

Fisheries Administration and Policies in India

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Abstract

Fisheries administration and policies in India are being carried out comprehensively by Department of Animal Husbandry, Dairying, and Fisheries (DADF). DADF provided a necessary suggestion in consultation with State Governments and Union Territories (UTs) for progress of fisheries and aquaculture in the country. Declaration of Department of Fisheries will have to determine more pinpoint role to bring better livelihood and contribute toward economic prosperity of the country. This paper reviews existing administration and policies of the fisheries sector and provide suggestion that strengthening of State Government, the participation of youth, intensification, and extension aquaculture activity in the prevailing and new area will reach the significant level for country well being.

Key words: Fisheries, Administration, Policies, Youth participation.

Introduction

Increasing human population require more food for sustainable livelihood. Fish and fisheries sector is a substantial source of food for human along with agriculture and livestock in India. To meet up food demand, it is necessary to look upon fisheries administration so that existing need is fulfilled at the same policy that might be adopted to cope with future challenges. First administrative Indian Fisheries Act come out in action in 1897 having three pillars which are related to protection of inland water and coast by using explosive, poisoning water and protection of fish in selected water bodies by rules of State Government. After that, there was a formation of rule by the name of Water Act 1974 and Environment Protection Act 1986

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that linked with protection of water bodies and fisheries from environment pollution. Thus the development of administration and policy is being adopted in the fisheries sector in India by the period of time to undertake to resolve new challenges and wellbeing of the fisheries sector in India. Comprehensive administrative set up by the establishment of Department of Animal Husbandry, Dairying and Fisheries (DADF) is responsible for establishing and executing the fishery policy through various governing and non-governing sectors for regulating fisheries throughout the country. Currently, India is the 2nd largest fish and aquaculture producing country in the world. Total fish and aquaculture production is estimated at 11.41 MMT during 2016-17 with an annual growth rate close to 6% (DADF 2018). The population growth, climate change, and environmental degradation are the main challenges in present and also for the future. These challenges can be resolved through different national policy in which active participation of youth can be helpful to mitigate future challenge. This paper highlight existing administration, policy and assess future action need to adopt in the current strategy.

Fisheries Administration

Department of Animal Husbandry, Dairying and Fisheries have made a contribution to make policies for the fisheries management and focus mainly on the activities like..

- Development of infrastructure in States/UT's for improving animal productivity.
- Preservation and protection of livestock through the provision of health care and disease control.
- Strengthening of central livestock farms (Cattle, Sheep, Poultry, and Fisheries) for development of superior germplasm for distribution to States.
- Expansion of aquaculture in fresh, brackish water, the welfare of fisher folk etc.

To implement the aforementioned objective, DADF has seven pillars to carry out administrative function

and adopt new policies as per requirement to improve the overall productivity of this sector. The seven pillar institution are as given below

- Central Institute of Fisheries, Nautical and Engineering Training (CIFNET), Cochin.
- Central Institute of Coastal Engineering for Fishery, (CICEF), Bangalore.
- Fishery Survey of India (FSI), Mumbai.
- National Institute of Fisheries Post Harvest Technology and Training (NIFPHATT), Cochin.
- Coastal Aquaculture Authority (CAA), Chennai.
- National Fisheries Development Board (NFDB), Hyderabad.
- National Federation of Fisheries Cooperation Ltd. (FISHCOPFED), New Delhi.

All administrative unit promote and implement different policies for the betterment of fish and fisheries in India undertaking two major field manly marine and inland water resources.

Marine Policy

National policy on marine fisheries 2017 based on seven pillars which is sustainable development, socio-economic upliftment of fishers, the principle of subsidiarity, partnership, inter-generational equity, gender justice, and the precautionary approach. These seven pillars have been set up with a of “A healthy and vibrant marine fisheries sector that meet the need of present and future generation through sustainable harvest in India’s Exclusive Economic Zone (EEZ) and along 8118 km coastline area. Under fisheries management of it has been indicated that EEZ indicated overcapacity in the territorial waters with respect to different categories of mechanized fishing vessels. The Government has taken consideration to develop strategies to reduce overcapacity and implement the same in a phased manner in consultation with the States/Union Territories and other concerned stakeholders. Several policies on marine capture fisheries have been taken out which is regulation based on closed season, closed fishing areas, marine protected areas, protected species, ban on certain destructing fishing gear and methods, minimum mesh size regulation and legal aspect of minimum harvest catch size at capture that aim to ensure species conservation and enhance natural productivity. Current marine capture fisheries production is 3.383 MMT,

nevertheless harvestable potential is 4.412 MMT (DADF 2017) will not able to contribute substantially to the total fisheries production in the country despite having 5.6% annual growth rate if the Government take initiative to reduce overcapacity of the mechanized vessel in EEZ area. Therefore, coastal and mariculture is the area in which the government has a more important role to play in order to enhance fisheries productivity in the country.

Mariculture

The current objective mariculture is the production of finfish seed by diversification of shrimp hatcheries, open sea cage culture and diversified mariculture through molluscan farming which has been contributed toward shifting of confine practices like the mussel, oyster, pearl oyster and to some extend seaweed to sea cage farming including other activity like marine ornamental fish. There has been the development of marine finfish farming like Cobia, pompano, sea bass, grouper, snapper, breams, and ornamental fish through different research institute. At the same time, technologies for mussels, oyster, clams, lobster, green tiger shrimps, blue swimming crab and ornamental fish have been developed. To some extent, these technologies have been taken in practice but more scope is there to contribute to the production of seafood in India. Moreover, Draft National Policy on Mariculture (NPM) 2018, National Fisheries Development Board (NFDB)-Central Marine Fisheries Research Institute (CMFRI) has been formulated highlighting five major aspects which are given below;

1. Suitable site selection for different mariculture activities.
2. Identification of suitable zone for the type of farming
3. Marine Special Planning (MSP) including data management, analysis, modeling and decision making.
4. Reservation of mariculture zone excluding ecologically sensitive areas.
5. Encouragement of off-shore technology parks and coastal embankment systems including infrastructure for breeding, culture, packaging, and trade.

Current mariculture production is <0.05 MMT (DADF 2017) whereas potential production estimated to be 8 to 16 MMT. Existing practice along with new policies on mariculture will be enabled to boost up to see food production and wellbeing of fisherfolk of the country.

Inland Policy

India is blessed with diversified inland water resource which includes the reservoir, pond, tanks, river, canal, and brackish water. These resources have been exploited to enhance the inland fisheries and aquaculture production under five categories through a centrally sponsored scheme and implemented through the State Government/Union Territory (UT) administration. These schemes are..

1. Development of freshwater aquaculture.
2. Development of brackish water aquaculture.
3. Development of cold water Fisheries and Aquaculture in Hilly Region.
4. Development of Water-logged area into Aquaculture Estate.
5. Productive utilization of Inland Saline/Alkaline Soils for Aquaculture and Inland Capture Resources (Reservoir/River etc.).

Newly formed Department of Fisheries has been created out and published draft National Inland Fisheries and Aquaculture Policy (NIFAP) 2019 (DADF 2019) to facilitate and formulate administration and policy level issue in fisheries and aquaculture in the country. The NIFAP, 2019 have following major area in order to increase the productivity of inland fisheries and aquaculture. The major suggested policies are:

a) Riverine Fisheries: Conservation and restoration of natural productivity, seed ranching of native stock, management of riverine system and regulation of fishing by state government/UT.

b) Reservoir Fisheries: Management of fisheries in the reservoir by State government/UT and promotion cage culture, culture based in the small and medium reservoir, stocking fingerling in large reservoir in addition to post-harvest, marketing facilities, input supply system and protection of declared sanctuary.

c) Natural wetland: Conservation and restoration of ecologically important wetland, ensure connectivity of wetland and river, promotion of culture-based fisheries in flood plain area, input supply system for hatchery and seed rearing unit through state government/UT rules and regulation.

d) Cold Water Fisheries: Development and conservation

of cold water fisheries, protection of endemic germplasm, broodstock, and seed production infrastructure, improve germplasm from international source may be introduced.

e) Recreational Fisheries: Development of sustainable model for recreational fisheries need to be promoted by States Government/UTs.

Aquaculture

Total fish production of India reached 12.61 MMT out of which 8.92 MMT come from inland fish production in 2017-18 with 6% annual growth rate while the overall growth rate is above 7%. This sector is diverse with pond, tanks, reservoir, and brackish water and full potential yet to be achieved for better livelihood and economic prospect. NIFAP has put forward several issues in order to further comprehensive and ecologically sustainable development of this sector. The main focus of aquaculture policies is given below briefly...

1. Preparation of Integrated Coastal Aquaculture Development Plan by States/UT to promote shrimp/prawn farming in inland saline/alkaline and freshwater area as per the suggestion made by the research institute, University and Department of Fisheries, Government of India.
2. Aquaculture zoning, plan development and its regulation.
3. Promotion of aquaculture in the low lying area (Saline and alkaline soil) which is not suitable for crop cultivation
4. Facilitate redefinition of largely unused land for aquaculture considering an integral component of agriculture
5. Differential the need and aspiration of small scale farmer from large scale holding and assistance is required to encourage these farmers.
6. Compulsory farm registration in terms of legal and environmental aspect including leasing system
7. Promotion of Best Management Practices (BMP) / Good Aquaculture Practices to ensure sustainability.
8. Regulatory framework and infrastructure for traceability of aquaculture product.
9. The regulatory framework for cage culture in open water resources and shrimp/prawn farming in inland saline and fresh water.
10. The effort for aquaculture development needs to be

in line with the national, international guideline and good practices.

11. Fish from wastewater aquaculture need to be safe for human consumption. Regulation and management and precautionary step need to be taken.
12. Promotion of trout farming in high altitude area considering the cluster approach with seed and feed production facilities.

In order to diversify aquaculture, NIFAP also provided the suggestion in this connection in both fresh and brackish water by establishing hatcheries, broodstock multiplication centers in association with research and development output and priority will be given to advance technology. In addition, post-harvest, marketing, and value addition system need to be upgraded as per national and international standard. Skill development training and participatory approach for the extension to facilitate BMPs/GAPs.

Blue Revolution

The most recent strategies have been initiated by DADF by the name of “Blue Revolution” in order to achieve economic prosperity and fisherfolk of the country along with ensuring food, nutritional security and doubling of the income of fishers and fish farmers. The target of this program to achieve 15.00 MMT from both marine and inland fisheries by 2020 with keeping the following objectives.

- To increase the overall fish production in a responsible and sustainable manner for economic prosperity
- To modernize the fisheries with the special focus on new technologies
- To ensure food and nutritional security
- To generate employment and exports earnings
- To ensure inclusive development and empower fishers and aquaculture farmers

Indian Council of Agricultural Research (ICAR)

ICAR plays an important in agricultural research and education that improves the agriculture and animal sector by developing new technologies and establishing human resource management. It provides various schemes, project and other duties to a different institution in and around the country to execute them for improving

fisheries and allied fields. It has five research institute, one Deemed University, one National Bureau, and one Directorate. The institution also have one Consortium Research Platform, two Network Research Project, and two Outreach Research Project.

State Fisheries Administration

Administration of different States generally consists of Additional Director/Directorate of Fisheries, Joint Director, Deputy Director, Additional Director/Assistant Director, District Fisheries Officer, Fisheries Extension Officer and Fisheries Field Assistant in which organogram vary depending upon State level and mobilization of the resource available in respective State. Andhra Pradesh, West Bengal, Gujarat, Kerala and Tamil Nadu are the topmost fisheries and aquaculture producing state in the country. It might be imperative to strengthen the district level capacity in connection with different policies issue formulated by the Department of Fisheries, Government of India.

Youth Participation in Fisheries Sector

A large number of population in India is youth and it will contribute 34.33% of the total population by 2020 (CSO 2017). This large number population can take part in the fisheries and aquaculture sector so that employment generation and productivity can be achieved. Thus participation of youth in the fisheries sector might be imperious to contribute to country’s economic status. The possible way to involve youth in the fisheries sector is given below.

Knowledge input

The value of fisheries should be encountered in the youth of our nation only by education them. The method of knowledge input can be done by providing long-term education as professional degree and short-term education as regular training, diploma course for the youngsters to train them in all basic science related to fisheries. The result of knowledge enrichment in youth makes them expert in the field.

Scholarship

Providing scholarship during the education period to attract some youngsters to take up the courses and learn the subject with interest. It also makes them get exposure to future opportunity in this sector.

Government Policies

Setting up new policies and program for the well-being of youth in the fishery by the government will promote their livelihood upliftment and involvement in the fisheries sector. They should provide individual grants and loans for higher education as well as to develop their business establishment in the field.

Job Placement

Universities and government may offer the future opportunity and job placement of every individual for sustainable development of fisheries.

Awards and recognition of talents

Youth whoever does an outstanding contribution in institution level, regional level and innovation towards the fisheries development must be encouraged with awards and proper recognition. This will enlighten or initiate other youth in the community to take up risk in the field of sustainable development.

Other aspects that help in retaining youth in the sector

- Proper exposure in the field that makes them self-sufficient and well-experienced candidate for developing fisheries sector
- Assuring in providing job during their education period by establishing job placement cell in university.
- Exploring young student to industries and abroad universities to pump up their hope in the future.
- Availability of loan at lower interest for higher education.

- Easily approachable/accessible education institute, so that migration of student from region to region is avoided
- Proper scholarship/salary with a comfortable residential stay.
- Provision for national and international competitions
- Up-gradation in the syllabus and extra-curriculum activities at time to time.

Conclusion

Fisheries administration of ICAR and DADF is playing an important role in the formulation and program strategies in consultation with State Government, UT, and different stakeholder. Newly professed Department of Fisheries will make a more comprehensive role towards the development of intensification and extension of commercial aquaculture to meet up food security and prosperity of economic growth in the country. Further strengthening of State and UT's fisheries administration might be needed to boost up fisheries and aquaculture production.

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