

## TREND AND GROWTH OF PRODUCTION AND EXPORT OF FISH PRODUCTS IN INDIA

**F. REKHA MORAIS**

Part-time PhD. Research Scholar in Economics, V.O. Chidambaram College, Thoothukudi– 628 008  
Affiliated to Manonmaniam Sundaranar University, Abishekapatti, Tirunelveli – 627012, Tamil Nadu, India.

### Abstract

One of humankind's earliest known means of subsistence was fishing. It is among the biggest economic sectors on the planet. It is also the earliest form of economic organisation. It not only feeds billions of people every day but also employs millions of people around the world. The coastal communities rely heavily on this commodity. After China, India is the world's second-largest fish producer through aquaculture. The fishing industry is essential for the nation's economy and way of life. It is a moneymaker, a source of cheap and nutritious food, and a boon to the economy, so it is no surprise that this sector has been hailed as a major source of income and employment. Above all else, it provides a means of subsistence for a sizable share of the economically disadvantaged population. As a result, the research evaluates India's expanding fish-product industry. Indian fish production and export of fish and fish products have been on the rise, with respective CAGRs of 6.58% and 7.34% in the study. Indian fish production and export of fish and fish products are both on the upswing, as shown by the trend coefficients being positive and statistically significant at the 5% level. Indian fish production has a trend coefficient of 0.076, and fish and fish products exported from the country have a trend coefficient of 0.073.

**Keywords:** fishing production, growth performance, human production, traditional crafts, employment opportunities.

### INTRODUCTION

Humanity's use of fish as a source of food dates back millennia. Over many centuries, it has spread around the globe. The annual amount of fish caught by fishermen worldwide has levelled off and become relatively stable at about 80 million metric tonnes (FAO, 2012a). While it only accounted for 0.5 million t of India's total fish production in 1950 (CMFRI, 2011), marine fish production increased to 3.07 million t in 2010 (CMFRI, 2011), making up 38% of India's total fish production and 79% of its capture fish production. India's total fisheries output rose from 739,817 t in 1950 to 9,348,063 t in 2010, an increase of 1263.5642 percent (FAO, 2012b; FAO, 2012c).

As of 2010, India was the third-largest producer overall and the second-largest aquaculture producer (FAO, 2012d). The Indian agricultural, forestry and fishing industry grew by 2.8% from 2011-2012. (Ministry of Statistics and Programme Implementation, 2012). Currently, total exports amount to 862021 tonnes with a value of Rs. 16597.23 crores (\$3508.45 million) (MPEDA, 2012). There are 194,490 fishing vessels in the marine environment, 37% powered by machinery, 37% by motor, and 26% by the human muscle (Ministry of Agriculture and CMFRI, 2012).

India's fishing fleet went through four stages of mechanisation: first, the motorisation of some preexisting designs of traditional crafts; then, the introduction of mechanised craft; finally, the introduction of more specialised crafts; and finally, the expansion to a full-fledged fishing fleet (Gurtner, 1958). One shining light is the economic importance of our fisheries. Food production has increased, new jobs have been created, the population's nutritional status has improved, and foreign exchange has been earned directly from these efforts (D. Amutha, 2016).

Now that their boats are more easily mechanised, indigenous fishermen can access offshore fishing grounds that were previously out of reach (Chidambaram, 1956). It has been determined that the following types of built canoes—the Lodhia, machuwa, kotia, and Satpati-Versova types—are suitable for mechanisation: (Zeiner et al., 1958). There have been two distinct eras in the fishing vessel's evolution: the one represented by traditional fishing crafts and the other by modern factory vessels (Edwin, 2009). Even though fishing is still a vital part of the economy for many people in the developing world, the industry has evolved into a more dynamic part of the global food market. The rising seafood demand has prompted this worldwide (D. Amutha, 2016).

Findings show that many fish processing plants in the Tuticorin region currently operate at or near capacity (D. Amutha, 2015). Farmers of crabs probably are not experts in the field. Farmers have insufficient resources to fatten crabs (Amutha D., 2013). Fish vendors can improve the quality of their products by learning about and implementing safe handling practices and sanitation standards (D. Amutha, 2014). With the development of mechanised harbour crafts, trawling has emerged as a primary method of catching prawns (Miyamoto and Deshpande, 1959; Kurian, 1969). The study's goal is to measure the success of India's fish-products industries in terms of output and export expansion.

## **OBJECTIVES**

The goals of this research are

- 1) This research aims to analyse fish production in India from 1980–1981 and 2019–2020.

- 2) Examining the market for fish and fish products abroad from 2010-2011 to 2019-2020
- 3) Determine the rate of expansion and development of India's fish-related exports.

## METHODOLOGY

The data in this study were collected through actual experiments. The growth and development of the Indian fish industry were analysed using percentages, linear trends, and compound growth rates. Secondary sources such as the internet, libraries, newspapers, journals, and brochures were mined for information.

**TABLE 1**  
**ANALYSIS OF FISH PRODUCTION IN INDIA**

Year	Fish production (In Lakh Tones)		
	Marine	Inland	Total
1980-81	15.55	8.87	24.42
1981-82	14.45	9.99	24.44
1982-83	14.27	9.4	23.67
1983-84	15.19	9.87	25.06
1984-85	16.98	11.03	28.01
1985-86	17.16	11.6	28.76
1986-87	17.13	12.29	29.42
1987-88	16.58	13.01	29.59
1988-89	18.17	13.35	31.52
1989-90	22.75	14.02	36.77
1990-91	23	15.36	38.36
1991-92	24.47	17.1	41.57
1992-93	25.76	17.89	43.65
1993-94	26.49	19.95	46.44
1994-95	26.92	20.97	47.89
1995-96	27.07	22.42	49.49
1996-97	29.67	23.81	53.48
1997-98	29.5	24.38	53.88
1998-99	26.96	26.02	52.98
1999-00	28.52	28.23	56.75
2000-01	28.11	28.45	56.56
2001-02	28.3	31.26	59.56
2002-03	29.9	32.1	62
2003-04	29.41	34.58	63.99
2004-05	27.79	35.26	63.05
2005-06	28.16	37.56	65.72
2006-07	30.24	38.45	68.69

2007-08	29.2	42.07	71.27
2008-09	29.78	46.38	76.16
2009-10	31.04	48.94	79.98
2010-11	32.5	49.81	82.31
2011-12	33.72	52.94	86.66
2012-13	33.21	57.19	90.4
2013-14	34.43	61.36	95.79
2014-15	35.69	66.91	102.6
2015-16	36	71.62	107.62
2016-17	36.25	78.06	114.31
2017-18	37.56	89.48	127.04
2018-19	38.53	97.2	135.73
2019-20	37.27	104.37	141.64

Source: Department of Fisheries, States Government / U.T.s Administration

Table 1 shows India's cumulative inland and marine fish harvests from 1980–1981 and 2019–2020, respectively. Marine fish production in India increased steadily from 1980–1981, when it was at a low point of 15.55 lakh tonnes, to 2019–2020, when it is expected to reach 37.27 lakh tonnes. Meanwhile, inland capture fish production increased from 8.87 lakh tonnes in 1980–81 to 104.37 lakh tonnes in 2019–2020. Total fish production also rose steadily from 1980–81's 24.42 lakh tonnes to 2019–20's projected 141.64 lakh tonnes.

**TABLE 2**  
**TREND OF EXPORT OF FISH AND FISH PRODUCTS**

Year	Quantity (Tonnes)	Value (Rs. Crore)	U.S. Dollar (\$: Million)	The unit value (Rs. /Tonnes)	Unit value Index
2010-11	8,13,090.85	1,29,01.47	2,856.92	1,58,671.89	6,367.92
2011-12	8,62,021.41	1,65,97.23	3,508.45	1,92,538.46	7,727.08
2012-13	9,28,214.67	18,856.26	3,511.67	2,03,145.42	8,152.76
2013-14	9,83,755.56	30,213.26	5,007.70	3,07,121.60	12,325.60
2014-15	10,51,243.49	33,441.61	5,511.12	3,18,114.75	12,766.79
2015-16	9,45,891.90	30,420.83	4,687.94	3,21,609.99	12,907.06
2016-17	11,34,948.09	37,870.90	5,777.61	3,33,679.62	13,391.45
2017-18	13,77,243.70	45,106.89	7,081.55	3,27,515.69	13,144.07

2018-19	13,92,558.89	46,589.37	6,728.50	3,34,559.46	13,426.76
2019-20	12,89,650.90	46,662.85	6,678.69	3,61,825.42	14,521.01

Source: Marine Products Export Development Authority, Kochi

The value of India's exports of marine products from 2010-11 to 2019-20 is displayed in Table 2. India's export numbers have been on the rise recently. Rapid growth in terms of U.S. dollars can be seen between 2017 and 2018. A total of 8,13,090.85 tonnes of marine fish were exported from India in 2010–11, and this is expected to rise to 12,89,650.90 tonnes in 2019–20. The marine fish export market was worth Rs. 1,29,01.47 crore in 2010-11 but is expected to be worth Rs. 46,662.85 crores in 2019-20.

Results from the study are presented in Table 3, and they reveal a rising trend in the export of Indian fish and fish products as well as the general pattern of fish production there.

**TABLE 3**

**TREND AND GROWTH OF FISH PRODUCTION AND EXPORT OF FISH AND FISH PRODUCTS IN INDIA**

Particulars	Trend Coefficients		R <sup>2</sup>	CGR (percentage)
	a	b		
Fish production	8.79	0.076* (11.64)	0.77	6.58
Export of fish products	8.24	0.073* (13.55)	0.81	7.34

\* Significant at 5 per cent level.

Note: CGR = Compound Growth Rate

Figures in parentheses indicate t-values.

According to Table 3, India's fish production and export of fish and fish products have been growing at a CAGR of 6.58 and 7.34 percent, respectively. Indian fish production and export of fish and fish products are both on the upswing, as shown by the trend coefficients being positive and statistically significant at the 5% level. Indian fish production has a trend coefficient of 0.076, and fish and fish products exported from the country have a trend coefficient of 0.073.

## CONCLUSION

The research has shed light on several previously unknown aspects of India's marine product exports over the past decade and provided useful insights into the many strategies that could be implemented to increase fisheries exports. The people who live in Gujarat's coastal regions are

employed by the fishing industry both directly and indirectly. The prevention and reduction of poverty are two of its most important contributions to the overall socioeconomic development of any given state. The official numbers show that millions of people enjoy fishing as a hobby or a source of income. Market trends in seafood manufacturing and export are also investigated. So it can be simple to examine price changes on a global scale. To enhance the fish and seafood industry, this will aid in recommending suitable measures to take.

## REFERENCES

1. Amutha D., 2016 Satisfaction of work among the crab farmers in Tuticorin District. A.E. International Journal of Science and Technology 4(3):1-9.
2. Amutha, D., A Study on Fishing in Tuticorin District (January 5, 2013). Available at SSRN: <https://ssrn.com/abstract=2196700> or <http://dx.doi.org/10.2139/ssrn.2196700>.
3. Chidambaram, K. 1956. Deep sea fishing in Indian Seas. In: Progress of Fisheries Development in India. Cuttack, pp.40- 46.
4. CMFRI 2011. CMFRI Annual Report 2010 - 2011. Technical Report. CMFRI, Kochi.
5. D.Amutha, Quality of Work Life of Fish Processing Women Workers in Tuticorin District, Journal of Social Welfare and Management, Volume 7, Issue 4, October - December 2015, Pages 157-163.
6. D.Amutha, Socio Economic Study of Vellapatti Village in Tuticorin District, Indian Streams Research Journal, 2013
7. D.Amutha, Struggle for Recognition-A Study of Street Vending in Tuticorin City, Growth of Unorganised Sector in India, 2014.
8. Edwin, L. 2009. An overview of fishing vessels. In: Meenakumari, B., Boopendranath, M.R., Pravin, P., Thomas, S.N. and Edwin, L. (eds.), Handbook of Fishing Technology, Central Institute of Fisheries Technology, Cochin, 67-82.
9. FAO 2012a. The FAO, Rome, published The State of World Fisheries and Aquaculture (SOFIA).<http://www.fao.org/docrep/016/i2727e/i2727e00.htm>
10. FAO 2012b. [http://www.fao.org/figis/servlet/SQSe\\_rvlet?ds=Production&k1=COUNTRY&k1v=1&k1s=100&outtype=html](http://www.fao.org/figis/servlet/SQSe_rvlet?ds=Production&k1=COUNTRY&k1v=1&k1s=100&outtype=html)
11. FAO 2012c. [http://www.fao.org/fishery/countrysector/FI-CP\\_IN/3/en](http://www.fao.org/fishery/countrysector/FI-CP_IN/3/en)

12. FAO 2012d. <ftp://ftp.fao.org/FI/STAT/summary/a-0a.pdf>
13. Gurtner, P. 1958. Fishing boat development in India, Ind. Fish. Bull., 6: 1-14.
14. Kurian, G.K. 1969. Fishing boat development in India. Seafood Exp. Jour., 1(11): 21-28.
15. Ministry of Agriculture and CMFRI, Kochi (2012). Marine Fisheries Census 2010. Part I India. Central Marine Fisheries Research Institute, Kochi.
16. Miyamoto, H. and Deshpande, S.D. 1959. Recent developments in trawl fishing for shrimps from small mechanised boats on the west coast of peninsular India. Proc. Ind. Paci. Fish. Coun. 10 (2): 264-279.
17. MPEDA 2012. <http://www.mpeda.com/press1.pdf> (accessed on 13. 08. 2012)
18. Ravindran, K. 1998. Trends in fishing craft development, In Balachandran, K.K., Iyer, T.S.G., Madhavan, P., Joseph, J., Perigreen, P.A., Raghunath, M.R. and Varghese, M.D. (eds.), Advances and Priorities in Fisheries Technology, Society of Fisheries Technologists (India), Cochin, p. 107-110.
19. Ziener, P.B., Rasmussen, K. 1958. First Report to the Govt. of India on Fishing boats, FAO Report 945, FAO, Rome.