

An Overview of Indian Marine Fisheries Sector

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[**Abstract:** Indian economy is diversified with agriculture and animal husbandry as major sector. These sectors and associated sub sectors are of more significant owing to the fact that they contribute to rural development. Backward areas are supported by these sectors for improving the standard of living of large poor population. One such activity is fisheries - marine in coastal and inland in different areas. In this paper an attempt is made to analyse seventy five years growth and performance of the marine fisheries sector in India.]

Key words: Fisheries; Production; Marine;

Introduction

Fisheries sector plays an important role in the socio-economic development of the country. Apart from generating income and employment and providing nutrition to a large section of the economically backward population, it generates a substantial amount of foreign exchange through exports. Over the decades, the marine fisheries sector has undergone significant improvements in craft and gears, storage and transport facilities, communication techniques and so on. The annual marine fish production in the country has already crossed three million metric tones. Marine fishery resources are renewable and management of the harvest of marine fishery resources is necessary for sustained production from the sea.

Fish is a major source of proteins and Omega 3 fatty acids that are required for maintaining a healthy body. Many of the proteins and fats found in fishes are considered as the best supplements for improving cardiovascular health and even prevent mental decline. To meet the growing demand for fish in the global market many countries have boosted the fish production by adopting several techniques and methods like aquaculture. Economics is mainly studies how the resources are being utilised in different sectors. In this study we are going to study about performance of the marine fisheries sector in India after independence.

Fisheries is a business of catching, processing, selling of fish, harvesting, loading unloading of fish from bodies of water or a place where such an industry is regularly carried on. The fishery concerns itself with the habits, life histories and interrelationships of fish population. It also concerns with the effects of commercial fishing on its population, and inter-relationships of various species of fish to each other. The fish occupy an important place in human society. The world's population explosion is becoming a source of increasing concern for all and is causing acute problems. It is being felt that the main weapon to fight against hunger could be developed by supplementing agriculture with fishery culture. Surrounded by sea on three sides and possessing big rivers, bays, lakes, and numerous artificially built canals, reservoirs, tanks and ponds, India possesses ideal conditions for improvement of fishery culture in all areas. The people who live in rural areas nearly seventy percent in India. They engaged themselves in primary activities like agriculture, poultry, farming, fisheries etc. The primary sector give large number employment to rural people. So the welfare these people are significant for developing country like India. Fish contributes substantially to the nation's food security which has a per capital consumption of more than 6.00 kg per annum

Fish is among the healthiest foods on our planet. Fish is a very important part of a healthy diet. It contains nutrients like protein and vitamin D. It is the countless source of omega-3 oily acids, which is more useful for brain and our body. Fish includes high quality of proteins, iodine, and various minerals and vitamins. Fatty species are more healthiest. Full of fat fish, including salmon, trout, sardines, tuna and mackerels are superior in fat based nutrients. Eating of fish reduces the risk of heart attacks and strokes in several ways. Fish

eating is more essential for development of brain and eyes. It is recommended that pregnant and breast feeding women get enough omega-3s. Having fish once or twice a week may definitely reduce the risk of stroke, depression, Alzheimer's disease and other chronic conditions. Fish consumption is linked to decrease emotional decline in grown-up adults. The consumption of fish improves sleep quality, protects our vision in old age, etc. Fish is delicious and easy to prepare.

Fisheries and aquaculture provide livelihoods to around 820 million people worldwide. Estimating global employment in fisheries and aquaculture is nevertheless complex, due to the extensive number of pre-harvest, harvest and post-harvest activities associated with this sector. Jobs range from the production and sale of inputs (vessels, fishing gear, bait, etc.) to farming and harvesting, processing, marketing and distribution of fish. Fishing and aquaculture operations can be informal and small-scale as well as highly organized and industrial in nature. (FAO UN).

In India nearly 14 million people are employed in fisheries sector and contributing to agricultural exports and food security of the country. Fish affords more than one billion deprived people with maximum of their daily animal protein. Fishing is a very significant economic activity in India. In India we are engaging both inland and marine fishing. There were 3,288 marine fishing villages distributed among the nine maritime states and the union territories of Puducherry and Daman & Diu, out of which 813 (24.7%) were in Odisha, 573 (17.4%) were in Tamil Nadu and 555 (16.9%) were in Andhra Pradesh. There were 1,511 marine fish landing centres in the country of which 407 (26.9%) were in Tamil Nadu, 353 (23.3%) in Andhra Pradesh and 187 (12.4%) in Kerala. There were 864,550 marine fishermen households in the country in which 192,697 were in Tamil Nadu, 163,427 in Andhra Pradesh and 118,937 in Kerala. Among the marine fishermen households 789,679 (91.3%) were traditional fishermen families. Nearly 61% of the marine fishermen families in the country (523,691) were Below Poverty Line (BPL). The total marine fisherfolk population in the country was 3,999,214 with Tamil Nadu, Kerala and Odisha accounting for 20.1%, 15.3% and 15.1% respectively. Among the marine fishermen population 33.6% were adult males, 31.9% adult females, 5.6% male children upto 5 years of age, 5.2% female

children up to 5 years of age, 12.7% male children above 5 years of age and 11.0% were female children above 5 years of age.(CMFRI 2010)

Fishing in India gives employment in all the processes like fish catching, marketing, processing etc. In olden days' fish catching was done through traditional techniques. Transport facilities, marketing facilities, preservation techniques, processing of fish were improved due to the demand for fish through out the world. The fisheries production in India production during 2017-18 is estimated to be 12.60 million metric tonnes, of which nearly 65 percent is from inland sector and about 50percent of the total production is from culture fisheries, and constitutes about 6.3 percent of the worldwide fish production. Here are the table1 shows the profile of Indian fisheries.

Table 1:Fisheries Profile of India

Global Position	3 rd in Fisheries 2 nd in Aquaculture
Contribution of Fisheries to GDP(%)	0.91
Contribution of agriculture GDP (%)	5.23
Per capital fish availability (kg)	9.0
Annual export earnings (rs. In Crore)	45,106,89
Employment Sector (million)	14.0
Coast line	8118 kms
Exclusive economic zone	2.02 million sq. km
Continental shelf	0.530 million sq. km
Rivers and canals	1,95,210 Km
Reservoirs	3.150 million ha
Ponds and tanks	2.44 million ha
Flood plains lakes and derelict waters	0.798 million ha
Brackish waters	1.240 million ha
Estuaries	0.290 million ha

Present fish production (capture)	7.0 mmt
Inland	3.2 mmt
Marine	3.8 mmt
Potential fish product	8.4 mmt
Fish seed production	40,000 million fry
Hatcheries	1,604 units
FFDA	429
BFDA	30

Source: National Fisheries development Board

Economic Importance of Fish

Fishing is oldest occupation before than agriculture also. Fishing has more important due to growing population and depleting land resources. There are about 30,000 species of fish in the globe and 18000 are found in our country. It is more important diet for coastal states of our country. The fisheries in India are of two types namely (a) Marine Sector and (b) Inland sector. Marine sector includes coastal offshore and deep sea fisheries has on the continental shelf upto depth of 200 meters. Inland fisheries includes fishes from rivers lake canals, reservoirs, ponds, tanks etc. fish helps in providing food, generating employment, raising nutrition level and earning foreign exchange. It accounts one percent of total agricultural production in India.

Fisheries is an important activity and which has many economic significance

(i) Fish as food: The fish flesh is an excellent source of protein, has very little fat, carries a good amount of minerals and vitamins A and D and rich in iodine. Above all man can digest it easily.

(ii) Fish for controlling diseases: Diseases like malaria, yellow fever and other dreadful diseases that are spread through mosquitoes can be controlled. Larvivorous fish eat larva of mosquito. The important larvivorous fish are Gambusia, Panchax, Haplochitus, Trichogaster, etc.

(iii) Scientific value: Some fish like the lung fish are of zoological importance because of their discontinuous distribution and anatomical features.

(iv) Aesthetic value: A large number of fish are cultured in aquarium for their beauty and graceful movements. The important aquarium fish are Macropodus, Trichogaster, Carassinus (gold fish) and Pterophyllum (angel fish).

(v) Fishery Bye-products: Fisheries has several by-product they are;

(a) Fish oil: It is extracted from the liver of the sharks, sardine, sawfishes, skates and rays and has medicinal value. These mainly include cod liver oil and shark liver oil.

(b) Fish Manure: The fish waste after the extraction of oil, is used as fertilizers,

(c) Fish Glue: It is a sticky product, obtained from the skin of the cod and is used as gum.

(d) Isinglass: It is a gelatinous substance, obtained from the air bladder of perches, Indian Salmons and cat fish used in the preparation of special cement and in the clarification of wine and beer,

(e) Shagreen: The skin of sharks and rays, which has pointed and sharp placoid scales are used in polishing the wood and other materials. It is also used for covering the jewellery boxes and swords,

(f) Leather: A highly durable type of leather is prepared from the skin of sharks and rays,

(g) Artificial pearls:

The silvery boney scales of cypnmids (a type of fish) are used in the manufacture of artificial pearls especially in France.

(vi) Employment: Development of fishing industry generates more employment opportunities.

(vii) Source of Income: The fishing industry has brought a lot of income to the farmers in particular and the country in general. Now we can talk about “Blue Revolution” (fish production) on the same lines as ‘Green Revolution’ (for producing enough food for all)

State wise fish production in India

India is federal republic, subdivided into 29, states and seven union territories. The state legislatures have the power to make laws and regulations with respect to a number of subject matters, including water, land, fisheries as well as the preserving and protecting them sustainably. The statewise fish production is depicted in table number 2.

Table2 : State wise fish production in India

S No	State	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013
1.	Gujarat	635.21	733.82	747.33	721.91	765.9	771.5	774.9	783.72	786.09
2.	Maharashtra	548.02	580.55	595.94	556.45	523.1	550.36	595.25	578.79	578.79
3.	Karnataka	251.23	297.57	292.46	297.69	361.85	420.06	526.58	546.44	575.38
4.	Kerala	678.31	636.89	677.63	667.33	865.99	698.85	681.61	693.21	633.49
5.	Tamil nadu	459.43	463.03	542.28	559.36	534.17	582.93	614.81	611.49	620.39
6.	Andhra Pradesh	853.05	891.09	856.93	1010.08	1252.78	1305.86	1368.2	1603.17	1808.08
7.	Odisha	315.59	325.45	342.04	349.48	374.82	382.55	386.19	381.83	410.14
8.	West Bengal	1215.00	1250.00	1359.10	1447.26	1484	1517	1443.26	1472.05	1490.02
9.	Puducherry	36.75	21.45	39.66	39.01	40.3	41.95	41.95	42.4	41.07
10.	Goa	990.44	104.95	102.39	33.43	86.21	85.37	93.27	89.96	77.88
11.	Daman & Diu	12.51	17.79	16.41	26.36	14.14	15.88	16.98	17.43	19.01
12.	Andaman & Nicobar Islands	32.68	12.09	28.68	28.68	32.49	33.17	33.92	35.26	36.62
13.	Lakshadweeo	11.96	11.96	11.7	11.04	12.59	12.37	12.37	12.37	12.37

Source:www.ijirset.com

The various states of fish producing in our country are listed below. They contribute a huge role in uplifting the country's economy.

1. **Gujarat:** It is the highest fish producing state in India and they use modern techniques for increasing fish production and its market. Gujarat is also endowed with rich resources for the growth of fisheries
2. **Maharashtra:** it is the second largest fish producing state. They catch superior quality of fish even they have good market also. The prices for fish is reasonable. This state concentrate more on marine fisheries sector and invests in deep sea fishing.
3. **Karnataka:** Karnataka coast is traditionally known as Mackerel Coast the three districts of Karnataka are concentrate in marine fishing they are Dakshina Kannada, Uttara Kannada and Udupi district. Karnataka has vast scope for fisheries development activities. Karnataka is the 3rd poplar and largest fish producing state. The major water bodies like canals, wastewater sea coast, lakes and various others.
4. **Kerala:** It is the 5th highest fish producing state in our country. In Kerala there is vast opportunities for the fishermen. Fisheries sector plays a crucial role in the growth of Kerala's economy. It provides employment and income to more than one million people either directly or indirectly.

The state endowed with 590 kms of coastal length constitutes 10 percent of Indian total coastal areas. Kerala is physically the smallest and most achieve maritime state of India.
5. **Tamil Nadu:** It is the 5th largest fish producing state in our country. Tamil Nadu is enriched with Marine Brackish water and inland fishery resources and culture fisheries. The state has been declared as "Aqua hub" by the Government of Tamil Nadu which increased the importance of fisheries sector.
6. **Andhra Pradesh:** Being a 6th position in fish production Andhra Pradesh is having enormous opportunity and high potential for fisheries. The state has been set an example in the large production of fishery in the Indian market with income return and high net profits.
7. **Odisha:** It is a major marine state offering vaste scope for development of inland brackish water and marine fisheries. The state is having highest fish consumers the Govt of Odisha implemented some important policies like better yield in the fisheries

is seeds and week. The state is having 480 km long coastline with 24,000 sq. km areas within the continental shelf has ample potential for marine fisheries development.

8. **West Bengal:** It is due that Bengal is the ultimate destination of fisheries West Bengal is geographically blessed as a the state has vast water resources potential the state has 18 fisheries districts and 306 fishery Blocks. It stands 8th position in the fisheries production in India.
9. **Pondicherry:** Pondicherry is situated in east coast of India is 9th largest fish producing state. The state is largely dependent on marine fish as the state is entirely surrounded by sea coast from all around. The climatic conduction is also pleasant for fisheries activity in the state.
10. **Goa:** The Arabian Sea in the west provides Goa a 110 kilometer coastline. Fishing is found in every village of Goa, Mackerel, pomfret, shrimp, sardine, prawn soormai king fish lady fish are among the major species found in Goa. The main centre of Goa fish production is Marmagao. Fishing in Goa is one of the most exciting and fun filled activity. There are various types of fisheries can be done in Goa they are deep sea fishing, river fishing, lake fishing etc. The structure of fish production can be depicted in table number 3

Table No:3 Structure of fish production in India

(000,t)

Years	Marine Sector	% of In total	Inland Sector	% in Total	Total Production
1950-51	534	71.01	218	28.99	752
1960-61	880	75.86	280	24.15	1160
1970-71	1086	61.85	670	38.15	1756
2000-01	2811	49.70	2845	50.30	5656
2002-03	2990	48.22	3210	51.78	6200
2003-04	2941	45.96	3458	54.04	6399
2004-05	2779	44.08	3526	55.92	6305

2005-06	2816	42.85	3756	57.15	6572
2006-07	3024	44.03	3845	55.97	6869
2007-08	2920	40.98	4207	59.02	7127
2008-09	2972	39.07	4636	60.93	7608
2009-10	2989	38.08	4862	61.92	7852
2010-11	3220	38.86	5068	61.14	8288
2011-12	3371	38.89	5295	61.11	8666
AGR	3%		5.4%		4.1%

Source: 1. Handbook of Fisheries Statistics 2008, DAHD & F Ministry of Agriculture, Govt of India.

2. States/ Union Territories, Annual Report 2012-13, of DAHD & F and Profile of Indian Fishery

Indias fisheries sector export performance

India's seafood export increasing rapidly at 13, 77,244 tonnes earned Rs 45, 106.89 crore in 2017-18. USA and South East Asia retained their positions as the major import markets of India's seafood products, with a share of 32.76 percent and 31.59 percent in dollar terms, respectively, followed by EU (15.77 percent), Japan (6.29percent), Middle East (4.10percent) and China (3.21percent). Indian seafood export touched new high at \$7.08 billion. The quantity was by 21.35 percent while the value rose 19.1 percent over previous year. In dollar terms the exports reached very high that is \$7.08 billion as against \$5.77billion a year go with frozen shrimp is dominating species in the exports items.

Conclusion

As a peninsular region India is having a potential to develop fisheries industry to generate higher sustainable economic social and environmental benefits in the upcoming years. No nation can transform into a developed nation without making optimum utilization of its resources, especially renewable resources. Now, it is realised by the nations of the world that renewable resources are crucial for the development of the economy Policy makers have been giving major thrust on formation of marine resources. Hence, investment on these resources is increasing all over the world and as a result country's exports are increasing. Being a

sunrise sector with varied resources and potential has transformed the fisheries sector from traditional to commercial has made increase in fisheries production.

References

- World Bank India Marine Fisheries Issues, Opportunities and Transitions for Sustainable Development August 2010 Agriculture and Rural Development Sector Unit South Asia Region
- www.preservearticles.com
- MPEDA (2006) Vision Documents. Kochi: Ministry of Commerce, Government of India, Ministry of Commerce and Industry.
- ShyamS.Salim (2019) Recession and Indian Seafood Exports: A bane or boon? MPEDA News letter, Vol.VII/No.3 June2019
- Marine Fisheries Census 2010 India
- http://timesofindia.indiatimes.com/articleshow/64830505.cms?utm_source=contentofinterest&utm_medium=text&utm_campaign=cppst
- [//economictimes.indiatimes.com/articleshow/64825570.cms?from=mdr&utm_source=contentofinterest&utm_medium=text&utm_campaign=cppst](http://economictimes.indiatimes.com/articleshow/64825570.cms?from=mdr&utm_source=contentofinterest&utm_medium=text&utm_campaign=cppst)
- Handbook of Fisheries Statistics 2008, DAHD & F Ministry of Agricultures, Govt of India.
- States/ Union Territories, Annual Report 2012-13, of DAHD & F and Profile of Indian Fishery