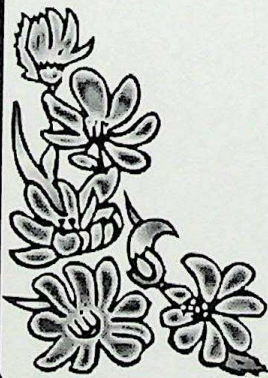


CHAPTER - III

SIGNIFICANCE, DEVELOPMENT AND PROBLEMS OF FISHERIES CO-OPERATIVES IN INDIA & ASIA



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1 INTRODUCTION

India is a developing country and it is facing number of economic and social problems. The main economic problems are low national and per capita income; lack of sufficient food grains to poor; unemployment; etc. Similarly there are some non-economic problems in the economy such as castism; religious disharmony; low status to women, illiteracy, etc.

But one thing is clear that our country is very rich in case of natural resources. If we exploit the available natural resources properly; then we will solve economic as well as social problems very easily.

In the above situation we will consider the importance of fisheries in Indian Economy. Fortunately our nation has near about 7,517 Kms. coast line; 20.2 lack Sq. Kms. area for deep fishing; 17 lack hectare areas of water bodies; 10 lack hectare area under creeks and 8 lack hectare area under dams and ponds.

India is the world's second largest producer of food and has further potential to grow in this sector. Fish and marine products are the important items as a food constituent and with about 8041 km of coastal line, 3 million hectares of reservoirs and 1.4 million hectares of brackish water, the country has vast potential for fish both from marine and inland sources.

India is the 6th largest producer of fish & 16th largest exporter of marine products in the world. Further, India is the 2nd largest producer of

inland fish in the world. This sector is of immense importance to the country due to employment generation capacity and export potential. Out of total Indian exports, the share of Seafood exports is 3.32%, however, it is the 4th largest contributor to the net foreign exchange earned by the country.

The following table gives the export of marine products from the country during last few years.

Item Rs. in Crores	2000-01	2001-02	2002-03	2003-04	2004-05 (April-Dec.)
Export	6287.80	5807.20	6763.26	5680.95	3969.59

Japan is the largest importer of fish and fishery products with about 22.6% of India's export. The other major countries for Indian fishery product import are Australia, Belgium, EU and USA. The major species that are exported include frozen squid, cuttle fish, frozen lobsters, crabs and lobsters, finfish, live shrimp and ornamental fish.

2 IMPORTANCE OF FISHING INDUSTRY

In Indian Economy fishing industry is important in the view point of following reasons :

2.1 Supply of Nutritious Food

Every year country requires additional food due to rapid increasing population by 1.9 % per annum. But the production of food grain is not increasing properly to provide demand of the growing population.

Fish is one of a very important and nutritive food. In the country, fishing is taking place in oceans; [namely Arabian sea; sea of Bengal; Hindi Mahasagar.] rivers; dams; creeks; ponds and in fish farming. Fish contains proteins; calcium; phosphorous; manganese; iron; bronze, etc. Especially fish contains 15 to 20 % high proteins. These proteins are very

easy for digestion. Marine fish contains much iodine, and it is helpful to human being to keep away from diseases.

2.2 Generation of Employment Opportunities

Fishing is included in a primary industry. This industry is providing employment opportunities to the large number of people who are living on coast line. These people are engaged in catching of fish; fish farming at coastal area; drying of fish; salting; transport; canning ; production of ice; boat building; net making; storage of fish; processing of fish; and production of by-products like fertilizers; animal and chicken food; medicine; oils, etc. This industry is providing employment opportunities for more than 1.3 crore people directly and indirectly.

2.3 Source of Foreign Earnings

As it is clear that country is facing many a times the problem of shortage of foreign currency. India is earning foreign currency from the export of fish to various nations like Nepal; China; some Asian; African and European Countries. Especially India is exporting Silver pamphlet; black (white; tinger; kapashi etc.) Bombay Duck. In 1950; nation got the foreign currency of rupees 2 crore; in 1980- Rs. 217 crore; in 2003- Rs.1600 crore and in 2004- Rs. 5739 crore rupees from the export of fish and fish products. Sometimes, India imports fish for West Bengal people from Bangla Desh. Thus, it is clear that fishing is important in the view point of export and import also.

2.4 Share in National Income

During the last five decades, fish production has increased with an annual growth rate of 4.1 %. Fish production touches 5.67 metric tons in 1999-2000 and it was about 5.66 Mt. in 2000-01. The fisheries sector contributes Rs. 19555 crores to national income which is 1.04% of the total GDP.

2.5. Growth of the Marine Fish Production in India and Maharashtra

The trend of marine fish production over the years has shown a five fold increase during the last five decades (1961-2000) (See Table No. 1). The marine fish production registered quantum increase during 1986-91 with a growth rate of 6.80 percent. In the following decade (1991-2000), although marine fish production showed an overall upward trend, the decade growth rate was only 0.93 percent indicating the approaching optimal level of exploitation of the resources in the inshore waters (0-50 m). The increase or decrease in the annual marine fish production of the country, by and large depends on the success or failure of sardine, mackerel and shrimp fisheries.

The contribution of Maharashtra in the total marine fish production in India as whole varied from 0.41 percent to 10.90 percent during 1961 to 2000. A comparison of growth rate of Maharashtra with India for the sub-periods shows very slow progress. Evidently in 1986-91 decade noticed that there has been declining growth rate of production in Maharashtra. With regard to India it shows that, marine fish production has increased but with declining trend of growth which is shown in Table No.1.

Table No. 1 : Annual Growth Rate (percent)

Year	Marine Fish Production (000 tonnes)		Simple Annual Growth Rate (percent)	
	India	Maharashtra	India	Maharashtra
1961	880	119	-	-
1966	824	132	-1.27	2.18
1971	1086	204	6.36	10.90
1976	1210	259	2.28	5.39
1981	1555	288	5.70	2.23
1986	1716	332	2.07	3.05
1991	2300	325	6.80	-0.42
1996	2707	387	3.53	3.81
*1999-2000	28.34	395	0.93	0.41

* Provisional

Source : 1) Central Marine Fisheries Research Institute, Kochin.
2) Bureau of Economic and Statistics, Statistics of Abstract of Maharashtra Various Issue, Govt. of Maharashtra, Mumbai

3. COASTAL FISHERIES AT A GLANCE IN MAHARASHTRA

The table No. 2 Shows the length to sea shore, fishing villages, fishing population of fisheries cooperatives, etc. The 05 districts of Konkan region or coastal region are having the fisheries; where as the inland fisheries in Maharashtra is very limited. The per year value of export of fish was around Rs. 984 Cr. From these figure, we can guess the role of fisheries in the Konkan area. About 271 primary fisheries cooperatives were also engaged in helping the fisherman.

Table No. 2 : Konkan Marine Fisheries : At a Glance (2006-07)

Sr. No	Particulars	Thane	Mumbai	Raigad	Ratanagiri	Sindhudurg	Total
1.	Sea Shore (km.)	112	80	240	167	121	720
2.		10,512	28,000	21,000	36,000	16,000	1,11,512
3.	Fishing Villages (1997 Census)	81	23	108	99	84	395
4.	Fishing Population	84,770	35,693	61,588	7,736	22,586	2,62,373
5.	Fishing Families	15,285	7,664	11,725	10,130	4,482	49,286
6.	Active Fishermen						
	a. Full Time	15,793	4,627	13,094	14,635	5,067	53,216
	b. Part Time	3,079	98	1,212	756	1,105	6,247
	c. Relating F. Activity	21,264	1,040	13,082	12,251	4,344	64,698
7.	Fishing Harbor	-	2	-	1	-	3
8.	Fishing Landing Centre	37	22	40	47	38	184
9.	Fishing Boats						
	a. Mechanized	3,040	4,017	3,865	2,841	1,526	15,289
	b. Non-mechanizes	236	235	579	80	457	1,587
	c. Total	3,276	4,252	4,444	2,921	1,983	15,691
10.	Fisheries Co-op Societies (Marine)						
	a. State Union	-	1	-	-	-	1
	b. District Union	1	1	1	1	1	5
	c. Taluka Union	1	1	1	1	-	1
	d. Primary Soci.	46	34	94	74	23	271
11.	Fish Export M. toones	-	-	-	-	-	1,12,277
12.	Fish Export Value Rs. Cr.	-	-	-	-	-	984.26
13.	Govt. Fisheries Training Centers	2	1	1	1	16	
14.	Ice Factories	57	21	15	16	15	124

Source : Lokraj (Marathi) Government of Maharashtra, October 2007, Mumbai

4. SIGNIFICANCE OF FISHERIES CO-OPERATIVES

These are some communities in India which can be called as weaker sections of the society. Fishing community is one of them. Especially illiteracy, poverty, lack of knowledge of latest fisheries technology and lack of proper price to their produce are responsible factors for their slow growth. This vicious circle is further strengthened by the lack of institutional support both in infrastructure and finances. Consequently fishermen are subjected to exploitation by middlemen who act as money lenders and contractors.

For solving the above problems and for the development of fishermen and fishery industry. "The Fishery Co-operative Movement" like other movements is considered as an effective tool. The co-operatives which keep their members away from exploitation and help to improve their socio economic conditions. So far some efforts have been done in this direction and have yielded good results in some areas but the overall picture of fisheries co-operatives is not encouraging; one of the reasons for this situation may be that the co-operative movement has not been given much recognition in the five year plan documents.

During the last few years tremendous development has taken place in the fishery sector. The government of India has identified it as a thrust area for food and exports. In the inland fishery sector "Fish-Farmers' Development Agencies" have been created and the inland fish production has increased. Similarly, the introduction of the World Bank Project has also developed inland fisheries especially in the field of seed production. The marine fishery also puts emphasis on deep sea fishing and mechanization of fishing which includes introduction of larger vessels, landing and berthing facilities were increased and constant efforts are being made to build infrastructure and promote exports.

5. ORIGIN OF FISHERIES CO-OPERATIVES IN INDIA

The fishery co-operative movement in India began in 1913 when the first “Fishermen’s Co-operative Society” was organized. The name of that society is ‘Karla Machhimar [Fishermen] Co-operative Society’ which is in Maharashtra state and in Ratnagiri district. This society is still working efficiently. The state of West Bengal was next to Maharashtra to organize the fisheries co-operatives in 1918. In the same year, Tamil-Nadu also organized one co-operative society.

6. ROLE/IMPORTANCE OF FISHERIES CO-OPERATIVES CAN BE EXPLAINED WITH THE HELP OF FOLLOWING POINTS

1. To Provide Finance to the Member Fishermen

As it is clear that the fishermen are poor, illiterate and low ability to take loan from organized financial Institutions, the co-operative fishing societies mobilize financial resources from members in the form of share capital and deposit from the members and non-members. It also mobilize resources from District Central Co-operative Banks, State Co-operative Bank, NABARD, FISHCOPFED, National Co-operative Development Corporation [NCDC], State and Central Governments. These agencies provide loans, subsidies, aids to the members of fisheries co-operatives.

2. To Motivate Fishermen to Organize Fisheries Co-operatives

The Co-operative sector is a very effective tool for the development of weaker sections of the society. For the economic development of fishermen and for solving the common problems there is a need of establishment of fisheries co-operatives. These societies help to rescue fishermen from moneylenders, middlemen, traders, capitalist, etc. It means fisheries co-operatives can increase the collective power of

fishermen community. Fishermen can keep pressure on the government for providing facilities like landing centers, fish processing centers, export of fish and fish products, etc. The fisheries co-operative societies can work as middlemen between fishermen and all government and semi government agencies.

3. To Provide Fish Seeds, Nets and Boating Materials, Inputs and Equipments

Recently the fishing business has been changed tremendously. Now fishing is carried out by modern technology. The new technique also being adopted in the processing and selling of fish. Similarly modern mechanized boats, purse nets, deep freezing facilities, storage facilities, transporting and canning facilities have been developed. Instruments like walky-talky, mobile and satellite, fish finder, global positioning system (GPS), alarms (depth and fish) radio telephone, international calling and distress frequency etc. can be provided by fisheries societies.

4. Procure Fish from Members and Provide Complete Infrastructure for Sale of Fish

There is lack of storage facilities of fish and fish producers as fishermen are poor, therefore they sell fish at lower price to middlemen. Because middlemen and traders give advance payments to fishermen for consumption as well as for purchase of fishing materials. In this business there is exploitation of fishermen. For avoiding this, fisheries co-operatives used to purchase the fish from fishermen who are the members of the society at a remunerative price. Fisheries co-operatives also provide some infrastructural facilities like storage, transport, canning, processing before the sale of fish.

5. To arrange Technical Guidance For Members

At the time of fishing, advanced technology should be used. But such type of technology cannot be used by fishermen as they are poor and illiterate. Fisheries Co-operatives provide all sorts of technical assistance which is useful at the time of fishing and for the processing of fish.

6. The Co-operatives provide food-grains, kerosene, diesel, nets, boating material and other necessary requirements at the concessional rate as societies are running ration and spare parts shops.

7. They can also provide health care facilities and family welfare services to the members of fisheries co-operatives.

8. Few fisheries co-operatives can set up the demonstration units for member fishermen.

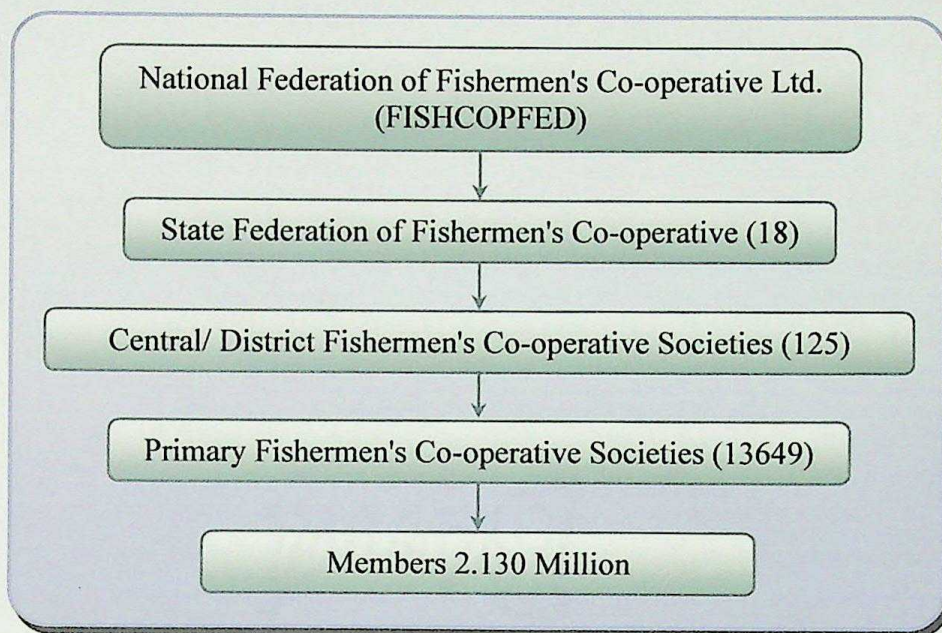
9. Research and consultancy programmes can be held in fishery co-operatives.

7. STRUCTURE OF FISHERIES CO-OPERATIVES IN INDIA

The structure continued to grow over the years in multifunctional units. At the primary level there are primary fisheries (13,649) co-operatives and at district level there are district federations. At national levels there is one national level federation. It is known as 'National Federation of Fishermen's Co-operative Ltd.' (FISHCOPFED), New Delhi. 18-State Level Federations and 125- Central (District/ Regional) level federations in the country.

The structure of Fishermen's Co-operative Societies is like any other co-operatives in the country. The national, state and district level

co-operatives are helping the co-operatives at their lower level of co-operatives. The structure can be shown as below :



7.1 National Federation of Fishermen's Co-operatives Ltd.

The National Federation of Fishermen's Co-operatives Ltd. is a national level apex Co-operative Federation of fishermen and fisheries co-operatives in the country, Registered in the year 1980, FISHCOPFED has been making all efforts for promotion and development of fishermen and fisheries co-operatives. It is the spokesman of these co-operatives at national and international levels. FISHCOPFED has been organising a National Congress of Fishermen Co-operatives once in every four years and various other forums to discuss and decide on a number of issues related and influencing subjects of fisheries and fishermen co-operatives. In order to make its activities effective, FISHCOPFED has to keep active liaison with the Commissioners/Directors/Wardens of all States and Union Territories. For proper planning the up-to-date data and knowledge of the situation in the field is necessary. Since fisheries are a state subject, Department of Fisheries of all states and union territories must be associated with the decisions making process related to the Fisheries.

7.2 Functions of FISHCOPFED

As we have seen that the fisheries co-operative structure is pyramidal in nature with definite responsibilities at various level. There is a need to link each tier so that the network is strengthened vertically and horizontally.

Main Functions of different tiers are as under :

- Arrange supply of fisheries inputs and equipments
- Transfer technology to fishermen through co-operatives
- Insurance cover to fishermen
- Procure pond/lake on lease basis for development of fish breed and sale of fish at reasonable price
- Provide health care and family welfare services to the members of fishery co-operatives
- Setting up of training-cum-demonstrations units
- Marketing of fish and fish seed and export promotion
- Research and consultancy in fishery co-operatives
- Publications
- Liaison with Govt., NCDC, NABARD, co-operative institutions and other international agencies

7.3 Functions of State Federation of Fishermen's Co-operatives

- Promote and develop fisheries co-operatives in the state
- Raise capital through shares, deposits and borrowings
- Procure and Distribution of required fishery inputs and equipments
- Marketing of fish at reasonable rates
- Undertake processing activities and export of fish products
- Technical guidance

- Liaison with state Govt., NCDC, NABARD FISHCOPFED, FFDA, co-operative banks, and other concerned agencies.

7.4 Functions of District/Primary Fisheries Co-operatives

- Motivate fishermen to organize co-operatives
- Procure fish from members and provide complete infrastructure for sale of fish.
- Provide fish seed, net and other inputs and equipments
- Arrange technical guidance for members

The study conducted by Council for Social Development, New Delhi (1984) confirmed the suitability of the Fisheries Co-operatives. The study emphasized for organizing active fishermen into co-operatives and the study stated that fisheries co-operatives should act as multi-purpose for their members. Thus, at present the marine as well as for inland fisheries co-operatives are working in three tier structure.

8. PROBLEMS OF COASTAL FISHING WITH SPECIAL REFERENCE TO CO- OPERATIVES IN MAHARASHTRA

In India, the beginning of the fisheries cooperatives dates back in 1913; but its real beginning was made only after the establishment of NCDC, in 1963. Up to the year 1969, there were traditional boats used in fishing activity; but after the nationalization of banks and again in 1975 due to the adoption of 20 point economic programme, the fishing was encouraged; again after the adoption of NEP (1990), the mushroom growth of the boats has taken place and this caused the harm to fisheries. *Only the well to do families could get the loan for mechanized boat, while others become the labours on such boats. Now a day's more than 50% of the fishing community is living below poverty line, whose annual income is up to Rs. 15,000.* Though, India ranks fourth in global

fish production, with an annual production of 6 million tones and contributes 1.4 per cent to the country's GDP; yet the fisheries cooperatives and their members are facing several problems. This chapter highlights the problems of fisheries cooperatives in India in general and in Maharashtra in particular.

9. GENERAL PROBLEMS

1. Lack of Sufficient Capital

Indian fisherman is very poor, and he is using old and outdated technology for marine and inland fishing. But due to the adoption of the New Economic Policy (NEP) since 1991, the big capitalist and foreign companies are catching and exploiting tremendous fish from the ocean. They are using modern technology like mechanized boats, purse nets, deep refrigeration, walky-talky, mobile, satellite system, etc. But the traditional and poor fishermen (rapan, tiyani, nhya, gill net) cannot use modern technology. Therefore, there is need to provide low rate of interest credit (short, medium and long term) to poor fishermen through various government and non government agencies. Fisheries co-operatives are getting credit from various agencies from state and central governments, but the credit is insufficient and with high rate of interest.

2. Lack of Proper Storage Facilities and Ice Factories

It is clear that fish is highly perishable goods. Sometimes fishermen can catch enough quantity of fish. But due to lack of storage facilities and processing facilities they are compelled to sale it immediately in the near market. The result is that the fishermen get very low price to their fish product.

Similarly ice is very important commodity for preservation of fish. But there is lack of enough ice factories at coastal areas. Due to lack of

fresh water, there are limitations on the ice factories. In one study, it is found that out of the total marketing cost of fish 10% cost was incurred on ice.

3. Lack of Technical Knowledge

For the coastal and deep fishing, it is necessary to use very advanced and modern technique for catching the fish, but this industry is suffering from lack of technical knowledge. Fishing tools and equipments are also crude and primitive in some parts of coastal areas. Now day's rich fishermen are using mechanized fishing trawlers and boats as well as nets. But the proportion of this is very limited with poor.

4. Lack of proper Transport Facilities

This is a basic and important factor in fishing industry that the fish should get remunerative price and it is necessary to transport fish in internal parts of the country i.e. from coastal area to inland area. But for transporting the fish the availability of cheap means of transport are limited. Roads are not well constructed and reached up to the landing centers. Sometimes, the cost of coastal of transport is very high. So the limited portion of marine catch goes to internal and remote markets. The result is that the price of fish remains very low, which results in to loss to the fishermen.

5. Fishing at Near the Sea Coast by Big Trawlers and Boat Owners

Government has given permission up to 5 to 10 fathoms to small fishermen who are using traditional crafts, boats and nets but unfortunately this law is being violated by big trawlers and mechanized boat holders. They are catching fish near the coast line where the depth of sea remains only 5 to 10 fathoms. They are also using purse nets and

trawler nets which have very micro holes. By using such types of nets small seeds of fish can be caught. The result is that there is destruction of future fish generation. This results in to *fish famine* at some part of fish catching centers, especially in Maharashtra.

6. Natural Calamities

The nature is playing very big role in fishing industry. Sometimes sudden change takes place in the sea due to strong trade winds, monsoon and cyclones, etc. This makes fishing difficult and risky especially in certain month, i.e. from June to September in Western part of India.

7. Low Plankton Content

Plankton is a major fish food in the sea water. But due to high temperature of sea water the growth of plankton in sea water, is obstructed. Insufficient plankton food has affected the growth of fish. Therefore, fish catching is decreasing year after year.

8. Other Problems

The other problems can be listed as under:

1. High temperature at the coastal area makes fish preservation more difficult and costly.
2. The coastlines at many places are broken so there is a paucity of good fishing harbors, the boats cannot be landed due to rocks of broken harbors. Also, except few landing centres, all harbors are unhygienic and dirty in India.
3. Marine water also contains many non edible and even poisonous varieties of fish. Such types of fish are harmful to edible fish. Due to increasing industrialization and chemical waste water, the fishes cannot grow properly. The toxic industries have become an enemy to fishermen. The Lote

industrial estate near Chiplun and in Raigad district in Maharashtra is the example of this pollution.

4. Marine water contains number of species of fish, but the quantity of each of them is limited. This makes specialization and gradation of fish difficult. Fishing of particular species on a large scale is dangerous for further generation.

10. FISHERIES CO-OPERATIVES IN ASIA: A LESSON TO INDIA

The development of the fishery co-operative movement in Asia dates back to the early 1900s. In Japan, the traditional forms of fishermen's associations were transformed into autonomous village societies in 1867 and were given exclusive fishing rights and encouraged to form federations in 1901. In the Rep. of Korea, Fishermen's Organizations started to form in 1908 but it was not until 1944 that nation-wide fishermen's organizations emerged with the rapid formation of primary and regional co-operatives (COPAC, 1984). As far India, the first fishery co-operative society was organized in Maharashtra in 1913 followed by the states of Kerala in 1917 and West Bengal and Tamil Nadu in 1918. But after 1965 the GOI encouraged the fisheries and enacted co-operative laws. Fishery co-operatives were set up and used as a channel for funds to reach the fishermen. The role of NCDC had remained the positive for the fisheries development in India.

An assessment was made of the status of fishery co-operatives in Asia in the early 1980. It was found that, out of 11 countries, four were considered successful (Indonesia, Japan, Rep. of Korea, and Malaysia), three had not successes i.e. (Bangladesh, Hong Kong and India) and two

had failed (Sri Lanka and Thailand), while the data of Pakistan and Rep. of China was not assessed owing to insufficient information.

10.1. Conditions For Success Of Fisheries Co-operatives

It is regrettable that the conditions for success of fishery co-operatives, which were summarized at the 1968 International Seminar on Possibilities and Problems of Fisheries Development in South-East Asia (Tiews, 1969) were not observed by the authorities concerned. These conditions were:

1. The co-operatives should be formed by the fishermen themselves;
2. The best and most trustworthy fisherman with organizing ability should be selected as leader;
3. The co-operatives should be big enough to employ and pay full-time skilled managers from the open labour market;
4. In order to guarantee stable prices, the co-operatives should run their own cold storage and processing plants;
5. The government should give financial support, at least in the initial stages;
6. A roof organization under government supervision should invite all local co-operatives; and
7. Education of co-operative members as well as leaders and managers regarding co-operative principles and business practices is most important.

The leader in fishery co-operative movements in Asia is undoubtedly the Fishery Co-operative Associations (FCAs) of Japan. FCAs were established from existing traditional fishing village guilds with the promulgation of the Fishery Law in 1901. This Law provides

the legal basis for granting exclusive fishery rights to the co-operative associations. Coastal fishermen, therefore necessarily became members of the FCAs, through which, the administration of fishery rights, virtually have complete control over their fishing areas as regards both conservation and utilization. The development of fisheries cooperatives in some of the Asian Countries can be seen as follows;

11. FISHERIES CO-OPERATIVES IN ASIA

11.1 Japan

The Japanese fishery management regimes have developed over 250 years with following three laws:

i. "Ura" Law (1743-1867)

This law was promulgated by feudal government in 1743. The primary objective of the law was to ensure the collection of tax from fishing villages. Under this law, all coastal villages were classified as either fishing villages or farm villages. People in the fishing villages were allowed to fish or collect resources inhabiting their sea area under an 'osumi-tsuki' right granted by the local "Samurai" lord, which was a kind of fishing right. People in the farm villages were allowed to collect only seaweeds as manure for farming.

ii. Old Fishery Law (1901-1948)

The feudal era was ended in 1867 and there was no fishery law till 1900. The new fishery law was established by the government and approved by the parliament in 1901. The new law stipulated that the fishing rights were granted only to the Fishery Societies (FS). In this way all fishermen have to become FS members, as fishermen were not allowed to fish unless they joined the F.S. During the early period of the Old Fishery Law, the FS acted merely as an organization responsible for the management of the fishing rights.

iii. Current Fishery Law (1949 to present)

The 'Current Fishery Law', was promulgated in 1948 and 1949 respectively. This law incorporates the principles of one member one vote, voluntary participation and democratic management.

The fishing industry of Japan developed very fast in the 1950s, 60s and 70s. However, due to domestic and International socio-economic and political change, plus worldwide trade liberalization trends as exemplified by the GATT decisions, etc, the speed of the growth slowed down in the 1980s and 1990s.

Fisheries co-operatives in Japan have played quite an important role as a leading fishermen's institution, established by the fishermen themselves under strong administrative guidance and logistic as well as financial support from the government. The Government support to the co-operative sector has been consistent, ranging from legal, infrastructural and institutional backup for establishment of welfare facilities for the fishing communities.

11.2 China

Fishermen's Association in China is a civil organization, which acts as a bridge between the government and the fishermen. As a judicial body, its establishment plays economic, educational and social roles. Fishery Associations are mostly multi-functional, involving such activities as production, marketing, credit etc. There is a fishermen's association at Taiwan Province level and those are established at 39 districts carriers. The objectives of the fishermen's association are to - (i) ensure and protect fishermen's rights and benefits; (ii) enhance fishermen's knowledge and technical skills; (iii) promote the modernization of the fishing industry; (iv) increase production incentives; and (v) improve the living quality of the fishermen.

The future plans and expectations of the fishermen's association include strengthening bilateral operation with foreign countries, establishing environmental protection systems to avoid further destruction of resources in the aquaculture sector and improvement of fishermen's income.

11.3 Indonesia

Fish production in Indonesia comes primarily from marine fisheries. The rate of exploitation is about 38% of Maximum Sustainable Yield (MSY). There are about 1.6 million fishermen, 90% of whom are traditional fishermen having simple fishing gears and boats of less than 30 gross metric tons. Fishing operations are mainly in the shallow coastal water.

About 25-26% of the total fishermen populations are the members of fishery co-operatives. The low membership rate is attributed to the lack of awareness and understanding of the functions of co-operatives and the benefits gained from joining the co-operatives. Fishery co-operatives could not provide the services needed by the fishermen due to lack of skilled manpower in promoting co-operatives in the fishery sector.

The main function of the fishery co-operatives in Indonesia is to manage fish auction at landing sites. The auction system helps the fishermen getting higher prices for their catch.

11.4 Pakistan

Agriculture, including fisheries is one of the dominant sectors in the economy of the country. It accounts for 26% of Gross Domestic Product (GDP), employs 54% of the country's labour force and provides 70% of the total value of export. Fishery accounts for 1% of the country's GDP or 3.7% of that of the entire agriculture sector.

In the marine sector, the first fishermen's co-operative society was formed under the Co-operatives Act in 1925 in order to improve the socio-economic conditions of the fishing community. The operational status of the society is reported to be unsatisfactory. In inland sector, no fishery co-operatives society has been established in spite of 1.70 lakh inland fishermen living in village near major barrages/ headwork.

Under the provincial fishery Law, fishing rights in all public waters are placed under open auction. These fishing rights, however, are taken by middlemen because of the high capital requirement. There is, therefore, a need to form fishermen's co-operatives in order to unite the fishermen into a strong group and to give them the chance to obtain fishing rights. Awareness programmes are needed apprising fishermen, the benefits of co-operative efforts.

11.5 Thailand

The first inland fishery co-operative was set up in the country in 1949 with the objective of allocating the land along the canal for fishing, fish marketing and processing. In the marine sector the first fishery co-operative was set up in 1952 with the objective of supplying fishing gears to its members and marketing their fish catch. There are 32 fishery co-operatives with 6535 members in the country. Of these, 16 with 2765 members, 10 with 2790 members 6 with 980 members are marine, in land and coastal aquaculture co-operatives respectively. The major activities of the co-operatives involve providing services in marketing, credit and extension. The fishery co-operatives in Thailand are confronted with problems related to sources of financing etc. The Government of Thailand is in the process of enacting fishery law that will provide fishing rights to coastal fishing community.

Fishery co-operatives in Thailand are engaged in providing fuel, fishing gear, consumer goods, short and intermediate terms loans to members. In addition, fishery co-operatives also operate both demand deposit and time deposit type savings programmes. They also provide fish ponds as a service to members.

11.6 Nepal

Nepal has not yet formed fishery co-operatives but fish farmers are organized into groups in village for inland fishing in order to receive fishery technology and other service provided by government agencies. There are about 1.25 lakh fish growers organized in 21 districts unions. The unions are members of the National Fish Growers Association. The organizational structure is based on four tiers at the village, constituency, district and national levels. District and national level associations are actively involved in arranging technical services to fish farmers, transporting of fingerlings from nurseries to fish farms and marketing of fish.

The co-operative movement in Nepal has gained momentum, especially after promulgation of the new Co-operative Law in 1991. Many types of co-operatives have been formed in Nepal and the co-operative promotion agencies have been strengthened accordingly. In Nepal, the government intends to provide production technology and marketing information through fishery groups/associations.

11.7 Philippines

The spirit of co-operativism in the Philippines took its roots from the bayanihan spirit of community co-operation. The co-operative development in this country has started only after 1972.

The 1987 constitution gave new lease of life for the fishery co-operative movement. The Co-operative Code of the Philippines

(Republic Acts, 6938 and 6939) was enacted in 1991 to provide the policy structure for the development of co-operatives in the country. The co-operative Code provides, among other things, tax incentives to co-operatives to ensure their viability. They are also exempted from pre-bidding requirements when transacting with the government and its Instrumentalities. The Local Government Code of the Philippines enacted in 1991 also supports the development of fishery co-operatives by decentralizing the management of coastal resources to local government units and fishermen's organizations.

Fishery Co-operatives, as well as other co-operatives in Philippines, are fast becoming an emerging "third sector" of the economic society. The Government of Philippines is in the process of enacting fishery laws that will provide rights to coastal fishing communities and enhance the coastal resources through a community-based approach to fisheries management.

12. REPLICATION OF PRIVATE –COOPERATIVE CO-ORDINATION IN FISHERIES

Fisheries Co-operatives are working in the countries like Japan, Italy, Denmark, Canada, etc. In Canada Fisheries Improvement Loan Act' provides the loans to cooperatives; while in Norway National Fishery Banks provide credit to cooperatives, and about 90% of the fish market is made through cooperative sector.

Biswas K.P (2006) has stated that in United States, there is coordination between the cooperative and private sector. Cooperative produces shrimp in large low-lying extensive ponds. The cooperatives supply the land and labour and the private sector provides the capital, technology and management. They split the profits 50:50. This system can be replicated by the Indian Cooperative Fisheries Societies.

13. WHAT LESSON CAN INDIA LEARN FROM ASIAN FISHERIES CO-OPERATIVES

Though India's co-operative movement is oldest and largest in the Asia Region; yet many things can be replicated by the fisheries co-operatives from the other Asian countries.

The first thing can be learning from Japan; i.e. the very objective of the Japanese fisheries cooperatives is to improve the standard of living of its members; and it has successes to a large extent. But in India, especially in western part of coastal region the socio-economic conditions of fishermen are very poor. Many of the members are still below poverty line. Our cooperatives have never thought of this objective.

Secondly, the member fishermen are never been acted as 'price maker' instead; they are the 'price takers' from the traders. The Indonesian fisheries co-operative dominate the auction sale of fish while private traders accept the price decided by the cooperatives. This can be replicated by the India fisheries cooperatives.

Thirdly, there is no separate fisheries law in India, or there are no any sections regarding the development and protection of fisheries cooperatives. But in Thailand fisheries law is passed, under which the interest of traditional fishermen is safeguarded, as well as credit needs of members are met by the society itself and not by the private traders. The removal of private agents/ traders should be the aim of Indian cooperatives. The Philippines Government has treated the cooperatives as a '*third sector*' by giving them constitutional support, which India can accept this again. But under NEP cooperatives have left without much support by the Government. Also the primaries should form their regional cooperatives unions; on Japanese model which can supply ice, technical guidance, market information, transport, training to fishermen about not

to catch the fish in certain months in a year and to protect the coastal environment. Last but not least, the Government should exempt all types of taxes to cooperatives and also give incentives which the other countries are doing for their fisheries co-operatives.

14. PROBLEMS OF FISHERIES CO-OPERATIVES IN RATNAGIRI, RAIGAD AND SINDHUDURG DISTRICTS

The coastal area of Ratnagiri, Sindhudurg and Raigad Districts is 167, 121 and 240 kilometers respectively. There are 90 fishing villages in Ratnagiri District, 76 villages in Sindhudurg District and 108 in Raigad District. The proportion of fishing villages to total villages in Ratnagiri and Sindhudurg Districts is 5.84 % and 10.22 % respectively. In the year 2005 there were 73 fisheries co-operative societies in Ratnagiri District and 25 societies in Sindhudurg District. But in the year 2005 the number of societies has increased up to 85 in Ratnagiri District and 45 societies in Sindhudurg District respectively. It is clear from this statistical information that there is quantitative growth of fisheries co-operatives. But in the case of qualitative growth these societies are lagging behind on various grounds. Fisheries societies in these districts are facing the following problems.

14.1 Lack of Enough Infrastructural Facilities

There is lack of proper and enough landing centers; market yards; roads; transport facilities; water, ice supply and electricity; processing; storage and canning facilities etc. This affects the viability and total activities of societies.

14.2 Problem of Recovery of Loan

Each and every society has provided loans to their member fishermen. Especially these societies used to take loan from various

government agencies like District Central Co-operative Banks; National Co-operative Development Corporation. But the member fishermen have not repaid the loan fully and regularly. Many reasons are responsible for this. The result is that every year the over dues of loan of every society had increased. The proportion of recovery of loan is only 30 to 50 % of the total given loans. This is very serious matter in the view point of the working of fisheries co-operatives in Maharashtra. The waiving of loan to fishing cooperatives is also discussed among policy makers, hence there is low recovery.

14.3 Low Fish Catch per Traveler and Per Fishermen

It is seen that some big private industrialists are using modern technology for fishing. They are using mechanized boats and very big nets having the length of 3 to 5 kilometers. The nets which they use are very narrow and micro holes from which a small fish (seed) can't escape. The result is that many poor fishermen who are the members of fisheries societies are not getting enough catch. Sometimes fishermen return empty hand while staying one to four days in the sea. In short, due to insufficient availability of fish in the sea; the catch is decreasing, but the number of trawlers is increasing. The ultimate result is per trawlers and per fishermen catch is decreasing. The researchers found that many fishing boats in Ratnagiri and Sindhurg districts had stopped the fishing due to the high cost of fishing. As result of this the activities of the societies have stopped and thereby they are in loss.

14.4 District level federations are not helping properly to Societies and Fishermen

If we consider the structure of fisheries societies in both districts, then we come to know that, in Ratnagiri District there is a district

fisheries federation, but this federation is not helping properly to fisheries societies and ultimately to member fishermen. Presently this federation is under liquidation, while Sindhudurg and Raigad District federations are just registered; but does nothing. *These federations are only for name and for Board of Directors.* The prime duty of the federation to solve the various problems of primary fisheries co-operatives regarding finance; infrastructural facilities; processing and marketing of fish, etc. But these problems have never been solved by the district fisheries federations. Thus, the chain of fisheries cooperatives is incomplete, defeating its objectives.

14.5 Problem of Catching the Fish from Outsiders

There are the boundaries of both districts regarding coast line. Number of villages has been situated on the coastal line and the fishermen had established fisheries co-operatives. They are fishing in the sea area which is available to them. But many times fish catching had done by out of state fishermen like Goa; Kerala and some times catching had been done by big foreign trawlers and mechanized boats also. The outside boats are well equipped with nets; processing and storage facilities. They are exploiting all sorts of fish from the sea; which is available in these districts. Therefore, fishermen who are the members of fisheries societies are not getting enough catch. Several fishermen and societies said that there are *fish famines* in the coast line of both the districts.

14.6 Low Participation of Women in Fisheries Societies

In fishing industry women are playing important role. Once the catching takes place and brought it at coast, the job of the women starts. Women perform the functions regarding sorting; processing; transporting

and selling of fish. But in sample districts; the participation of women as a member of fisheries societies is very less. The proportion of women member in societies is only 12 to 15 %. One important thing is that; in Ratnagiri District there is a separate fishery society only for women. But it is not functioning properly. But in remaining societies the participation of women in the management of societies is limited, it is only 30%; but proportion should be increased up to 50%.

14.7 Lack of Marketing Facilities

Out of 34 fisheries societies in Sindhudurg district, none of them were purchasing the fish from the member fishermen. At the same time the societies have not made any arrangements regarding the collection, grading and marketing of the fish. Finally these societies used to sell the catch to private traders and middlemen. There is no intervention of the cooperatives societies in fixing the price while traders undertake auction. The result is that the members are getting lower price to fish and ultimately low income to member fishermen.

14.8 Lack of Trained Personnel

Fisheries societies have appointed managerial and clerical staff in the offices. But the staff is not having proper qualifications and training. They don't have enough knowledge about account matter. Similarly in many societies, the managerial staff has not enough knowledge regarding supply of credit; subsidies, profit and other related things. *Due to above things, vicious circle takes place as low profit, low salary, therefore, low qualified employees, low turnover and again loss to societies.*

14.9 Clutches of Private Traders/ Money – lenders

It was found in field work that each and every fisherman both poor and rich had taken an advance amount ranging from Rs 50,000 to 2 lakhs

from the traders against the sale of fish. Therefore, *the fishermen are only the price taker and not price fixers.*

15. SUGGESTIONS FOR ORDERLY DEVELOPMENT

1. In light of the development of fisheries cooperatives it is necessary to organize regional/district level fisheries cooperative federations to provide inputs, operational units, harvesting and marketing support to the members of primary fisheries cooperatives and fish farmers. The district federation like AMUL in Gujarat should be established for one or two districts.
2. All the state regional/district level federations need to become permanent members of FISHCOPFED (national level), also membership of some other cooperative federations like consumers, marketing transport, etc.
3. At the primary level there is competition among the fisheries cooperatives. In many villages there were more than one societies in one village. This results in unhealthy competition between them, particularly for water bodies. State governments should take strict steps to correct this, and to organize/ recognize the existing primary level fishery cooperatives, and their area of operation.
4. There should also clear-cut instructions to allot water bodies to cooperatives so that each can get sufficient fishing water and employment to their members.
5. In the marine sector, the primary fisheries cooperatives should be strengthened with infrastructure facilities like landing centers, market yards, ice, roads, and transport facilities. Fisheries cooperatives should be given necessary support to pool their catch and have access to export infrastructure with qualified staff. The

regular supervision from the fisheries department is much necessary.

6. The National Cooperative Development Corporation should revise its pattern of assistance to fisheries cooperatives. The loan amount up to Rs. 1-2 lakhs should be given to the small fishermen who demand for 'Yahma' engine boat. Poverty in fishing communities in the country can be removed by liberalization of credit norms for fisheries cooperatives and providing low interest rates on loan.
7. Women play a very important role in fisheries cooperatives. Once the fisherman brings in the catch, women's job begins. Cooperative law does not allow membership of both husband and wife, which prevents women from participating in the management of the fisheries cooperatives. The Ardhanareeswaran Committee has recommended joint membership of husband and wife in cooperatives, this may be accepted.
8. Cooperative banks and other financial institutions have not yet helped to remove the poverty of fishermen in most of the states. Financial aid is often not available where it is needed, in the rainy season, the fishermen require an advance amount, But neither the cooperative society nor the DC Banks provide sufficient advance therefore, fishermen get such advance from private traders. This compels the fishermen to sale the fish to traders without any negotiations. The NABARD should take immediate steps to encourage cooperative banks to provide sufficient advance to fisheries cooperatives where it is most needed.
9. To make the fishing profitable, marketing infrastructure must be created. The Municipal Authorities in towns and cities should provide the subsidized market outlets.

10. The fishermen members should get the regular and sufficient amount of food grains per month on fixed dates, as all the coastal areas are deficit in food production. The ration shops should be linked with the fisheries cooperative societies.
11. The National Commission on Agriculture headed by Dr. M.S. Swaminathan, has approved fishing as agriculture. The report in its part II 'Food for All' has stressed upon the marketing and pricing of fish. Therefore, all the concessions and facilities applicable to agriculture must be given to fishermen and their cooperatives. The Swaminathan report is much useful and hopeful to fisheries cooperatives in India.

The development of fisheries cooperatives in some of the Asian Countries can be seen as follows;

Thus, the above discussion shows that still the Indian Fisheries industry in general and a fisheries cooperative in particular is facing problems. The over fishing and over crowded boats must be strictly prohibited otherwise the famous '*tragedy of commons*' will soon be experienced. The report of Dr. Swaminathan is hopeful to fishing community.

16. CONCLUSION :

- In general, the fishery co-operative movement in most of the Asian countries has not developed to the level of achieving the objectives of providing fishermen-members the needed support and services to improve their socio-economic conditions, but performance is better than Indian fisheries cooperatives.
- In most of the countries, the co-operative movement has not achieved the desired success as they have failed to develop the

awareness of co-operative benefits on the part of fishermen, inadequate government support and failure of the fishery co-operatives to provide critical services in terms of fish marketing, credit, technology dissemination and training, food grains, etc.

- In spite of the failures, there are positive signs that some of the countries are providing the policy structures for the development of fishing industries with emphasis of utilizing the fishery co-operatives as vehicles for productivity and growth. The government of Thailand and Philippines, for instance, are in the process of enacting fishery laws that had provided fishing rights to coastal fishing communities and enhanced the coastal resources through community based approach to fisheries management.
- India can take lesson from Japan, Thailand and Philippines and form the strong federations supplying inputs and fair prices.

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