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# SEMINAR ON POTENTIAL MARINE FISHERY RESOURCES

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**Central Marine Fisheries Research Institute**
*(Indian Council of Agricultural Research)*
P. B. No. 2704, E. R. G. Road, Cochin-682 031, India
October 1987

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# NEW DIMENSIONS IN FISHERY MANAGEMENT

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Food resources remain under pressure for the rising Indian population. Our need to provide adequate and nutritious food is becoming much greater. Fish as a food and protein suppliant is universally accepted.

The future of economic stability and prosperity of India could be sought along our God bestowed generous coastline. Adequately surveyed and fully exploited ocean resources could produce earnings much more than any other resource this country may have ever known.

Knowledgeable people, who include scientists, politicians, senior Government officials, consultants and managers in fishing industry, feel that growth rate in general has been very disappointing, There have been many seminars, speeches, recommendations, and still there has not been optimum exploitation of marine resources which could have been achieved if the problem had been tackled more imaginatively and known facts had been analysed in proper perspective.

This is evident from the fact that till now we do not have a national fishery policy, which could have formed the backbone of growth to initiate decisive action plan.

The capital has remined shied away from fishing industry for fear of day to day changes in implementing so called rules and regulations. The policies have been basically made on ad-hoc basis. Many times the interpretations were based on ignorant whims by the people who had nothing to do with framing of the policy itself.

Any policy should be judged only to the extent it has been executed. If we review our developmental Five Year plans, we are to realise that most of the time paltry sums which were san-

ctioned for development of fishery resources remained unutilised. When there were plans for purchase of fishing trawlers there was paucity of resources.

The main objectives of the plans were:

a) Increase in fish production by increasing the number of mechanised boats

b) Improvement of the social economic conditions of fishermen, who were primary producers.

Between 1951-1985, our efforts on fishery development programmes and achievements in marine sectors are as follows:

a) As stated, marine fish production increased from 5.34 lakh tonnes in 1951 to 1.45 million tonnes in 1973. By itself it may not be poor, but when compared to other developing countries of S. E. Asia it is too slow. Moreover, since 1973, the production has virtually stabilised around 1.45 million tonnes. For comparison, other countries have registered the following growth pattern:

Phillipines - 400 times
Sri Lanka - 500 times
Thailand - 800 times
S. Korea - 900 times
Taiwan - 1000 times

b) The number of mechanised boats [between 8 and 14 m. length] rose from almost nil in 1951 to over 20,000 in 1984, and the non-mechanised boats from 75,000 in 1951 to 135,000 in 1982. The range of fishing operation increased from 20-22 miles in 1951 to 30 miles in some regions. Depthwise, our fishermen increased their fishing zone from 20 fathoms in 1951 to 40-45 fathoms in 1984. In the meantime, the cost of fuel alone has risen phenomenally. It has become natural for fishermen to go for selective fishing, prefering high unit value species to larger catches of uneconomical varieties.

c) In the year 1976, charter scheme was introduced by Government, with considerable foresight, to stimulate and galvanise the fishing industry by providing opportunities to them to experience something not known to the Industry, and for greater coordination of efforts for harvesting. The scheme was further revised with more stringent laws in the year 1980:

i) to get factual data

ii) to train Indian personnel

iii) to develop indigenous fleet

iv) to locate foreign untapped markets

The advantages of charter policy have been as follows:

i) New experience of Indian crew to work on long voyages, sometimes as long as four months.

ii) Leadership coordination for organising fishing on board.

iii) The concept of team work to be ensured on fishing trawlers for optimum utilisation of plant and equipment

iv) To work hard and in purposeful manner on board vessels.

v) To coordinate navigational skills with harvesting of fish even during rough seasons.

vi) Companies have gained experience and confidence to operate fishing trawlers on ownership basis.

vii) Adoption of bull trawl fishery by more than 500 Indian boats mostly in Tuticorin area.

d) There has been tendency in recent times for large number of fishing boats to remain idle because of non-availability of fish storage facilities. This could be considered the most improtant factor for th e stagnation in growth.

These are known facts to be taken into account for the formulation of new fishery policy.

The policies, objectives and strategies incorporated in various plans remained unchanged in all these years. Even in the latest plan there is no mention of stagnation of fishery development or its causes. Fishing Industry is important to Indian Economy as a source of nutritious food, employment and earning of foreign exchange. It should never be forgotten that even with meagre investment fishing industry earns more than Rs. 375 crores of valuable foreign exchange per annum.

The Industry has not registered anticipated growth. For development, it should have sound technological and economic base with proper plans and motivated desire for implementing the same, and above all, it will have to look for new concepts of fishery management.

Time has come to broaden our thinking. We are a big nation, and have no other choice than to think big.

Naturally, the present process of talking big and thinking small has to be changed completely. We have resources in our E. E. Z. There exists great stock of Krill in the Antarctic Ocean. We must also include the exploitation of Krill as part of our National Fishery Policy.

The implementing strategy should take into account national objectives on one side and national talent and availability of financial resources on the other to become the instrument of much needed positive change. We could at this stage identify the target which could be achieved in say next 10 to 12 years. Using various results, M. Visvaraya Industrial Research and Development Centre, Bombay, worked out the following resource potential in 1980:

| Depth zones (in m.) | Area as% of Indian E.E.Z. | Potential Yield (in thousand tonnes) | Adjusted fig. (in thousand tonnes) |
|---|---|---|---|
| 0 to 50 | 9.0 | 2,260(50.56%) | 3,000(66.6%) |
| 51 to 200 | 11.6 | 1,170(38.25) | 1,000 (22.2%) |
| 201 and over | 79 4 | 500(11.19%) | 500(11 1%) |
| | 100.0 | 4,470 | 4,500 |

From this we can safely state that India has harvestable fish resources of at least 4.5 million tonnes per annum in the E E.Z. From the various studies it has also emerged that it would be more profitable to fish further in 20-40 fathoms depth because that would give most economical returns. It would also be less expensive, since existing boats can exploit this area without any further investment. This area can be fished by smaller and medium fishermen with their existing technology and equipment.

The data presented show very clearly that another one million tonnes of fish can be harvested by exploiting to the optimum level, the depth zone of 0 to 50 m. Question arises, how to achieve this ambitious target? The assets which we possess are at the moment 7500 km long Indian coastline, where more than 300.000 artisinal fishermen live in about 2500 villages. The traditional fishermen operate 15 feet non-mechanised boats, whose number is at the moment about 135,000. We also have mechanised boats up to 50 feet length, numbering about 20,000 and deep sea fishing boats numbering about 90.

Studies indicate that there is scope for addition of 200 more shrimp trawlers. whose economical viability has already been established. There is also need for the introduction of intermediate crafts in near future, which will be owned primarily by the members of fishing communities.

The immediate gains for us can only be achieved by round the clock utilisation of traditional and mechanised boats, which

in itself can exploit another one million tonnes ot fish by involving smaller capital investment, for renovation and upgrading of craft and fishing equipment. Continuous use of boats can be motivated by creation of cooperatives for their management and incentive orientation.

It is a known fact that most of the boats remain idle as the fish prices crash, the moment these fishermen improve their efforts and start landing more fish. Because of this, the fishermen, who fish for four days in a week, would earn the same amount as there are no facilities for them to store the surplus fish.

The investment which could be made in near future, should be made for the establishment of fish centres all over the coastline, to provide:

a) Fish storage facilities at low temperatures

b) Loading and unloading equipment

c) Transportation to refrigerated cargo vessels or other consumer centres by road.

d) Supply of ship stores, fuel oil, lub oil, fresh water, ice, provisions etc.

e) Ship maintenance and management facilities, workshops' slipways, suitable space for inspecting and repairing of nets etc.

I am now convinced that only by this approach it would be possible for us to exploit our resources further in near future. Once fish storage centres have been established, Indian fishermen would automatically increase their fishing efforts, and shall remain operative for the maximum possible period. Indian traders, who are one of the most skilled and talented in the world, will find ways and means to process, market and export the stored fish catch. International market will respond to the quotes of Indian Exporters of marine products in much better way. This will permit industry to go for the export of fish

properly by ensuring quality and delivery schedule. It will be possible for Indian entrepreneurs to create new thrust in the international market, as the world is witnessing resurgence in consumer use of fish after years of stagnation. The change is the result of low cholesterol fat content in fish and consumer resistance to red meats.

This will also help create bigger consumer base in the country itself as on one hand fishermen will get better price and on the other the Indian consumer will get better quality fish at very much cheaper prices. With supplies assured, fish will become part of regular diet in Indian household.

Fishery policy planning should be based on the basis of exploitation of species like Anchovies, Carangids, Tunas, Cat fishes, Perches, Deepsea Prawns, Cephalopods, Squids, Cuttlefish etc.

This way, having set out a target of exploitation of one million tonnes of harvestable resources in 10-12 years time frame, we can go about creating a system approach to gain specialised knowledge for exploitation, storage and marketing. For development, fishery policy may consider:

a) The declaration of fish harvesting as agricultural activity, having the same incentives as other agricultural outputs.

b) Establishment of fish centres with strong capital base to be able to buy and store all possible catch to be purchased at minimum support price.

c) The purchase at declared support price should be through cooperatives to enable round the clock utilisation of boats by changing the crew after every voyage if required.

d) Pollution hazard will emerge as the greatest enemy of the traditional fishermen. It could be countered by declaration of pollution—free zones and diverting the attention of small fishermen to more lucrative, less capital intensive methods of fish-farming, which will yield more fish at less cost and effort.

e) Motorisation of country craft.

f) Creation of franchised marketing outlets.

To achieve these targets, we may plan:

a) Survey of specific resources

b) Design improvement for fishing craft and gear

c) Identification of financial inputs

d) Creation of storage, processing, marketing and transporation arrangements.

e) Utilisation of all landed fish.

f) The manpower planning must take into account the national talent rather than theoretical achievements of passing out-dated examinations.

g) The role of various agencies, such as banks, Export Development Authority, and other financial institutions.

h) The objectives of various Governmnet departments must be very clearly defined and understood for their flexible interpretation.

i) Coordination of efforts of all the Fishery Institutes by appointment of a Director General and Institutes Management Board, having overall decision making powers.

j) To improve living conditions of fishing communities and to create educational Institutions for them to orient their thinking towards modern fishing trends.

k) Investment, keeping in view that per rupee invested direct and indirect employment potential in fishery is only next best to textile industry.

l) Adopt any other measure and systems approach for the optimal utilisation of our fishery resources.

I feel, that the time has come to frame a target oriented time bound National Fishery Policy. To start with, we may plan to harvest additional one million tonnes of marine resources. I feel certain that it can be done.

To achieve this target, let us dare and fix the date 31st as December, 1999.