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# Status of Marine Fisheries Sector in Coastal Karnataka

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**Abstract:** The aim of the study is to examine the status of marine fisheries sector in coastal Karnataka and to assess the production of marine fisheries in the state specifically in the district of Dakshina Kannnada. Indian peninsular is gifted with its rich coastal areas. Karnataka State has 320 Km long coast line along with 27000 Sq. km continental shelf area. The state has vast scope for fisheries development. The aim of this paper is to assess the status of marine fisheries in Karnataka over past twenty years. It gives an overview of the marine fisheries of Karnataka. The paper examines the status of marine fisheries and its marketing in the Dakshina Kannada district of Karnataka. There are about 9.61 lakh fishermen in the state of which 3.28 lakh fishermen in marine and 6.33 lakh fishermen are in inland who are involved in various fisheries activities. The study has been reliant on Secondary data. The marine fisheries sector in the state has experienced remarkable developments in the coastal economy of the country. Dakshina Kannada, Udupi, Uttara Kannada are the three districts contributing fisheries to the economy. Fisheries has gained importance in the State and National economy as a source of nutritious food, foreign exchange and employment. 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 the production trends of coastal economy.**)**

**Key words: Fisheries sector; Production; Marine; Coastal economy**

 

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## Introduction

India is the second largest producer of fish in the world contributing to 5.68% of global fish production. India is also a major producer of fish through aquaculture and ranks second in the world after China. Fisheries sector occupies a very important place in the socio-economic development of the country. It has been recognized as a powerful income and employment generator as it stimulates growth of a number of subsidiary industries, and is a source of cheap and nutritious food besides being a foreign exchange earner. Most importantly, it is the source of livelihood for a large section of economically backward population of the country.

Karnataka State has vast potential for fish production. It has 5.65 lakh ha. of freshwater sources consisting of 2.93 lakh ha. of ponds, tanks and 2.72 lakh ha. of reservoirs. In addition, the State has 8,000 ha. of brackish water resources and 320 Km coastline with a continental shelf area of 27,000 Sq. Km. Karnataka coast is known as "mackerel coast". Karnataka emerged as a maritime state in 1956 and established its independent Department of Fisheries in 1957. Presently, 3780 mechanized boats, 6978 motorized boats and 8119 traditional crafts are operating along the coast.

The marine fisheries resource potential of the state has been estimated at 4.25 lakh metric tons, of which 2.25 lakh metric tons come from inshore areas up to a depth of 70 m and the remaining 2.0 lakh metric tons hail from off shore/deep sea zone. To harvest the marine fisheries potential in an efficient and sustainable way there is a need for landing and berthing facilities for promoting the UN intermittent operation of fishing vessels.

The state has 6 major fishery harbours such as Mangalore fishing harbour in Dakshina Kannada (D.K), Malpe and Gangolli fishing harbours in Udupi and Honavar, Tadri, and Karwar in Uttara Kannada (U.K) districts. About 90% of the marine fish production in the state comes from these major ports.

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 self upto depth of 200 meters. Inland fisheries includes fishes from rivers lake canals, reservoirs, ponds, tanks etc. fish helps in providing food, generating employment,

 

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raising nutrition level and earning foreign exchange. It accounts one percent of total agricultural production in India. The fisheries sector playing an important role in Indian economy. It contributes to national income, exports, food and nutritional security and employment generation. This sector is also a major source of livelihood to the deprived section of the country, especially coastal areas. It has been recognised as a powerful income generator and employment generator as it stimulates the growth of a number of subsidiary industries. It plays prominent role in developing states.

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

 

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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 drain and eyes. Its 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. Fisheries is an important acuity and which has many economic significance

A Comprehensive review of existing literature is done to provide the researcher a good understanding in to the issue of fisheries production and marketing. A review gives birds eye view about the sector. Various researches have dealt with various aspects of fishery sector

Vishwanatha, Senthiladeban, Raj Kumar and AmaliInfantina (2015) examined the status of Marine Fisheries infrastructure and changes in the marine Fisheries Infrastructure and changes in the marine fish utilization patterns in Karnataka. They studied mainly six major fishing Harbours of Karnataka they are Mangalore, Malpe ,Honnavar, Tadri, Karwar and Gangolli.. The Marine Fisheries Sector developed immensely in terms of infrastructure and fish utilization pattern especially with the support of both state and Central Governments and thereby access to fresh fish is available throughout the year. The demand for dry fish is decreased. They concluded that improvements in cold chain infrastructure, road transport etc have encouraged traders to develop marine fish supply regularly.

 

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Ramachandra Bhatta , Gururai Sagarad and Aruna Rao K (2000) have made a research on"An Economic Analysis of Fishing Operations in coastal Karnataka". The study ananlyses the impact of introduction of deep sea fishing technologies on economies of scale on small-scale fishing. It studies the profitability, small fishing units operating in less than50 metre depth zones generate much higher employment, though deep sea vessels have higher absolute levels of profit and internal rate of return. The small-scale fishing gears were found to be more susceptible to loss of revenue from fish production and increased operating coasts than deep-sea vessels, indicating the eventual decline of some of the traditional gears. The negative revenue impact of higher supply is more for larger vessels compared with smaller vessels, as shown by the inverse demand function. The standard deviation, as a measure of risk, represents lower risk for share-seines compared with trawlers.

The objectives of the study are given below, they are as follows

- To know the production trends of fisheries in coastal districts of Karnataka
- To analyse the marketing of fisheries in the coastal areas.
- To know the role of fisheries sector in the coastal areas in the state.

Peninsular India is bounded by water on 3 sides: the Arabian Sea in the west, the Bay of Bengal in the East and the Indian Ocean in the South. The Indian coastline runs over a distance of 7500 km (5700 kms on mainland) distributed along nine coastal states, two groups of islands and four union territories. The coastal belt comprises of a wide range of ecosystems extending from sandy beaches and mangroves to coral reefs and rocky shores. The State Wise Coast Line And Continental Shelf Area of various states are mentioned in table number 1

Table 1 : State Wise Coast Line And Continental Shelf Area (2012)

| S. No | State | Length of Coast line (Km) | Continental shelf(000 sq.km |
|---|---|---|---|
| 1. | Andhra Pradesh(Undivided) | 974 | 33 |
| 2. | Goa | 104 | 10 |
| 3. | Gujarath | 1600 | 184 |
| 4. | Karnataka | 300 | 27 |
| 5. | Kerala | 590 | 40 |
| 6. | Maharashtra | 720 | 112 |

 

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| | | | |
|---|---|---|---|
| 7. | Odisha | 480 | 26 |
| 8. | Tamilnadu | 1076 | 41 |
| 9. | West Bengal | 158 | 17 |
| 10. | A & N Island | 1912 | 35 |
| 11. | Daman & Diu | 27 | NA |
| 12. | Lakshawadeep | 132 | 4 |
| 13. | Pondicherry | 45 | 1 |
| 14. | Total | 8118 | 530 |

Source:GOI(2011)

The marine fish production during 2014-15 was 3.898 lakh metric tonnes. More than 85% of total fish catch of the State is caught through mechanized fishing boats. 128,415 MT of marine products worth Rs.1426.53 crore was exported from the State during 2014-15. In order to make marine fisheries a more viable venture the supply of 1,50,000 KL state's sales tax exempted diesel to mechanized boats has been continued. A total 1,49,652 KL diesel has been supplied during the year. This scheme is beneficial to 3777 mechanised boats. Administrative approval has been given to take up the work of wharf extension at Alvekodi fish landing centre at an estimated cost of Rs.5.00 crore. Approval has been given to take the dredging of fish landing centers at Malpe, Belekeri and Kodikanyana under Centrally Sponsored Scheme. Fisheries related information is being given to registered fishermen through SMS. Fisheries related information is being given through Kisan Portal of Central Government in the call centre of Agriculture Department. Water and soil testing kits have been distributed to District level offices to conduct testing of the quality of water and soil, which is essential for site selection to take fresh water aquaculture. Tank disposal order is being given transparently and quickly online through Fisheries Resources Information Management System (FRIMS) software. Approval has been given to develop 3 jetties, 22 roads and bridges and 1 fish seed production centre with an estimated amount of Rs.30.00 crore under Rural Infrastructure Development Fund (RIDF). The priorities to be followed while disposing the fishery rights of the inland fisheries resources on lease was according to the comprehensive leasing policy issued in 2006. Since there was a demand from the fishermen to make changes in this policy, the rules have been revised and new leasing policy has been formulated and issued. The Fish Production And Export Of Fish Products Year – Wise Fish Production are mentioned below in Table no 2 and Table no 3

 

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Table no 2 : Fish Production And Export Of Fish Products Year –Wise Fish Production

(Qty: In Metric Tons) (Value: Rs In Lakh)

| Year | Marine | | Inland | | Total | |
|---|---|---|---|---|---|---|
| | Quantity | Value | Quantity | Value | Quantity | Value |
| 1997-98 | 189859 | 23643 | 120542 | 28394 | 310401 | 52037 |
| 1998-99 | 160627 | 21009 | 118419 | 27995 | 279046 | 49004 |
| 1999-00 | 165653 | 23684 | 126646 | 29706 | 292299 | 53390 |
| 2000-01 | 177907 | 24829 | 127468 | 29911 | 305375 | 54740 |
| 2001-02 | 128416 | 19942 | 121196 | 28343 | 249612 | 48285 |
| 2002-03 | 180161 | 33653 | 86262 | 9805 | 266423 | 43458 |
| 2003-04 | 187003 | 40498 | 70036 | 18783 | 257039 | 59281 |
| 2004-05 | 171227 | 45873 | 80470 | 21582 | 251698 | 67455 |
| 2005-06 | 176974 | 46598 | 120599 | 32321 | 297573 | 78918 |
| 2006-07 | 168545 | 55143 | 123919 | 37176 | 292464 | 92318 |
| 2007-08 | 175566 | 51787 | 122124 | 42744 | 297690 | 94531 |
| 2008-09 | 218137 | 82024 | 143717 | 57487 | 361854 | 139511 |
| 2009-10 | 248728.80 | 90198.11 | 159324.00 | 63730.00 | 408052.80 | 153928.11 |
| 2010-11 | 340570.68 | 133564.71 | 186008.75 | 77348.29 | 526579.43 | 210913.00 |
| 2011-12 | 347383.21 | 150629.73 | 199053.47 | 80015.54 | 546436.68 | 230645.27 |
| 2012-13 | 357324.97 | 201668.16 | 168241.47 | 84604.91 | 525566.44 | 286273.07 |

Source: Government Of Karnataka Department Of Fisheries Annual Report 2014-15

 

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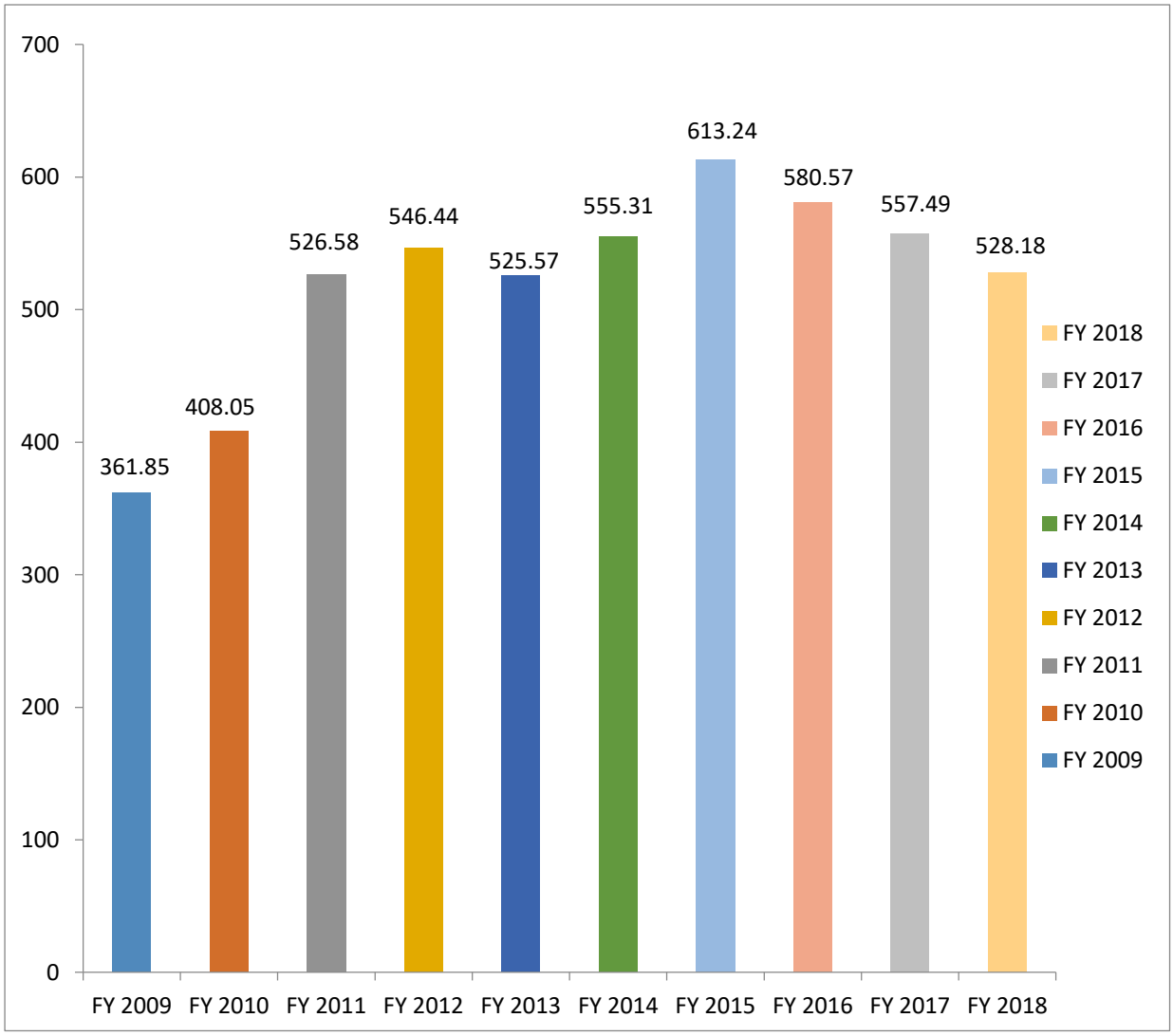
Table no 3 : Fish production volume across Karnataka in India from FY2009 to Fy 2018 (in 1,000 metric tons)




Source: www.statista.com

The present study examines the present status of marine fisheries in Karnataka. The study is based on secondary data. The secondary data has been collected from Department of Fisheries, Government of Karnataka and relevant research articles.

There are also minor fishing ports providing landing facilities to the small boats and traditional crafts. Though these fishing ports are well connected to the roadways, some of the basic amenities such as toilet, retiring room, potable water supply, and sanitation are found to be lacking. Most of the ports have failed to provide berthing place for increased number of fishing crafts.

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Karnataka has registered the highest growth in fish production among the coastal States in the country.According to an independent study conducted by The Associated Chambers of Commerce and Industry of India (Assocham), Karnataka posted a compounded annual growth rate of about 11.5 per cent in the last five years. It produced five lakh tonnes of fish last year (Rs 4,000 crore in value terms), and accounted for 6 per cent of overall fish production in the country estimated at 91 lakh tonnes. With a 300-km coastline and six lakh hectares of inland waters, it has huge scope for further growth in investments in fisheries sector, says the study. Andhra Pradesh, with 8 per cent growth, ranks second in terms of growth in fish production, followed by West Bengal (4.9 per cent), Tamil Nadu (4.5 per cent) and Odisha (3.25 per cent). According to the study, Kerala and Goa have recorded a fall in fish production, mostly due to over-exploitation of fishery resources, highlights the study.

There has been a spectacular growth in marine fisheries sector due to well developed harvest and post harvest infrastructure and demand for seafood both in the domestic and export markets. However, there are not many large-scale processing units in the country. Majority of the units are small scale, proprietary, partnership firms and fishermen co-operatives, the study points out.

Karnataka, the southwestern costal state of India, produced over 528 thousand metric tons of fish in financial year 2018, which was a decrease from the previous year. Even though, the volume had increased from about 361 thousand metric tons in financial year 2009, an evident exponential decrease in volume was noticed over the last couple of years.

**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.

 

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