



DEVELOPMENT OF FISHERY PROGRAM AND BENEFICIARIES PROFILE IN MAHARASHTRA

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ABSTRACT :

Countries and states have abundant resources in terms of lakes and tanks, rivers and canals, reservoirs, lakes and other reservoirs with huge potential for fisheries development to strengthen food security, create employment opportunities and earn foreign exchange. Aims to improve the socio-economic status of fishermen and others involved in the sector. To this end, the Government of India developed and launched a Centrally Sponsored Scheme "Inland Fisheries and Fisheries Development" under the Macro-Management Approach in the States / UTs during the 10th Plan.



KEYWORDS: Fisheries, Development Program

INTRODUCTION:

Many people around the world find sources of income and livelihood in the field of fisheries and fisheries. The most recent estimates show that 58.3 million people were engaged in the primary sector of fisheries and fisheries. The proportion of fishermen working has increased from 20 to 38%. Fisheries are responsible for an effective increase in the supply of fish for human consumption. Unexpectedly, global fisheries production continues to grow, and newly released FAO fisheries figures record the second all-time global fisheries production of 106 million tonnes of live weight in 2017, with a total estimated first sales value of \$175 billion.

In the case of India, it has been reported to be second in fish production and second in fisheries. Fisheries is a sunrise area with diverse resources and potential, involving more than 18.50 million people at the primary level and much more with the value chain. Due to the transformation of the fisheries sector from traditional to commercial level, fish production has increased from 8.1 lakh tonnes in 1950-51 to 112.87 lakh tonnes in 2015-16, while export earnings in this sector have been recorded at around Rs 38.00 crore in the 2014-15 (US \$ 6.36 billion). With 6.35% of global fish production and 6% of global trade, India is the world's second largest fish producer and fishery. The sector showed an increase of 5.6%, mainly due to inland fish production with 7.9%, according to the DAHD & F report. These figures show that the inland area is growing rapidly.

Andhra Pradesh is a leading state in fisheries and the newly formed state like Chhattisgarh is not far behind. Maharashtra is the second largest producer of fish seed in the country and the sixth largest producer of domestic fisheries. Its annual fish seed production has reached 15,148 lakh standard fries and 3.653 lakh

tonnes of fish. The fisheries sector contributed Rs 3,551 crore to the state's GDP during 2015-16. According to the DOF report, the total GDP contribution of the state to fisheries is 1.63%. There are 32 districts in the state and its capital is Mumbai. About 35% of the population in the state is Scheduled Tribes and 13% is Scheduled Castes. Of the 1.71 lakh hectares of water available in the state, 1.63 lakh hectares has been developed under fisheries, which is 94% of the total water area. In the year 2015-16, the State Fisheries Department implemented various fisheries development programs and 38,523 fishermen benefited this year which improved their living standards.

MATERIAL AND METHOD:

To study fisheries, information was collected on the area of water used and its development, total number of fish producers, trend of fish production in last twelve years, current district fish production and various fisheries development programs undertaken. For this, information was collected from secondary sources such as the DOF's annual report and its website. For additional information, a focus group discussion was held with DoF officials. Interview schedules with selected criteria were used to document the profiles of beneficiaries of fisheries development programs. Information was collected on age, educational qualifications, caste, religion, marital status, family type, family size, occupation and experience in fishing. The reliability of the interview schedule was tested by 'test retest' method. A reliability coefficient with a value of 0.80 was found to be acceptable. In addition, Cronbach Alpha, which is a function of the number of items in a test, calculated the average correlation between item-pairs and the difference in total score with a value of 0.83, thus establishing the tau-equivalent reliability as acceptable for a less limited estimate of the reliability of the interview schedule. 120 fish farmers were selected to achieve the objectives of the study. Out of the four blocks in Mumbai, 30 fish farmers were selected using a random sampling method.

RESULT AND DISCUSSION:

Table 1.1 Utilization of Water Area

Sr. No.	Water Area	Area in Lakhs	Developed in %
1.	Ponds	0.776	48.86
2.	Reservoir	0.812	51.14
Total		1.588	100.00

Source: Primary Data

A study on fisheries in Maharashtra showed that a network of 34 large, small rivers and tributaries, flows from east to west and covers an area of about 3796 km in the state. According to the official website of the Maharashtra Fisheries Department, the growth rate of fisheries in 2016-17 was 9.06%. A total of 1.588 lakh hectares of water area is available for fisheries in the State of Maharashtra (2016-2017) with 76,156 rural lakes and reservoirs. However, a total of 1.692 lakh hectares of rural lake reservoir water has been used for fisheries till 2016-2017. A free accident insurance scheme is being offered to fish farmers involved in the fishing business for financial assistance.

Table 1.2 Number of Reservoirs on Basis of Size and Area

Sr. No.	Reservoirs	Area in Lakhs	Developed in %
1.	Large	10	24,516
2.	Medium Size	23	30,854
Total		1.588	100.00

Source: Primary Data

Freshwater fish farming plays an important role in the development of rural livelihood in Maharashtra. In addition to direct self-employment opportunities from fisheries, pond fish farming provides various livelihood opportunities for hatcheries and seed nursery operators, farm workers and seed traders and other intermediaries. The state fisheries are mainly dominated by culture based fisheries with the most cultivable species being Indian Major Carps (IMC), exotic carps and catfish. At present, more than 2.2 lakh

fish farmers in the state depend on fisheries and fisheries for their livelihood. A total of 1,532 fishing co-operatives exist in the state. Information on the area of water used under aquaculture, the number of reservoirs based on size along with their area and the total number of fish producers obtained from the DOF.

Table 1.3 Fish and Seed Production

Sr. No.	Year	Inland Fish Production (000 tonnes)	Seed Production (Million Fry)
1.	2007-08	4.64	200.61
2.	2008-09	4.19	149.43
3.	2009-10	3.95	188.90
4.	2010-11	4.15	190.89
5.	2011-12	4.26	1396.89
6.	2012-13	4.46	94.52
7.	2013-14	4.39	187.50
8.	2014-15	4.58	65.18
9.	2015-16	4.79	98.96
10.	2016-17	5.01	189.55

Source: Handbook Gov. of India

The State of Maharashtra has vast natural water resources in the form of rivers, reservoirs, lakes and tanks, out of which 1.863 lakh hectares of water has already been used for fisheries. Since 1998, all the reservoirs except the water area of more than 1500 hectares have been leased by the local panchayat administration. The water area up to 5 hectares of lakes and reservoirs in the village has been leased by the Gram Panchayat, the Panchayat has auctioned 5-50 hectares, the District (District) Panchayat has auctioned 50-100 hectares and the Fisheries Department has auctioned more than 100 hectares. Water area less than 1 hectare is allotted to individual fish producers and water catchment area above 1 hectare is given to fishermen co-operatives for a period of five years. The DOF has reserved a small reservoir for the purchase of brooders in each district. Farmers in Maharashtra have started fish farming on the lines of Andhra Pradesh by introducing inputs like feed and fertilizers.

Table 1.4 Beneficiaries of fisheries development programmes

Sr. No	Program	Benefited	Not Benefited
1.	Production of Fish Seed	75.9	24.1
2.	Reservoirs and River Development	32.6	67.4
3.	Training by Department	69.5	30.5
4.	Study tour	22.1	77.9
5.	Poly culture, prawn culture and ornamental Fish culture	21.5	78.5
6.	Assistance towards net and Boat	78.3	21.7
7.	Assistance towards fish seed rearing in seasonal ponds	69.2	30.8
8.	Assistance towards fingerling stocking	58.7	41.3
9.	Assistance towards retail sale	78.9	21.1
10.	Grants towards registered fishermen co-operatives societies	61.5	38.5

Source: Primary Data

Fish Seed Production Scheme: This is a state plan scheme and was introduced in 2007-08 with the objective of providing healthy fish seeds for the development of fisheries. Under the general scheme and tribal sub-plan, the main function of this scheme is to produce quality fish seeds through scientific methods and to meet the needs of fish farmers living in remote areas. Demand for fish seeds for divisional reservoir and river basin areas is also met under the scheme. The various components on which the budget is spent are farm maintenance, electricity charges, hatchery operations, seed production and rearing, feeding and expansion of new infrastructure. The existing 72 circular hatcheries for fish seed production, 78 fish farms and 1147 individual rearing sites with an area of 3047.81 hectares of available water are involved in fish seed

production in the public and private sectors. The current demand for fish seed production has been kept at 102.9 crore standard fries, out of which 186.32 crore fries were produced in 2017.

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Training: This program is mainly to improve the knowledge and skills of fish farmers and to improve their livelihood through training through state planning schemes. Under these schemes, general, tribal and scheduled caste fishermen are being trained with modern scientific methods of fish culture, fishing, net making, boat rowing for 10 days. Each fisherman is given 3375 / - which includes 85/ - per day Scholarship, 420/ - of nylon twine cost and 90/ - with travel fare and other expenses. Following the implementation of this scheme, 7,000 fishermen have benefited in 2016-17. **Out of State Study Tour:** This is the State Fisheries Scheme introduced in 2005-06. In addition to local trainees, progressive fish farmers from different parts of the state are sent to other states to learn advanced techniques of fish culture. For this the government provides 2750/ - per trainee and the cost for state tour is covered for 15 days. This includes training allowance of allow 850/ -, ticket fare of 1750/ - and various expenses of 300/ -. Following the implementation of this scheme, 450/- fishermen have benefited in 2016-17. **Polyculture-prawn culture and ornamental fish culture:** This is the State Fisheries Scheme introduced in 2007-08. The scheme is mainly to provide financial assistance to fish farmers for fisheries. Under this scheme, grant scheme for prawn culture and ornamental fish culture has been implemented for general and scheduled caste / tribal fish farmers.

Under the scheme, rupees 12,000 / - for purchase of prawn seeds and rupees 8,000 / - for fish seeds for a maximum of three years for fertilizers etc...is provided. After the implementation of this scheme 312 fishermen benefited in 2015-16.

Net and Boat Assistance: This was introduced in 2007-08 with the objective of providing fishing equipment to the beneficiaries in the State. Assistance was provided to tribal fish farmers and other fish farmers for fishing nets / boats. There is a provision of rupees 20,000 / - for boats and nets. The scheme is 100% funded by the state government, after the implementation of this scheme, 637 fishermen benefited in 2015-16.

Assistance for Fish Seed Breeding Unit: This scheme was implemented in 2007-08 with the objective of developing spawn culture in the village area. The stock of seasonal lakes is 0.35 hectare area. 100% subsidy is provided by DOF for storage of spawn.

A total of 159 lakes were supported by new promotion units in the year 2016-17. **Finger storage assistance:** The scheme is funded 100% for SC, ST and general category fish farmers with the assistance of the State Government. The stock of fingers in the ponds is taken on the provision of 50% subsidy, Rs. 1500 / - for purchase of fingers for 5 years assistance. In 2016-17, 6257 lake owners have benefited from this scheme.

Retail Assistance: This is a new State Fisheries Scheme undertaken in 2010-11. A provision of Rs. 4500 / - has been made to each beneficiary for purchase of equipment for sale of fish. A total of 295 fish farmers have benefited from this scheme in 2016-17.

Grants to Registered Fishermen's Co-operative Societies: This State Fisheries Scheme was started in 2004-05. The co-operative society is given assistance of up to Rs 2.5 lakh for three years for the purchase of tools and other items. As per the policy of the government, water bodies above 0.50 hectare will be given on lease to the co-operative societies. Financial assistance in the form of loans and subsidies is given to fishing

co-operative societies under this scheme. Fishermen's Co-operative Society is given a grant of up to a maximum of Rs. 15,000 / - for three years. Of the 120 fishermen selected for the study, all benefited from more than one scheme. All the beneficiaries had benefited from more than one scheme. A review of Table 6 shows that a total of 78.% fish farmers have benefited from retail / net and boat support scheme, 78.9% have benefited from fish seed production scheme, 69.5% from departmental training programs, 69.2% from seasonal pond rearing assistance. , 61.5% from grants to registered fishing co-operative societies, 58.7% from finger storage, 32.6% from reservoir and river development schemes, 22.1% from state study tour programs and 21.5% from polycultures - prone culture / ornamental fish culture programs.

CONCLUSION:

It is clear from the study that many schemes / programs are being implemented by DoF in Maharashtra and the fish farmers have benefited from these schemes. These interventions are known to have a high potential to promote fisheries activities and the welfare of fish producers. In terms of fish farmers, about 68% of fish farmers have their own business and only fish farming for all ages. Some fish farmers say they are uneducated, showing that these schemes have also benefited those who have not learned. Of the 120 fish farmers selected for the study, fish farmers benefited from more than one scheme. It can therefore be concluded that schemes for fisheries development are gaining growth and benefits with the help of policies and strategies supported by strong research programs of national and regional governments.

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