

A Review of Inland Fish Production of Raichur District, Over a Decade

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(Received March, 1991)

Abstract : A study was carried out to review inland fish production of Raichur district over a decade. The inland fish production has increased over 22 per cent between 1977–78 and 1988–89. Among the various taluks, Raichur taluk showed the highest annual growth rate of 29.81 per cent, showing a very high percentage of increase during the above period. Only Lingasugur taluk has recorded a decrease in inland fish production during the period. The other taluks which have shown an impressive growth rate are Kustagi (29.54%), Devadurga (23.19%) and Yelburga (22.09%).

Introduction

Karnataka is blessed with vast aquatic resources comprising major riverine systems such as Tungabhadra, Krishna, Cauvery, etc. Apart from this, the state is also endowed with 54 reservoirs having 136491 ha of water-spread area (wsa), 4898 major tanks (17378 ha/ wsa) and 15283 minor tanks (59469 ha/wsa). The total inland fish production stood at 50159 metric tonnes during 1987–88 which forms about 28 per cent of total fish production of the state.

Raichur district has become a very potential area for developing inland aquaculture as it is situated between two major command areas, Tungabhadra and Upper Krishna. The inland fish production of the district which was only 250 metric tonnes in 1977–78 has increased by about seven folds in a span of twelve years. The district has one reservoir (360 ha/wsa), 89 major tanks (5283 ha/wsa) and 406 minor tanks (728 ha/wsa) as shown in Table 1. Of the total fish production in the state, the district contribution accounts for 3.37 per cent. In

the present study, an attempt has been made to review the trend in inland fish production in the district over a period of time.

Material and Methods

The fish production data utilized in this study were obtained from District Statistical Office as well as Dept. of Fisheries, Raichur, for a period of twelve years (1977–78 to 1988–89). Compound growth rate was estimated by employing an exponential function of the form

$$Y_t = ab^t$$

where Y = fish production in metric tonnes;
and t = time period

In order to understand the extent of variation/instability in fish production during this period of investigation, a simple statistical technique namely, co-efficient of variation (CV) was employed. The same measure was used to estimate extent of variation in rainfall for the corresponding period.

Table 1. Number of major and minor tanks in Raichur district

Taluk	Major	Minor
Deodurga	8	18
Gangavathi	8	—
Koppal	5	—
Kushtagi	13	1
Lingasugur	10	1
Manvi	3	5
Raichur	3	382
Sindhanur	1	—
Yelburga	8	—
Total	89	406

Source : Dept. of Fisheries, Raichur.

Results and Discussion

The compound growth rates in fish production worked out for the period of investigation are presented in Table 2. The inland fish production has increased

by 577 per cent between 1977-78 and 1988-89. This is also evident from a high rate of annual growth (22.83%) in the fish production. This has been mainly due to the higher growth rate in almost all the taluks of the district. However, Raichur taluk has recorded the highest annual growth rate of 29.81 per cent showing a very high percentage increase (1688%) over twelve years. The other taluks which have shown impressive rate of growth are, Kushtagi (29.54%), Deodurga (23.19%) and Yelburga (22.09%). This higher rate of growth in inland fish production in these taluks can be attributed to the existence of more number of major and minor tanks (Table 1) coupled with lower variation in rainfall (Table 3) during this period, leading to higher water-spread area. Only Lingasugur taluk has shown a 9 per cent decrease in fish production between the first and last year of the study period. However, the annual growth rate was positive and moderate (10.22%).

After reviewing the trend in growth of inland fish production in the district, an

Table 2. Production and growth rates of inland fish production in Raichur district : 1977-78 and 1988-89

Taluk	1977-78 (in mt.)	1988-89 (in mt.)	% Change	Compound growth rate (%)
Deodurga	25	200	700	23.19
Gangavathi	25	125	257	18.75
Koppal	25	112	348	18.03
Kushtagi	10	100	900	29.54
Lingasugur	55	50	-9	10.22
Manvi	20	100	400	11.72
Raichur	45	800	1678	29.81
Sindhanur	15	100	367	20.34
Yelburga	20	105	425	22.09
	250	1692	5777	22.82

Table 3. Variation in fish production and rainfall 1977-78 to 1988-89.

Taluk	Mean Yeild (in mt)	C. V. (%)	Mean rainfall (in mm)	C. V. (%)
Deodurga	76.08	121.86	740.35	18.55
Gangavathi	126.50	112.67	661.06	28.78
Koppal	74.92	105.59	584.60	18.17
Kushtagi	75.83	92.09	480.37	35.80
Lingasugur	122.75	113.61	605.17	19.47
Manvi	50.33	85.76	676.10	24.13
Raichur	284.33	92.41	729.45	18.23
Sindhanur	71.25	92.72	29.34	31.62
Yelburga	69.50	87.92	571.64	18.91
TOTAL	951.5	84.48	652.72	19.10

attempt was made to understand the stability or otherwise in growth over a period of 12 years. The variations in the mean yield (Table 3) of the district was found to be moderately high (84.48%). However, the variations in annual rainfall was relatively low (19%). A look at the taluk-wise variation shows that the Deodrga (121.86%), Lingasugur (113.6%), Gangavathi (112.67%) and Koppal (105.59%) taluks exhibited higher degree of variations in mean yield and Kushtagi (35.80%), Sindhanur (31.62%), Gangavathi (28.78%) taluks showed greater variation in mean annual rainfall.

Though agro-climatically Raichur district falls under North-Eastern Dry Zone of Karnataka, the data presented in this paper indicate an impressive growth rate in inland fish production during the years 1977-78 to 1988-89. This is mainly because of the efforts put in by University of Agricultural

Sciences, Dept. of Fisheries, elected local bodies like Zilla Parishad and Mandal Panchayats. Looking at existing potential and future requirement, there is need to strengthen the existing structure of tanks and reservoirs to utilize most efficiently and effectively the available aquatic resources in the district. Further effort should be directed for the construction of new fish ponds in general by the district administration also and by cultivators through Fish Farmers Development Agencies, University of Agricultural Sciences and financial institutions with suitable guidance and assistance.

In the case of short seasonal ponds/tanks it is advisable to stock stunted fingerlings. The Fisheries Department, Fish Farmers Development Agencies and public bodies may also help in consistent supply of fish seed at a reasonable price to both public and private entrepreneurs.