general development experience. This necessitates a detailed study of the socio-economic problems of fishermen in Kerala, which is going to be discussed in subsequent chapters.