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STATES VIEW OF FISHERIES SECTOR IN KARNATAKA

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Abstract:

The fisheries sector in the national economy has gained importance both as a foreign exchange earner and as a generator of employment. The fish production in Karnataka was around 2.0 lakh tons in early eighties and reached to a peak of over 3.0 lakh tons in mid-nineties. Karnataka is one of the leading fish production centres and fish products of the country. Karnataka state has 4th place among maritime states in terms of marine fish production and 9th position in inland fish production for 2020-21 (up to the end of November 2020). The annual fish production in Karnataka has shown a considerable increase from 5.26 lakh MTs in 2010-11 to 6.32 lakh MTs in 2019-20 with annual average grow the rate of 7.59per cent.

Keywords: Fisheries, Foreign Exchange, Fish Production, Karnataka.

Introduction

The fisheries sector in the national economy has gained importance both as a foreign exchange earner and as a generator of employment. This sector also plays an important role in the socio-economic development of fisheries farmers of State in view of its contribution to the food basket, nutritional security, foreign exchange earnings, income and employment generation, livelihoods, reduction of poverty, daily wages at gross root levels in the state. In addition, this sector has assumed the characteristics of an industrial enterprise. Fish is the cheapest source of protein available for human diet. The fish production in Karnataka was around 2.0 lakh tons in early eighties and reached to a peak of over 3.0 lakh tons in mid-nineties. The average fish production in the last 5 years is about 5.65 lakh tonnes with the contribution of Marine sector being 66per cent and Inland sector 34per cent for the year. The fish production from the state contributed about 5.86per cent of India"s total fish production for the year 2013-14.

The fish production from Karnataka state contributed about 4.27per cent (5.87 MT) of India's total fish production for the year 2018-19 and ranks 6th position in total fish production, in Marine fish production 4th position and Inland fish production 9th position. The current level of per-capita fish availability in the state is around 8.77 kg. The contribution of fisheries sector to the GSDP at current prices during 1993-94 was Rs 16,316 lakhs and it has increased to Rs.6996 crores in 2018-19. Export of marine products form Karnataka has increased from 0.98 lakh MTs during 2013-14 to 1.42 lakh MTs during 2018-19.

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 and tanks and 2.72 lakh ha of reservoirs. In addition, Karnataka has about 5.93 lakh hectare of Inland water resources 8,000 ha of brackish water resources and 320 Km coastline with a continental shelf area of 27,000 Sq. Km. The marine fish production during 2020-21 was 3.45 lakh MTs. Presently, 4,597 mechanized boats, 10,100 motorized boats and 9,760 traditional crafts are operating along the coast. More than 85per cent of total fish catch of the State is caught through mechanized fishing boats. About 95,841 MTs of marine products worth Rs.1367.13 crore ($198.92) was exported from the State during 2019-20.

Inland fisheries, during 2020-21, 7422.18 lakh fish seed (fry) have been produced. 3145 department tanks were developed by stocking 2171.62 lakh fingerlings. Similarly, 1914 Gram Panchayat tanks have been developed by stocking 497.15 lakh fingerlings. It is estimated that 1.52 lakh MTs of inland fish has been produced. Karnataka has huge scope for further growth and investments in fisheries sector. Incidentally, about eight lakh fishermen are involved in fishing business across Karnataka.

Objective:

To study on States View of Fisheries Sector in Karnataka

Methodology

The present study is based on the secondary data; the required data for the study purpose were collected from the number of reference books, Journals and Internet. The study covers 10 years from 2010-11 to 2019-20.

Fisheries Development in Karnataka

Karnataka is one of the leading fish production centres and fish products of the country. Karnataka state has 4th place among maritime states in terms of marine fish production and 9th position in inland fish production for 2020-21 (up to the end of November 2020). The total fish production is 3.05 lakhs MTs and fish seed production is 7278.65 lakh fry respectively. In 2019-20, the yield was 4 lakh tonnes and 2 lakh tonnes respectively. Karnataka has 6th position among all Indian states if one combines the fish production in both these sectors. The marine exports including fishmeal and fish oil

exports from Karnataka was 0.95 lakh metric tons worth Rs.1367.13 crores in 2019-20. Karnataka State has 54 process units and 54 cold storages under private sector with capacity of 7812 MTs/ day. During 2020-21, assistance of Rs.26.50 lakhs was given for establishment of 1cold storage unit with a capacity of 20 MTs. It has steadily managed to ramp up fish production with its total fish production in 2019-20 in marine fisheries sector valued at Rs.4032.1 crore and that of inland fisheries at Rs.1831.8 crore in the country. The annual fish production in Karnataka has shown a considerable increase from 5.26 lakh MTs in 2010-11 to 6.32 lakh MTs in 2019-20 with annual average grow the rate of 7.59per cent.

Trends in Growth of Fish Production in Karnataka (2010-11 to 2019-20)

(Quantity: in Metric Tonnes)

Year	Marine	Inland	Total	AGR of Total Fish Production (per cent)
2010-11	340571	186009	526580	-
2011-12	347383	199053	546436	3.77
2012-13	357325	168241	525566	-3.82
2013-14	357358	203914	561272	6.79
2014-15	389822	223419	613241	9.26
2015-16	411762	168828	580590	-5.32
2016-17	398928	158566	557494	-3.98
2017-18	414348	188174	602522	8.08
2018-19	389491	197921	587412	-2.51
2019-20	403368	228633	632001	7.59
CAGR	**2.09**	**0.81**	**1.67**	
Std. Error	**0.004**	**0.013**	**0.004**	
t-ratio	**4.769**	**0.589**	**3.837**	
Sig:	**0.001**	**0.571**	**0.005**	

Source: Government of Karnataka, Department of Fisheries, Handbook of Fisheries Statistics, Bangalore–(2010-11 to 2019-20)

The above table-4.1 presents the production of marine fish and inland fish in the state. The growths in fish production have been captured in CAGR. It has been found from the above table that the growth in the fish production have been increased by 2.09 per cent in marine fish production, 0.81 per cent in inland fish production, and 1.67 per cent total fish production however, this argument is sustained as CAGR is statistically significant at five percent level. Therefore, inland fish production is not sustained as CAGR is not statistically significant at five and one per cent level. In marine and in total fish production the CAGRs are positive and significant. The growth is higher in marine fish production compared to inland fish production. The growth in fish production of total in Karnataka represents both

marine and inland fish production, is increasing moderately.

The following graph-4.1 shows the trends in production of fish in the state during the period from 2010-11 to 2019-20.

Table –4.1

Trends in Fish Production in Karnataka (2010-11 to 2019-20)

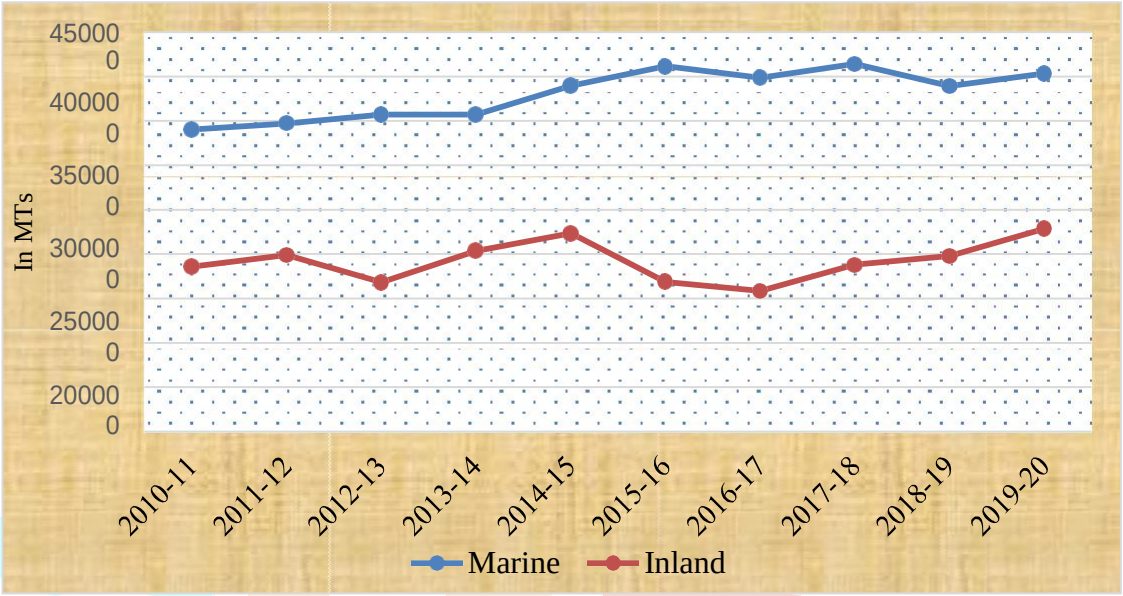


Table presents the fish production in Karnataka during the period from 2010-11 to 2019-20, in terms of annual growth rate and compound annual growth rate. The marine fish production of 340471 MTs in 2010-11, which has increased to 411762 MTs in 2015-16; then it has sharply reduced to 398928 MTs in 2016-17, and then it has again spectacularly increased to 403368 Mts in 2019-20. The inland fish production of the state was 186009 MTs in 2010-11, it has increased to 199053 MTs in 2011-12, then it has decreased to 168241 in 2012-13, and then it again increased to 223419 MTs in 2014-15, and then it has sharply reduced to 168828 MTs in 2015-16, and then it has significantly increased to 228633 MTs in 2019-20.

Fund Assistance to Fisheries Sector in Karnataka

This section analysis of the fund assistance for the fisheries sector in Karnataka has consistently increased over the last decade from Rs.137.52 crore during 2009-10 to Rs.347.82 crore during 2018-19. Apart from the state budget, funds have been sourced under various central sector/ sponsored schemes (CSS) including, National Fisheries Development Board (NFDB), Rashtriya Krishi Vikas Yojana (RKVY), CSS-Blue Revolution Schemes, (CSS-BR). Private investments have increased correspondingly with the introduction of various promotional schemes to boost the development of the sector.

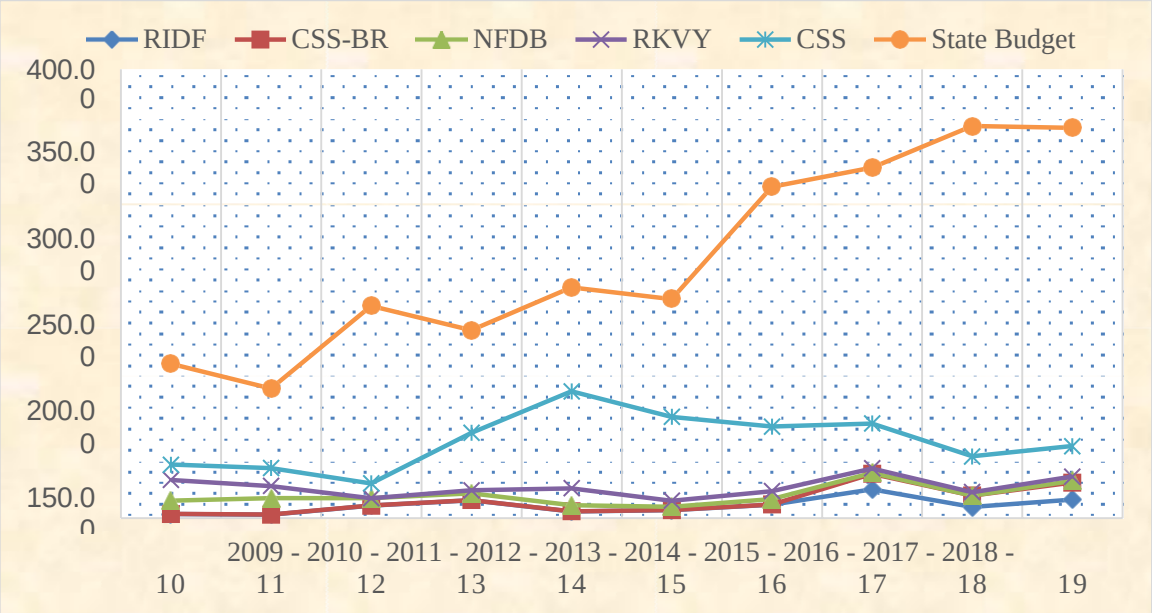
Fund Assistance to Fisheries Sector in Karnataka (2009-10 to 2018-19)

(Rs. in Crores)

Year	RIDF	CSS-BR	NFDB	RKVY	CSS	State Budget	Total of Fund Allocation	AGR
2009-10	3.48	0.00	11.74	18.69	13.64	89.97	**137.52**	-16.12
2010-11	3.00	0.00	14.53	11.00	16.00	70.82	**115.35**	64.06
2011-12	11.00	0.00	6.61	0.00	13.14	158.49	**189.24**	-11.50
2012-13	16.00	0.00	5.91	2.80	51.24	91.52	**167.47**	22.82
2013-14	6.00	0.00	5.27	15.27	86.25	92.89	**205.68**	-5.13
2014-15	7.00	0.00	2.99	5.39	74.78	104.97	**195.13**	51.29
2015-16	12.00	0.00	4.79	7.22	57.44	213.76	**295.21**	5.78
2016-17	25.61	13.71	0.87	4.05	39.92	228.11	**312.27**	11.90
2017-18	9.77	10.24	0.00	3.05	31.92	294.44	**349.42**	-0.46
2018-19	16.53	15.03	1.55	3.88	27.13	283.70	**347.82**	-16.12
Total	**110.39**	**38.98**	**54.26**	**71.35**	**411.46**	**1628.67**	**2315.11**	

Source: Government of Karnataka, Department of Fisheries, Handbook of Fisheries Statistics, Bangalore – (2014 to 2018)

Fund Assistance to Fisheries Sector in Karnataka (2009-10 to 2018-19)



The above Table –4.2 and Graph-4.2 indicates the fund assistance for the fisheries sector in Karnataka state from 2009 to 2018. Out of which, the state budget has highest contribution fund allocation was Rs.1628.67 crore for the fisheries sector, followed by the next position of CSS scheme was Rs.411.46 crore, RIDF scheme was Rs.110.39 crore, NFDB was Rs.54.26 crore, RKVY scheme was Rs.71.35 crore, and CSS-BR was 38.98 crore.

Inland Fisheries in Karnataka: State Scenario

During 2019-20, 5753.64 lakh fish seed (fry) have been produced of 2976 department tanks were developed by stocking 2277.00 lakh fingerlings. Similarly, 2083 Gram Panchayat tanks have been developed by stocking 535.00 lakh finger lings. It is estimated that 2.29 lakh MTs of inland fish has been produced. During the year 2020-21, 3019 departmental tanks and 1820 Gram Panchayat tanks have developed by stocking 1874.85 lakh fingerlings and 428.58 lakh fingerlings respectively up to November 2020. It is estimated that 1.07 lakh MTs of fish has been produced from inland resources up to November 2020.

Resources and Potential- Inland Fisheries

Karnataka state has 5.65 lakh ha. of inland water resources, which provide immense scope for development of inland fisheries in Karnataka. The annual estimated fish production potential of these resources is around 4.02 lakh metric tons. During the period between 1956 and 1966, the important activity in the inland sector was to import fish seed, mostly riverine major carp fry collection from West Bengal. Fish seed production and rearing farms have been set up in the Government sector with a view to develop the much-needed infrastructure for producing fish seed for stocking in tanks, ponds and reservoirs of the State.

At present, there are 47 fish seed production and rearing farms of Fisheries and Zilla Panchayat and 60 Taluk level nurseries in the State. The under the control of Department State requires about 56 crore fish fingerlings to develop all water resources (cent percent utilization) suitable for fish culture. The present fish seed production is about 60 crore fish fries contributing to the stocking of 25 to 30 crore fish fingerlings annually. Tank fishery development plays a strategic role in providing employment to the rural folk. The fish produced by them provides livelihood or additional income to them. The fishery rights of the tanks with achcut of more than 40 ha. are vested with the Fisheries department. Karnataka is one of the richest states among the Indian states having inland water resources of varied type, constituting about 9.3per cent of inland water resources of India. It is estimated that the potential of inland fish production of the state is around 4.02 lakh MTs taking in to account the full utilization of all inland water

resources for fisheries.

There is still considerable scope to increase inland fish production by undertaking regular and periodical stocking of the suitable water bodies with quality fingerlings. Due to stocking of fish seed in tanks and reservoirs under Reservoir Fisheries Development and Mathsya Krishi Ashakirana schemes marginal increase in inland fish production of the state has been witnessed.

Utilization and Production of Resources for Inland Fisheries Sector in Karnataka (as on 2021)

Sl. No	Resources	Extent	Maximum Expected Yield (Kg/ ha)	Estimated Production Potential (MTs)	Current Status (Kgs/ ha)
1	Reservoirs	272258 ha	150	20058	25-90
2	Department Tanks	239195 ha	2500	214644	1130
3	Grama Panchayath Tanks	52432 ha	1000	60309	220
4	Rivers	5853 km	1000	2907	150
5	B Water	8000 ha	3500	14000	2420
6	Private Ponds	9000 ha	10000	90000	3000
	Total			**401918**	

Source: Government of Karnataka, Department of Fisheries, Handbook of Fisheries Statistics, Bangalore – (2014 to 2018)

The above table presents the utilization and production of different resources for inland fisheries sector in the state. During 2018-19, a total of 6298.01 lakh fish seed (fry) have been produced. 2791 departmental tanks were developed by stocking 1768 (70.83%) lakh fingerlings. Similarly, 1734 Gram Panchayat tanks were developed by stocking 410 (16.43%) lakh fingerlings, 318 lakhs fingerlings (12.74%) stocked in Private Ponds and 94.99 lakh fingerling stocking in Reservoirs, by stocking 2590.81 lakh fingerlings and achieved total inland fish production of 1.97 lakh MTs.

District-wise Inland Fish Production in Karnataka

Analysis in this section represents district-wise trends in inland fish production in the State during the period from 2014-15 to 2018-19. The following table shows the inland fish production in the districts in the state in terms of MTs. Out of 30 districts, 6 districts are playing a major role in the inland fish production in the state. Shimoga district is in first place in the production of inland fish in Karnataka, which was 105191 MTs (11.23%) from 2014 to 2018. Mandya district is in the second place, which was 75319 MTs (8.04%) of inland fish production from 2014 to 2018. Raichur district is in third place, which was 73123 MTs (7.80%) of inland fish production from 2014 to 2018. Tumkur district is in the fourth place, which was 57869 MTs (6.18%) of inland

fish production from 2014 to 2018. Bellary district is in the fifth place in the inland fish production, which was 50604 MTs (5.40%) from 2014 to 2018 and Mysuru district is in sixth place, which was 48644 MTs (5.19%) of inland fish production in the state from 2014 to 2018. Finally, other districts are producing less fish inland production compared to these six districts in Karnataka.

District-wise Trends in Inland Fish Production in Karnataka

(Between 2014 to 2018)

(Quantity in Metric Tonnes)

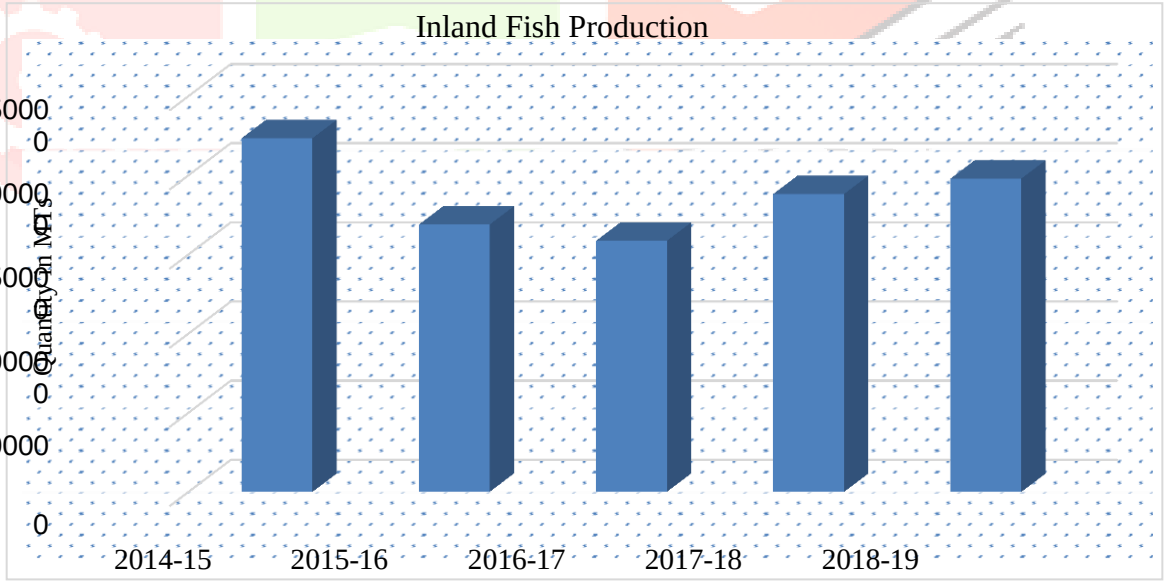
SI. No	District	2014-15	2015-16	2016-17	2017-18	2018-19	Total of Inland Fish	%
1	Bagalkote	1958	2427	3349	1903	1736	11373	1.21
2	Bangalore (R)	2788	2393	2110	2531	5798	15620	1.67
3	Bangalore (U)	3938	3946	4423	4434	2618	19359	2.07
4	Belgaum	4896	4092	4760	6286	5547	25581	2.73
5	Bellary	15004	9124	10388	9094	6994	50604	5.40
6	Bidar	2334	1725	1877	3338	1030	10304	1.10
7	Bijapur	9795	6881	4744	9811	8787	40018	4.27
8	Chamarajanagar	3883	4243	2017	3497	4995	18635	1.99
9	Chikkballapur	1690	4177	4309	5682	3772	19630	2.10
10	Chikmangalur	7211	5814	5409	4132	5646	28212	3.01
11	Chitradurga	5878	4488	3768	4405	5116	23655	2.52
12	Dakshina Kannada	1112	1106	1203	7067	3353	13841	1.48
13	Davanagere	15718	9323	7532	1841	6861	41275	4.41
14	Dharwad	2856	2227	1943	446	2517	9989	1.07
15	Gadag	1071	687	757	5605	594	8714	0.93
16	Gulbarga	3410	4079	5024	7620	5840	25973	2.77
17	Hasann	10296	9464	9578	3865	11614	44817	4.78
18	Haveri	6606	3901	2206	4328	1806	18847	2.01
19	Kodagu	3790	3084	3517	3881	3528	17800	1.90
20	Kolar	1523	1848	1608	3292	3937	12208	1.30

21	Koppal	4458	2749	2219	17418	3252	30096	3.21
22	Mandya	14673	17528	12924	7175	23019	75319	8.04
23	Mysuru	8517	7721	7332	16172	8902	48644	5.19
24	Raichur	18101	12707	10095	20721	11499	73123	7.80
25	Ramanagara	4575	4079	5019	7941	6222	27836	2.97
26	Shimoga	43765	17302	17443	3227	23454	105191	11.23
27	Tumkur	12803	11412	9971	11784	11899	57869	6.18
28	Udpi	2173	2182	3571	3983	3077	14986	1.60
29	Uttara Kannada	6451	6441	7688	4931	12016	37527	4.01
30	Yadgiri	2150	1677	1782	1762	2490	9861	1.05
	Total	**223423**	**168827**	**158566**	**188172**	**197919**	**936907**	**100.00**
	CAGR (%)			**-1.33**				

Source: Government of Karnataka, Department of Fisheries, Handbook of Fisheries Statistics, Bangalore – (2014 to 2018)

District-wise Trends in Inland Fish Production in Karnataka

(Between 2014 to 2018)



There was a fluctuation in the overall state inland fish production, that was 223423 MTs in 2014-15, has decreased to 168827 MTs in 2015-16; and then it has spectacularly increased to 197919 MTs in 2018-19 are presented in above table-4.4 and graph-4.3.

Conclusion:

Karnataka is one of the leading fish production centres and fish products of the country. Karnataka state has 4th place among maritime states in terms of marine fish production and 9th position in inland fish production for 2020-21 (up to the end of November 2020). Analysis in this section represents district-wise trends in inland fish production in the State during the period from 2014-15 to 2018-19. Tank fishery development plays a strategic role in providing employment to the rural folk. The fish produced by them provides livelihood or additional income to them.

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