SOUVENIR

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RESEARCH SUPPORT FOR SEAFOOD EXPORT PRODUCTION

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Marine capture fisheries contributed nearly 60-65% of the total fish production during the past decade. Out of the total marine landing of 1.4 million metric tonnes comprising a variety of items, only a few selected species found their way into the export market. During the 1981-85 period, the volume of processed marine products exported from India was in the range of 70,000 to 92,000 tonnes per annum. Among the export items one single item, namely, frozen shrimp constituted the bulk, amounting to more than 60% by volume and 85% by value. The demand for different fishery items already in the export markets and several new items for which India has potential for production is on the increase in the international markets. Mainly on account of production constraints we have however been unable to fully avail ourselves of the favourable market opportunities.

A perusal of the export data reveals that several of the items that have no domestic demand as food or otherwise are in good demand in the international markets. The possibilities of augmenting production and export of some of the items for which resource potential in our waters has been fairly well established are briefly discussed in this paper.

Till the technology of freezing and canning was adopted for marine products, exports from India were largely confined to dried items to neighbouring countries like Sri Lanka, Burma, Singapore, etc. The advent of quick transport facility for frozen cargo opened the sophisticated affluent markets of Japan, USA and other European countries to Indian exporters of marine products. Over the years India emerged as the largest supplier of frozen shrimps to Japan and a major supplier to the USA, next only to Mexico and Ecuador. However, the near total reliance on a single commodity, viz., shrimps, that too only to one or two countries is not quite a healthy trend for a country like India. Efforts have, therefore, to be made for diversifying the markets and products. The Marine Products Export Development Authority after conducting several market surveys has identified the following items which have export potential:

1. Tuna and allied fishes
2. Ribbon Fishes
3. Silver Pomfrets
4. Anchovies
5. Cat Fishes
6. Perches
7. Shark
8. Sardine
9. Mackerel
10. Scianeids
11. Polynemids
12. Threadfin Bream
13. Aquarium Fishes
14. Squids
15. Cuttle Fishes
16. Clams and Mussels

These items already figure in our exports but in very insignificant quantities. Except for tuna, squids, cuttle fish, clams and mussels, the consumer demand for these items within the country itself is very high and their international market prices are not very attractiive.

According to one study, the projected marine fish requirement of India by the year 1984-85 was 2.88 million tonnes. Of this, 1.9 million tonnes were for human consumption, 0.59 million tonnes for industrial uses such as production of fish meal|fish manure|poultry feed and the remaining 0.39 million tonnes for exports. Against the demand the estimated production during the year 1984-85 was hardly adequate to meet the internal demand for human consumption. Unless the internal demand is met and sufficient surplus is generated fish export may not be an economically viable proposition. However, considering the gap between the potential resources and the actual exploitation, there is considerable scope for increasing production. The prime food fishes such as pomfret, perches, sardines, mackerel, etc., have good demand from importing countries but the scarcity of supply in the internal market does not permit large scale export of these items.

The marine products items which have not much demand in the national market are tuna and allied fishes, cuttlefish and squids. These items are also the poorly exploited ones at present, though the identified potential is quite

vast. Against the estimated potential of 0.180 million tonnes of cephalopods, the quantity being exploited is around 16,000 tonnes (less than 9%). Squids and cuttlefish are only incidental catches in the exploitation of shrimps and fishes and the effort put in to exploit these resources through specialised fishing is next to nil.

One way of increasing marine production is by increasing the effort of exploitation and another is by extending the operations into under exploited|unexploited areas. The essential data with regard to the fish population abundance, area of concentration and the impact of fishing effort over given area has to be compiled on the basis of research and investigation and provided to the industry. More thrust is necessary in this area in order to increase fish production.

From records it may be observed that the near shore area upto 50 meter depth is well exploited and production is showing trends of stagnation. On account of large scale demand for shrimp for export, intensive fishing operation have already lead to economic, if not biological, overfishing. Therefore, it is time that fishing operations moved offshore. The lack of reliable, useable information about the types of catch, location of fishing grounds and suitable fishing technology in the offshore have been identified to be some of the major reasons for the poor effort put in for the exploitation of offshore fisheries resources. Studies on the size of the stocks of different species, their rate of mortality and recruitment, the inter-relationship among species, and the inter-relationship between a stock and its environment in the distant sea within the EEZ are essential. The collection of data and its analysis and proper interpretation on a continuing basis are absolutely necessary to have clear understanding of the resources and to plan proper exploitation strategies.

Prospects of Aquaculture

Several species of fish and shell fishes are now successfully cultivated in marine farms of different descriptions. The lead taken by the Central Marine Fisheries Research Institute in India on this aspect is commendable. However, production programmes have not taken off the ground for various reasons. There is no doubt that the export of shrimp can be increased considerably by augmenting production through farming. Scientific management technology has to be introduced in the traditional prawn culture practised in about 30,000 ha. in the country. With the potential area available in the country estimated to be well over 1.4 million hectares, it should not be difficult to bring an additional 50,000 ha. under brackishwater prawn farming. Absence of clear policies on land use, lack of adequate quantity of prawn seed for stocking, lack of technically trained manpower to handle the multi-disciplinary functions connected with prawn hatchery and farms, etc. have been identified to be major constraints on the growth of prawn farming in the country. The level of production

of prawns through culture is quite poor in the country in comparison with many South East Asian countries. Therefore, intensive research is required to develop technology, viable under Indian conditions, to optimise production from the existing fields and new farms are to be brought under prawn culture. The technology developed has to be effectively disseminated to the field level and for that training and demonstration programmes have to be organised.

The backwaters, brackishwater lakes and in-shore sea in India are ideally suited for the purpose of pen culture and restocking to improve natural population and other management techniques to increase production. And it is high time we moved into the open waters with modern tools of management to sustain and improve production. Our research programmes have to be oriented to this if we have to achieve the targeted production. The Central Marine Fisheries Research Institute being the nodal organisation collecting data on marine fisheries resources, the institute should also effectively disseminate knowledge and information to the end users namely, the fishing industry. While it is gratifying to note that the Institute has attached considerable importance to extension activities and included them as integral parts of its research and development programmes there is considerable scope for intensifying the extension services and making them more result oriented. On the one hand resource data and such other technical information should be passed on effectively to the end users and on the other research projects should be so designed and oriented as to be of direct practical relevance to the fishing industry.

For sustaining the large momentum of the export-led growth of the fishery industry which was witnessed in the 60s and the 70s it is absolutely essential that adequate research, training and extension back-up is provided by institutions like the CMFRI.