Research Notes

The Growth of Tamil Nadu Fisheries: An Empirical Analysis

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INTRODUCTION

Tamil Nadu is one of the states in India blessed with marine and inland fishery resources. It is also one of the states to have first started a department for fisheries in 1907 with the mandate to develop fisheries. In the late eighties it added to its mandate the promotion of fisher-folk welfare as an important objective.

Tamil Nadu has a coastal length of 1076 KM., and a continental shelf of 41,412sq.km, has rich potential of fish resources, which constitutes about 15 per cent of India's coastal line. Thus the marine area of Tamil Nadu is about 9 per cent of total Indian marine area. This apart, the state is also endowed with inland water sources to the extent of 3.71 lakhs ha. 52,000 ha. of reservoirs, 56,000 ha. of brackish water area and 2,62,760 ha. of other sources.

The fishery sector provides employment to the tune of 10.28 lakhs people - 8.45 lakhs in marine fishing and 1.83 lakhs in inland fishing. There are about 10,353 mechanized fishing crafts and 53,773 traditional crafts functioning in the state. Besides, the state has initiated development of Fishing Harbours and landing facilities numbering 362 Fish Landing Centres all along the coastal line of the state.

DATA AND METHODOLOGY

To analyze the inland, marine fish production and fish export, the information has been collected for the period of 50 years (1952-52 to 2001-02). The data are analyzed and the results are presented below. Average growth rate was computed by using the function of the following form.

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$Y = ab^t$

Where,

Y = Quantity of fish landed in tonnes during the 't'.

a = intercept,

b = coefficient of variables to be estimated,

t = time period in years (1, 2 ....t)

RESULT AND DISCUSSIONS

The analysis of the growth rate of fisheries in Tamil Nadu is given in the following tables.

GROWTH OF MARINE FISH LANDINGS

Table-1: Decadal Growth Rate of Marine Landings in Tamil Nadu and India

Year	Average landings (tonnes)		Growth rate	
	Tamil Nadu	India	Tamil Nadu	India
1952-60	57888	-	6.88	-
1961-70	151948	-	12.05	-
1971-80	209174	1308600	-0.24	3.77
1981-90	252025	1682300	2.19	3.80
1991-2002	344405	2744455	2.33	1.30
1952-2002	213494	1949938	3.96	3.49

The marine fish production has reached a level of 370,998 tonnes in 2001-02. The marine fish production over the recent years has been increased (2.19 and 2.33 per cent during the period of 1981-90 and 1991-2002 respectively) as compared with the total India marine fish production (3.80 and 1.30 per cent during the same periods), because of the government has banned fishing operation for period of 50 days during April-May.

The marine fish production growth was higher in the period of 1961-70 (12.05 per cent), but it was showed negative growth in the next 10 year period during 1971-80 (-0.24 per cent). During 1952-2002 the growth of marine production was 3.96 per cent.

GROWTH OF INLAND FISH PRODUCTION

Table-2 : Decadal Growth rate of Inland Fish Production in Tamil Nadu and India

Year	Average landings (tonnes)		Growth rate	
	Tamil Nadu	India	Tamil Nadu	India
1952-60	38400	--	1.76	--
1961-70	80589	--	13.23	--
1971-80	136790	753400	3.42	2.56
1981-90	135320	1134300	-8.98	5.28
1991-2002	105794	2364727	1.96	5.99
1952-2002	101599	1450781	2.21	5.36

Inland fish production has reached near stagnation over time; average catches per year obtaining at about 1.3 lakhs tonnes. It may be mentioned that minor irrigation tanks (both perennial and seasonal) offered as high as 81 per cent in total inland fish catches as of 2001-02). The growth of inland fish production for the period of 1952-2002 was 2.21 per cent. This is very slow when compared with growth of inland fish production in India (5.36 per cent during the period of 1971-2002).

Tamil Nadu's potential in inland fish production is estimated to be 4.27 lakhs tonnes, where as the actual production is 1.4 lakhs tonnes in the year 2001-02 which is only 32.78 per cent of its potential. The state has higher growth in inland fish production was 13.23 per cent during the period 1961-70 and also it fall on the negative side in the period 1981-90. The growth of inland fish production has decreased over the year as compared to all India growth.

GROWTH OF MARINE EXPORTS

Table-3 : Decadal Growth rate of Export from Tamil Nadu and India

Year	Average landings (tonnes)		Growth rate	
	Tamil Nadu	India	Tamil Nadu	India
1971-80	6501	56816	8.78	11.35
1981-90	13657	87954	13.51	4.18
1991-2002	38050	318486	9.33	8.29
1971-2002	20233	159077	8.92	8.44

Tamil Nadu is one of the major marine products exporting states. An analysis of data on marine exports in terms of quantity from the state and for India shows a linear growth rate of 8.44 and 8.92 respectively for the period 1971-2002. The all-India average annual export growth rates for the periods 1991-2002 is 8.29 per cent. Exports for the state for the

same period is 9.33 per cent, this is higher than that of India export growth rate. Tamil Nadu is one of the most important maritime states with high export potential. Tamil Nadu accounts for 13.78 per cent of the total export in India.

CONCLUSIONS AND RECOMMENDATIONS

Even though the state is endowed with a number of reservoirs and a vast continental shelf, the total fish production is not commensurate with the potential. The total fish production continues to be less than 5 lakh tonnes during the last five years (1997-98 to 2001-02). The growth rate of total fish production was 3.42 for the period 1952-2002. The growth rate for India total fish production for the period 1971-2002 was 4.28 per cent. During the last 10 years (1991-2002) the total fish production growth rate for Tamil Nadu and India were 2.24 and 3.44 per cent respectively. The state's relative share in total fish production at the national level in 2001-02 comes to 8.3 per cent. It forms 12.97 per cent of total marine fish production and 3.65 per cent of the total inland fish production at all India.

The growth rate of fisheries in India and Tamil Nadu is very less than that of overall growth, but the growth of export in Tamil Nadu has increased. The increase in the growth of export shows that the domestic fish consumption of state is less than that of India.

Tamil Nadu's brackish water spread area is estimated at 56,000 hectares out of which 15,000 hectares of low lying areas could be utilized for land based aquaculture. Under the directions of the Supreme Court, the government of India constituted an Aquaculture Authority of India to regulate the setting up of coastal aquaculture within the state. The Authority also framed broad guidelines to regulate aqua farms and make them eco-friendly. The setback not only affected the private farms but also the state owned Demo-farms.

On the inland fisheries front, the state has about 3.96 lakhs hectares of water spread comprising perennial reservoirs, irrigation tanks, long and seasonal tanks, village and ponds identified as suitable for fish culture. The vast area of irrigation canal can be used for the aquaculture. The state has higher tank area; this can also be sued for fish culture to increase the inland fish production.

The exploitation of marine fishery resources in inshore waters is almost at its potential. About 80 per cent of the fishing effort is extended in the inshore waters, which accounts for 80 per cent of the marine production. On the other hand, the potential in the deep seas of the Exclusive Economic Zone is yet to be realized fully. The increase in the number and efficiency of fishing fleet has failed in increasing the fishing operations in offshore areas and in diverting from catching shrimps to fin fishes. The measures needed for sustaining the marine fisheries production are to regulate the fishing effort, particularly in the inshore, traditional fishing grounds.

Provision of reliable and good infrastructure facilities can help the fishermen, the wholesalers and other inter-mechanics related to the production and marketing systems. Investment for development of both marines, inland and aquarium fish culture to tap the potential is far from adequate. This is especially so in case of inland and aquarium fish production. Considering the potential there is vast scope for increasing the inland and aquarium fish production if adequate investment is made.

The Tamil Nadu Fisheries Department implements various welfare schemes to fishermen viz., the scheme for the development of marine and inland fish production, schemes for upliftment of socio economic standards of fishing community, conservation of marine fishery resources, development of infrastructure through provision of fishing harbour and landing jetties.

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