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Marine Fisheries Policies in India: Opportunities and Challenges

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Indian Fisheries: The Setting

Fisheries are an important source of food, nutrition, employment and income in India. The sector provides livelihoods to about 16 million fishers and fish farmers at the primary level and almost twice the number along the value chain. Fish being an affordable and rich source of animal protein is one of the healthiest options to mitigate hunger and malnutrition. The sector has immense potential to more than double the fishers and fish farmers' incomes, as envisioned by the government. India has rich and diverse fisheries resources ranging from deep seas to lakes, ponds, rivers and more than 10 percent of the global biodiversity in terms of fish and shellfish species. The marine fisheries resources are spread along the country's vast coastline of about 8118 km and 2.02 million square km Exclusive Economic Zone (EEZ) and 0.53 million sq. km continental shelf area. The inland resources are in the form of rivers and canals (1.95 lakh km), floodplain lakes (8.12 lakh hectares), ponds and tanks (24.1 lakh hectares), reservoirs (31.5 lakh hectares), brackish water (12.4 lakh hectares), saline/alkaline affected areas (12 lakh hectares), etc. The unutilized and underutilised vast and varied inland resources offer great opportunities for livelihood development and ushering economic prosperity.

India is the third-largest fish producer in the world. The fish production in the country has shown continuous and sustained increments since independence. The total fish production in the country rose from 0.75 million tonnes in 1950-51 to 14.16 million tonnes in 2019-20, an average annual growth rate of about 8 percent. Out of the 14.16 million tonnes, about 74 percent comes from inland sources and the rest is contributed by marine capture fisheries. The total fisheries potential of India has been estimated at 22.31 million metric tons (2018), of this, the marine fisheries potential stands at an estimated 5.31 million metric tons and the inland fisheries potential has been estimated at 17 million metric tons.

Marine fisheries sector and Indian economy

The Indian marine fishing sub-sector accounts for approximately one percent of national Gross Domestic Product (GDP), but forms an important component of the rural coastal economy, generating income, employment, livelihoods, and food security for an estimated 3.52 million people along the 8,118 km Indian coastline spread across 8 maritime coastal states and 2 union territories of the country.



Fisheries are a promising sector contributing to income and employment in the economy. The sector witnessed a gradual transformation from a traditional activity to a commercial enterprise. The sector has been showing steady growth in the total Gross Value Added (GVA) and accounts for about 7.28 percent share of total GVA added to the agricultural sector in 2018-19. The share of the fisheries sector in the total Gross Value Added (at constant prices: 2011-12) increased from 4.53 percent in 2011-12 to 6.84 percent in 2018-19, recording an increase of 51 percent. The sector contributed Rs. 2,12,915 crore to the GVA (at current prices) during FY 2018-19 (Handbook of Fisheries Statistics, 2020).

India contributed to about 13.5 percent of the global fish production in 2018-19. The fish production in the country has registered an impressive growth of 24.60 percent during the period Triennial Ending (TE) 2016-17 to TE 2019-20. The major contributor towards this growth is the inland fisheries sector with a growth rate of 33.64 percent whereas the marine fisheries sector grew at a rate of 5.65 percent during this period. The marine fish production in India in 2019-20 recorded 3.72 million tonnes. The provisional estimate of the value of marine fish landings during 2020 at the Landing Centre (LC) level was Rs. 46,962 crores and at Retail Centre (RC) was Rs. 67,194 crores resulting in a marketing efficiency of 69.89 percent (ICAR- CMFRI, 2020). The marine fisheries sector has been one of the major contributors of foreign exchange earnings with India being one of the leading seafood exporting nations in the world. During 2019-20, the export of marine products stood at 12.9 lakh metric tons and was valued at Rs. 46,662.85 crore (6.68 billion USD). The marine exports constituted about 17 % of agri-exports in 2019-20. The average annual growth rate of fish and fish products exported from India in terms of quantity and value for the last decade (2010-11 to 2019-20) was 6.13 percent and 15.47 percent respectively.

The extensive marine resources indicate the immense growth potential of the sector with proper policy directions. Artisanal and small-scale fishers dominate the marine fishing community. However, about 98 percent of the capture fish production emanates from the mechanised and motorised sector. This evident discrepancy points towards the fact that the livelihood security of the small-scale fishers is at stake. Proper policy measures are the need of the hour to ensure the conservation and sustainable development of marine natural resources and the welfare of all stakeholders associated with the marine fish value chain. Schemes such as Pradhan Mantri Matsya Sampada Yojana (PMSSY) envisage bringing about the Blue Revolution through sustainable and responsible development. However, the extremely dynamic nature of the marine sector resources makes policy formulation a challenging endeavour. Sound policy formulation is key towards optimal utilisation of the marine natural resource of the country addressing sustainability as well as equitability concerns.



Nuances in the marine fisheries sector

The marine fisheries sector in India faces multifaceted constraints on account of multi-gear multi-craft and multiple stakeholders. The scope for expansion of capture marine fishing in territorial waters is limited. Managing marine resources is a collective action with free rider issues. The sector is an example of the tragedy of the commons which happens when there is open access to resources and property rights are incomplete. The concern has recently evolved from 'tragedy of commons' to 'dilemma of the common' concerning living marine resources and mineral resources in the ocean commons. Though there are attempts to address the same through certain interventions in the national and international agreements such as Maximum Sustainable Yield (MSY), the issue persists.

Balancing the needs of different stakeholders is another major hurdle. A meager 2 percent of the total marine capture fisheries production is contributed by artisanal and small-scale fishers who dominate the sector in terms of manpower. Ensuring the livelihood security of the traditional fisher community by providing sustainable alternative livelihood options is a major concern. At the same time, the sector is also suffering from the non-availability of skilled labour and attrition in fisher youth. Moreover, the cultural and socio-economic shocks resulting from labour migration in the sector are also important. The post-harvest management in the marine fisheries sector suffers from inadequate infrastructure in landing centres and fishing harbours such as lack of cold storage facilities, logistic facilities, etc. post-harvest losses, waste management, exploitation of middlemen, the drudgery of fisherwomen engaged in the processing sector, certification and traceability, etc. are other factors limiting the growth of the marine fisheries sector in the country. Lack of awareness about the rules and regulations of the sector among the fishers and low level of compliance also limit the effectiveness of interventions. However, India's marine fishing sub-sector has the potential to develop a more valuable asset base (building more productive fish stocks); generate a higher level of sustainable net economic, social and environmental benefits in the future (capturing the inherent value of more productive fish stocks); and improving the distribution of these benefits (providing for better equity among stakeholders).

Marine fisheries management and the regulatory framework

Fisheries are state subjects under the Seventh Schedule of the Constitution of India. Fishing and fisheries beyond territorial waters are on the Union list. The state and the central government share the responsibility of management, development and regulation in the case of maritime resources. The territorial limit for the state is up to 12 nautical mile (22 km) in the sea waters whereas the Union government manages fisheries in the EEZ in the range of 12 to 200



nautical miles (370 km). Therefore, cooperative federalism plays a central role in the responsible and sustainable utilisation of this common property resource.

Marine fisheries management faces several challenges such as open access fishery property rights systems; weaknesses in several aspects of the state and national level legal and policy frameworks; low state government capacity for monitoring, control and surveillance (MCS); and knowledge gaps regarding the sustainability of key fish stocks. India brings exceptional challenges in reforming its marine fisheries because of the large number of participants, boats and on-shore infrastructure, poor regulation and management, and a traditional focus on increasing fish catches as a central policy mechanism for pro-poor growth. Revitalizing India's marine fisheries sub-sector will likely require major changes in policy and governance for stronger access and use rights, which could limit and, in some cases, reduce access to selected inshore fisheries that have excess fishing effort relative to sustainable stocks. This may ultimately lead to a reduction in overall fishing capacity.

Marine fisheries legislation and policies – A timeline

The evolution of fisheries legislation in India traces back to the Indian Fisheries Act, 1857. The Maritime Zones Act 1976, which recognises the conservation, management, exploration and exploitation of biotic marine resources in the Indian EEZ is a prominent regulation which had bearing on the marine fisheries sector since independence. The Maritime Zones of India (Regulation of Fishing by Foreign Vessels) Act (1981) and Rules (1982) were other significant breakthrough regulations. The Marine Fisheries Regulation Act (MFRA) stipulates regulation and management of fisheries within the 12 nautical mile territorial waters of maritime states of the country through mandatory registration and licensing of fishing vessels. The act intends to maintain the law and order of the sea for protecting the interest of traditional fishers by regulating fishing vessels in the 12-nautical mile territorial sea. The act was first implemented in the states of Kerala and Goa in 1980. They were subsequently enacted in other States, the latest being in 2003, in Gujarat. As there is no such legislation for EEZ to manage marine fisheries at the national level, institutional mechanisms to reduce and manage inter-state/international conflicts are required. The National Marine Fisheries (Regulation and Management) Bill, 2019 intends to bridge this gap by facilitating holistic resource utilization in EEZ.

The comprehensive marine fishing policy, originally drawn up in 2000 was adopted in 2004 aimed at enhancing production, export, food and livelihood security along with sustainable development of marine fisheries. Later, the National Policy on Marine Fisheries Policy (NPMF) 2017 was notified in April 2017 and the drafts of the National Inland Fisheries and Aquaculture



Policy 2019 and the National Mariculture Policy 2019 were released by the central government in 2019. The NPMF, 2017 focused on the promotion of the 'Blue growth Initiative' through the blue revolution by sustainable utilisation of marine and aquatic resources for improving livelihood security of fishers. The overall goal of the draft national marine policy 2019 is to enhance sustainable seafood production, food and nutritional security of the nation and to ensure livelihood security of the fisher/coastal community through additional livelihood/entrepreneurial options.

Given the dynamic and diverse nature of the marine fisheries sector, it is imperative to have policy guidelines to ensure the optimal utilisation of resources. Moreover, the recent global attention and competition over maritime resources raise several concerns such as transboundary movement of aquatic species and migratory fishes, trade of marine products and livelihood concerns of traditional fishers, especially in the light of climate change. At the same time, regional dimensions also need to be taken care of to ensure sustainability and livelihood security of the fisher community and nutritional security of the population.

National Fisheries Policy 2020

The National Fisheries Policy 2020 (NFP) has been drafted by merging existing policies such as National Policy on Marine Fisheries, 2017 (NPMF), Draft National Inland Fisheries and Aquaculture Policy (NIFAP) and Draft National Mariculture Policy (NMP). The policy framework will act as a model framework to states and UTs for developing location-specific legislation and policies with regulatory and developmental features. The policy document envisages export growth, enhanced fishers' income and better choice for consumers through sustainable development of the fisheries sector.

The National Fisheries Policy seeks to consolidate the sectoral gains and ensure sustainable growth through policy support to enable and accelerate fisheries development responsibly and inclusively through multi-pronged strategies and focused interventions to provide the requisite impetus for realising the full potential across the country. The Policy lays down a clear road map for unhindered growth of the sector by the optimal harnessing of fisheries resources in sync with the best national and international standards. It will also create a conducive environment for attracting investment into the fisheries sector. The Policy intends to strengthen the government initiative to double fishers and fish farmers' incomes and double exports for improving the lives and livelihoods of Fishers and their families. The NFP will encompass elements of the 'Blue Growth Initiative', the Agriculture Export Policy 2018 and also the targets set under the Sustainable Development Goals for which India is committed.



The national fisheries policy addresses some critical gaps in the diverse marine fishery resource management. The policy focuses on managing the fisheries resources sustainably and responsibly by following an Ecosystem Approach of Fisheries (EAF) management and modern, scientific and diverse fishing practices in the ocean. As fish is a highly perishable commodity, enhancing shelf life and minimising post-harvest losses by strengthening and modernising the value chain is another thrust area. Value addition is another area of focus through which income and shelf life of marine fish products can be increased. The need to ensure competitiveness in the export market, access to institutional credit, promote community partnership, cooperative movement and entrepreneurship in the fisheries sector are other major areas of thrust in the policy.

The vision of the National Fisheries Policy 2020 is to develop an ecologically healthy, economically viable and socially inclusive fisheries sector through sustainable and responsible fishing for nutrition and livelihood security of the nation and coastal community. Moreover, the document envisages improved coordination among centre, States/ UTs and other stakeholders for better fisheries governance. An updated model bill by the centre, considering international norms, will enable delegation of power to the coastal States/ UTs enabling granting marine fishing licence beyond 12 nautical miles in the EEZ. Conservation measures such as ranching, temporary fish ban periods along with safer options such as mariculture will be promoted through coordination with maritime states/UTs.

The possibility of reservation of specific areas of fishing exclusively for traditional fishers by some coastal States/ UTs is worth considering. Moreover, the traditional fishers will be encouraged to undertake species-specific sustainable high-value fishing (tuna, oceanic squids, etc) through optimum fleet size, infusion of modern technology and capacity building for extended voyages.

Sustainable fishing methods will be promoted using inputs from scientific institutions and fishers to prevent resource depletion. The safety of the enlisted fishing vessels at sea will be another priority area. The Monitoring, Control and Surveillance (MCS) system will enable real-time monitoring and communication between vessels at sea and concerned authorities. Adequate training and capacity building of the coastal guard, coastal police and fisher community is necessary to strengthen the MCS system. A sound mechanism will be in place for the prevention/ elimination of Illegal, Unreported and Unregulated (IUU) fishing. Ratification of ILO Convention 188 in a time-based manner will be another priority.

Harnessing fisheries resources in 'Areas Beyond National Jurisdiction' (ABNJ) will be promoted in compliance with International Agreements/Arrangements. The government will also take appropriate measures to create awareness and capacity building among sea venturing fishers



to reduce incidences of Indian fishermen crossing the International Maritime Boundary Line (IMBL). The transboundary stock management issues with the neighbouring nations in the Indian EEZ will also be adequately addressed.

Status of NFP 2020: The National Fisheries Policy 2020 sixth draft has been placed in the public domain for stakeholder suggestions since March 2021. About 14 states, including maritime states such as West Bengal, Tamil Nadu, Andhra Pradesh, Karnataka and Odisha gave their comments on the draft policy. The NFP 2020 encompass elements of the Blue Growth Initiative, the Agriculture Export Policy 2018 and the targets set under the Sustainable Development Goals. The policy also looks at integrating the fisheries sector with other areas like agriculture, coastal development and ecotourism to meet the goals of “Blue Economy” while keeping the “socio-economic upliftment and economic prosperity of fishers and fish farmers” especially traditional and small-scale fishers. However, there are dissent and criticism on the draft policy for being export-oriented, production-driven, and based on capital investments, innate fear for the small-scale fishers off their rights of access to commons, no focus on women empowerment goals and environmental damage in the long run.

Arriving at a consensus in the policy framework with inclusiveness across the policy elements poses a serious concern in policy formulation and implementation. These nuances often lead to mismatches in prioritisation coupled with time and cost overrun. Towards implementing a more holistic fisheries policy in place, the following management approaches to maximize social welfare may be considered.

1. Identification of policy gaps

The national fishery policy is a blueprint describing the objectives and course of action for conservation, development and management of the fisheries resource of the country. A proper policy gap analysis is necessary to identify the lacunae in the formulation and implementation of the objectives. This exercise will facilitate correcting the course of action if there is any time lag or implementation gap. The policy gap attempts to deduce WHAT IT IS and WHAT OUGHT TO BE

2. Developing the mission and vision plan in the policy process

The policy process involves both the design and implementation of policy. Fisheries policy should reflect a consensus by society on what it wishes to achieve through the exploitation (or not) of its fish resources and how it is going to achieve those objectives. The ‘visioning’ of the future of the fishery is important to gain ownership by the stakeholders, and to initiate the overall process of change. Moreover, envisioning a bottom-up approach by involving stakeholder



consultation will ensure better compliance and outcomes. Incorporating short, medium and long-term goals in the vision statements will facilitate timely monitoring and evaluation of the policy outcomes.

3. Identification of stakeholders

All the stakeholders and key policy planners related to the impact of the policy reforms whether affected positively or negatively are to be involved and taken on board while formulating the policy. The stakeholders need to understand the nature and performance of the fisheries and the potential impacts /benefits which can be realised under different management and economic regimes. Information flows during the reform process are critical to build credibility, streamline perceptions and provide support for change.

4. Identifying institution/ organizations/ change agents

There is a need to identify and develop relevant institutions and organisations towards policy planning and implementation. The institutional arrangements which can enable the effective performance of new fisheries management systems should be developed. Appropriate organisations (public and private sector) will be needed to provide a range of services for the management system and sector.

5. Developing the management programme over a timeline

Towards sustainable marine fisheries development which ensures fishers welfare new approaches to fisheries management need to be designed, tested and made operational: New approaches to fisheries management based on improved fishing rights and maximising net benefits may offer a viable alternative to the conventional approach of maximising production in an open access system. However, there is a need to adopt any new approach to location-specific environment, resource and resource users status. In the process, different management arrangements and tools to develop management plans can be made operational in the future through appropriate instruments. This could be organised as a set of program components including the pilot testing of different institutional arrangements (such as co-management for inshore fishing with small communities or alternatives based on individual or collective use rights separate from direct government involvement) across several locations that can be conducted to identify appropriate management plans.



6. Evolving a legal framework

The legal framework exists to support the implementation of the policy and subsequent strategy. It is essential to establish efficient policies and strategic direction before developing or reforming legal instruments. Close attention should be paid to the nature of the legal instruments that are developed. The best generic approach seems to have a broad Fisheries Law that establishes general goals and directions for the fisheries sector based on Policy and Strategy documents, and then develops a “cascading” structure of legal and regulatory instruments to implement the law. The precise instruments chosen will depend on the particular circumstances of the country concerned. In federal systems, national policy and legislation must guide state policy and legal frameworks to ensure harmonisation in critical areas. In the context of developing the legal framework, care should be taken to ensure that legal pluralism is integrated across conflicting/ competing sectors too.

7. Consensus building across stakeholders

Consensus building enables arriving at a unanimous agreement with stakeholders groups to reach an overwhelming agreement to meet the interests among relevant stakeholders and maximize possible gains to everyone. The method recognizes diversity in livelihood and works through a structured learning and planning process that focuses on common interests. It works with each group of stakeholders to prioritize their needs and share and agree on common priorities across the stakeholders' groups. The process identifies the collective action that is needed to arrive at preference outcomes and determines potential impacts on different stakeholders and assigns responsibilities for implementation monitoring and evaluation.

8. Integrating policy elements across location/ time

The process of deliberations, drafting, piloting and implementation of new policy elements takes time. Identification and prioritization of management units will hasten the process. The identified potential fisheries management units are provided with resources and a timeline for exploitation of the same in a locality/timeframe. Later, these prioritized units are provided with management plans for gradual scale up with institutional support.

9. Internalizing the externalities- Positive and negative

The introduction of new management units requires capacity building and identification of externalities. Deliberations regarding implementation should consider the anticipated positive and negative externalities. Externalities are the cost or benefits inflicted to the third party which is not considered while the pricing of the final product. The process also requires the generation



of human and institutional capacity. Integrating the goals of the fisheries sector into the overall macroeconomic policy vision is also required.

10. Tradeoff on transaction/ transition

In the short term, the investments required to develop institutional capacities and replenishment of fish stock resources far exceed the visible benefits. Though there will be a significant increase in the net socio-economic welfare concerning these investments, in the long-term ensuring equitable distribution of the gains and losses is necessary for reasons of sustainability.

11. Political will to implement and governance/compliance against all odds

The successful implementation of the policy elements depends upon political will and support. Given the peculiar nature of fisheries governance in the country through cooperative federalism necessitates coordination among different players to bring out desirable outcomes. Building consensus through stakeholder consultations and feedback mechanisms ensures better compliance and outcomes.

12. Revisiting policy over a time period

The policy must be flexible enough to incorporate provisions to cope with the challenges and changes of the dynamic system. Therefore, the process is cyclical and continuous. Revisiting the policy priorities across periods through impact assessment, feedback mechanisms and stakeholder consultations will ensure relevance and better compliance.

Moving forward

The conservation, development, and optimal utilization of Indian marine fishery resources have ramifications in the employment generation, socio-economic welfare and nutritional security of the population. Timely formulation and implementation of marine fisheries policy are necessary to bridge the gap between exploitation and equitable distribution of the gains and losses of the sector considering the sustainability angle. This would also assist in reducing the time and cost overrun of the process. Furthermore, improved governance also has a major role in the implementation of carefully drafted policy measures. A bottom-up approach by taking all the stakeholders into confidence may enhance the quality of the marine fisheries policy formulation, implementation, and outcome.