



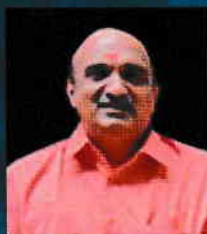
FACET OF ECONOMY YESTERDAY, TODAY & TOMORROW



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CHAPTER

BLUE ECONOMY: AN EVALUATION IN THE LIGHT OF NEW FISHERIES POLICY

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Abstract

Fisheries play an important role in the economy of India. It helps in augmenting food supply, generating employment, rising nutritional level and earning foreign exchange. 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. The fisheries sector contributes a major portion to the national income.

Keywords: Fisheries, Blue Economy, National Fisheries Policy

Introduction

Fisheries are an important source of food, nutrition, employment and income in India. The sector has immense potential to more than double the fishers and fish farmers' income, as envisioned by the government. The Indian fisheries sector is set in a unique and diverse set of resources ranging from the pristine waters of the Himalayas to the sprawling Indian Ocean. The fisheries biodiversity of the country encompasses a wide spectrum of physical and biological components that support the livelihoods of millions of people. Commencing as a purely traditional activity, fisheries have now transformed into a commercial enterprise. Fisheries resources are set in different ecosystems. With growing population and the increasing demand for fish protein, the need for sustainable development of aquatic resources is now felt much more than ever before. To meet the compelling demands and to ensure a growth trajectory that fulfils the requirements of today and leaves an equally better fishery for tomorrow, it is necessary to develop a sound National Fisheries Policy (NFP) framework, which

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based on the cardinal principles of equity and equality and adopts a people centric participatory approach; mainstreams gender, and maintains inter-generational equity. The National Fisheries Policy 2020 would offer a strategized way forward to harness, manage and regulate capture and culture fisheries in a responsible and sustainable manner. The Policy will ensure a productive integration with other economic sectors, such as agriculture, coastal area development and eco-tourism, to meet the goals of the 'Blue Economy'. While centre-state and inter-state cooperation, socio-economic up-liftment and economic prosperity of fishers and fish farmers, especially traditional and small-scale fisheries are at the core of the Policy. The Policy mirrors national aspirations and the developmental goals set before the nation.

Blue Economy

Blue Economy, a promise to bring about changes that aim at the sustainable use of marine resources, lay stress on the promotion of smart and inclusive growth and diverse, but interconnected segments such as marine fishing and allied sectors, ocean-based energy exploration and shipping as well as coastal region tourism. India has a major stake in promoting Blue Economy, since the livelihood of large number of coastal inhabitants in the country depends on the wealth of the oceans. Millions of people are directly dependent on marine fishing and allied activities for their livelihood. Those depending on coastal aquaculture, coastal tourism, shipping, sea mining, offshore energy production and other related services add to it. Another major reason why Blue Economy is poised as a game changer for India is because of its likely contribution towards the country's food security in the form of increased marine fish production. It is estimated that, by 2030 India will require about 18 million metric tons (NFDB) of fish to meet the demands. When considering the fact that today we produce about 11 million metric tons annually (DAHDF) there is a gap of 7 million metric tons that needs to be bridged.

Given the limitations of the marine capture fisheries sector and the modest enhancements that are likely from the deep sea resources, rather substantial enhancements from the land based fisheries and aquaculture systems, the focus is on agriculture. The growing demand for seafood in the country, necessitates harnessing the unexplored potential of capture fisheries in a sustainable manner as well as to explore new avenues such as mariculture to enhance the marine fish production. To achieve this end, an overhaul of the marine fisheries sector and its governance is critically needed. One of the approaches to intensify capture fish production is exploitation of deep-sea resources, which is yet to be tapped fully. However, technological lag and financial constraints have been the major bottlenecks in the delayed take off of the deep-sea fishing industry in India. Deep-sea fishing needs higher capital invest-

ment and recurring cost since deep-sea fishing is expensive compared to the trawling operations. Promotion of Mariculture is emerging as a major option to meet the growing seafood demand. With the development of captive breeding and production technologies for high value marine fish species, mariculture and cage farming is being established all along the coastal waters of maritime states and Union Territories (UTs). However, production from mariculture is yet to pick-up at commercial scale in India. Several policy measures such as identification of suitable areas, development of leasing policies, development of quality certified seed and production facilities and value chain development have been suggested for optimal harnessing the potential of mariculture. Genetic and biotechnological interventions offer huge potential for tapping the rich resources of ocean and meeting the sustainable development goals towards realization of a Blue Economy in India. Promising biotechnological applications in the field of marine fisheries include stock identification using genetic tools, bio prospecting for development of pharmaceuticals and cosmetics, bioremediation and bio-monitoring for ensuring sustainable production environments, in vitro fish meat production and climate smart biotechnology to minimize the adverse impacts of climate change. Development of market and value chain integration of marine fish is equally important for ensuring its sustainable production. Though modern and innovative marketing models are emerging in recent years, marketing practices followed presently are predominantly old and traditional in many areas with inefficiencies pervading across the value chain.

In view of these, a comprehensive strategy is essential to upgrade marketing infrastructure, reform fish auctioning systems, develop niche labels for increasing profitability and ensuring quality, enhance traceability of consignments, strengthen market intelligence and promote exports. The potential of harvest and post-harvest technologies for efficient harvesting, value addition and for ensuring fool proof quality assurance mechanisms need to be harnessed to improve the overall efficiency of the value chains. There are several demonstrated technologies such as energy efficient vessel and gear designs, use of alternate sources of energy for powering fishing operations, use of satellite-based prediction techniques to reduce fuel consumption, new fish preservation and processing technologies, better packaging systems, technologies for zero-energy waste management. Therefore, that can be adopted and up-scaled for the benefit of fishermen, fishery entrepreneurs and other value chain intermediaries. Fisheries governance is a matter of extreme importance in the context of Blue Economy as an efficient model of resource management and governance is the key to sustainable development of its constituent sectors. In India, control and regulation of fishing and fisheries within territorial waters is the exclusive province of the States, whereas beyond the territorial waters, it is the exclusive domain of the Union govern-

There is an exhaustive set of legal instruments, which has introduced from time to time to govern fishing and allied activities along the coast. The marine fisheries regulatory Acts of the State Governments, which are the pillars of fishery regulations in the coastal states, need to be reformed and updated to address the emerging issues. There is a need to follow the ecosystem approach to fishery management to ensure sustainable development. Similarly, extensive use of technology such as GIS and remote sensing applications, vessel monitoring systems, automatic identification systems and other management options are necessary to strengthen monitoring, control and surveillance. India also needs to harness multilateral negotiations and international cooperation to develop and expand its maritime operations.

Apart from the above priorities, other areas that need attention are financial support, skill development and ensuring social safety for the people engaged in marine fisheries and allied sectors. Presently, credit for fishermen is mainly catered to by informal financial agents such as auctioneers, middlemen and private moneylenders. Inter-linked deals with such financial intermediaries often result in bondage and involve huge costs in the form of inflated interest rates and auction commission. Measures should be taken to improve financial inclusion of fishermen through provision of flexible and affordable credit which suit their unique requirements. Similarly, a strong fisheries extension system is needed to consolidate the gains in the sector as well as to address the emerging challenges by conveying the relevant information to major stakeholders, in addition to translating policy goals into action domain. To utilize emerging opportunities and tackle hindering challenges in the sector, fishermen, fish workers, value chain intermediaries and fishery department personnel have to be trained adequately. Investments need to be pumped in to plug the gaps in this regard and to develop human resources for the future growth of the sector. Finally, measures for strengthening social safety nets in the form of insurance coverage, pension schemes, and social welfare programs are needed to insulate fishermen and small and marginal entrepreneurs from natural calamities and other adverse events. A larger coordination is required at the national level for strengthening the weak links in marine fisheries sector. It is envisaged that a separate Ministry created at the Centre with specific departments to cater to the requirements in marine and inland capture, aquaculture and fisheries research and education will lead to a major growth of this sector.

National Fisheries Policy

India's fisheries sector provides enormous potential in extending its reach to hitherto un/underexploited resources in both marine and inland waters; sizeable hikes

in production and productivity from aquaculture; productive integration with farming sectors such as agriculture, horticulture, poultry, and livestock; expansion of non-food fisheries such as ornamental; and in enhancing the availability of nutritious fish protein rich in omega-3 fatty acids to the nation's growing population. On the environmental front, pond, tanks and floodplains can play a very important role in harvesting and holding rainwater and in the process serving as a valuable recharging agent for the re-charging of groundwater. With the growing population of the country and the increasing requirements for fish protein, the need for sustainable development of the resources is now felt much more than ever before. To meet the demands and ensuring a growth trajectory that fulfils the requirements of the future leaves an equally better fishery for tomorrow, it is necessary for the country to develop a sound National Fisheries Policy framework.

The Policy will provide the blueprint to optimally harness the capture and fishery resources that would help in sustaining the desired production and productivity levels. It is also expected that this policy framework will guide stakeholders at the State and Union Territory-levels in the coming period. Accepting that the fisheries resources are set in diverse ecosystems that determine their sustainability and the integrity of the resources and the plant and animal wealth contained therein, the NFP will adopt a mountain to sea-scape approach. This will ensure that the fisheries receives minimum adverse impacts from external sources and in the process ensures minimum adverse impacts on the environment. Within the framework of the 'Blue Economy', the NFP will also ensure a productive integration with the other sectors, such as agriculture, livestock, water resources, hydro-electric power, forestry and environment, eco-tourism, rural development, and shipping to achieve the goals of the 'Blue Economy'.

The NFP will lay adequate emphasis on reducing the vulnerability of fishing communities from the ever-increasing impacts of climate change mediated global warming, extreme natural events such as cyclones and tsunamis, floods and droughts, and any other unprecedented situation such as the COVID-19 pandemic, ensuring that the communities' resilience is built to offset such threats.

The NFP will also take into account the fact that fisheries are gradually moving into a globalized environment that involves trade, sharing of water basins, inter-Economic Zone (EEZ) movement of migratory fish species, trans-boundary movement of live aquatic animals, curbing of Illegal, Unreported and Unregulated (IUU) fishing, and finally India's commitments to international instruments of both binding and non-binding nature.

Similarly, the regional dimensions will also be adequately reflected in the NFP to ensure cooperative arrangements in the trans-boundary management of shared fisheries ecosystems and the resources contained in them and in the interest of their long-term sustainability. Finally, drawing inspiration from the fact that the Government has created a separate Ministry for the fisheries sector, the policy will mirror the national aspirations and the developmental goals set by the country's leadership, to ensure that fisheries become an equal partner with the other developmental sectors in making India a USD 5.0 trillion economy by the year 2025.

The objective of the National Fisheries Policy is to secure the overall development of marine fisheries and aquaculture in the country. While the fishers and fish farmers will be at the core of the Policy, the intent will be to ensure sound management and sustainable development of the resources and associated habitats, maintaining the ecosystem integrity, meeting the food and nutritional security of the growing population, protecting the rights of the fishing and farming communities and building their resilience, making Indian fish and fish products globally competitive, and supporting India's commitment towards fulfilment of the global agenda on sustainable and wise use of the fisheries resources. The National Fisheries Policy (NFP) encompasses the entire land and the EEZ of the country and is set in a time-frame of ten years (2021-2030).

National Fisheries Policy on Blue Economy

The coastal and marine environment of India is one of the world's richest ecosystems with high productivity. The Blue Economy provides a great opportunity to access these natural resources and ensure food security and gainful employment, only if the resources are sustainably harvested and well-managed. India has developed a working definition of Blue Economy as - "Blue economy refers to exploring and optimizing the potential of the oceans and seas which are under India's legal jurisdiction for socio-economic development while preserving the health of the oceans. The Blue Economy links production and consumption to capacity and envisages an integrated approach to economic development and environmental sustainability. It covers both the marine, that is offshore resources, as well as the coastal, that is onshore resources."

The fisheries and aquaculture sector is emerging as a dynamic segment of the Indian economy and is positioned towards a significant growth trajectory in the coming period. Fisheries and aquaculture are also important constituents of Blue Economy initiatives. These initiative aims to promote investment and innovation in support of food security, poverty reduction, and the sustainable management of aquatic resources. The initiative takes an overall approach towards improving sustainable growth

and management of aquatic resources, with special attention provided to the seafood value chain. However, keeping in view of the competing demands for ocean space, the need for Marine Spatial Planning (MSP), which is an important tool for the implementation of the Blue Economy, assumes significance. With the growing demand for mineral and oil exploration/extraction from the seas, the increasing volumes of maritime commercial traffic and reservation of spaces for strategic defence purposes, the available space for fisheries is diminishing. Keeping these contemporary developments in view, the policy will emphasise on a sound MSP to ensure that all economic activities get their due space and in the process, conflicts are reduced. Where required, necessary research support would also be solicited from the Research Institutions.

Criticism on National Fisheries Policy

Aiming to accelerate the development of the fisheries sector, the Indian government has released the draft National Fisheries Policy 2020 that intends to integrate all components- marine and inland, capture and culture, and post-harvest - in a single document and create an environment to increase investments in the sector, double exports, and incomes of fishers and fish farmers. Fishermen bodies, marine experts and other experts working with the fisheries sector feel that the policy is export oriented, production driven and based on capital investments. They feel that it is neither protecting the interest of the fishing communities nor the environment, but would strip small scale fishers off their rights of access to commons, and also damage the environment in the long run. In addition, they say that the policy does not talk about women. There are women in many parts of the country who engage in capture fisheries in both marine, backwaters, estuaries and inland, there is no mention of them and wherever mentioned they are mere claims with no progressive intent for the fish workers. The draft states that the marine sector is dominated by the socio-economically backward artisanal and small scale fishers, that there is stagnation in the growth of marine capture fisheries, and that it is imperative to figure out alternative livelihood options. It suggests two initiatives for small scale fishers: to skill them in deep fishing and to skill them in mariculture- the practice of cultivation of economically viable marine plants and animals in seawater. The problem with this is that the further you move away from the shore in terms of capture fisheries, and the more you try to enhance production in artificial ways through intensive culture fisheries, the need for upfront capital to be able to conduct and undertake these activities will increase and invariably use more intensive technologies. The government is largely basing fishery development on the fact that it needs to invest through entrepreneurs, and that investment will be matched by government support. What is the problem for fish workers is that it excludes them, because women, lower caste fishermen

those involved in allied activities operate within a socio-economic system where livelihoods are not embedded in the cycle of investment, extraction and profit. So, in addition to the schemes being financially unviable, there is also a clash of cultures and outlooks in the way the state sees and the people perceive development.

The inland fisheries include all rivers, canals, floodplain lakes, high altitude lakes, ponds, wetlands, tanks, reservoirs, brackish water, all saline and alkaline affected areas of the country. The state is going to take these areas under their jurisdiction and then it is going to lease them out to private entrepreneurs or beneficiaries, who are then going to enhance fish production. The traditional fishers and fish farmers are going to lose their natural rights over these water bodies- they will be turned into contract labourers.

The draft proposes to implement dedicated programmes for developing fisheries sector in islands. One of them is game fishing or recreational fishing, which is increasingly being recognised as a sustainable means to connect with aquatic ecosystems and as alternative livelihood options for small scale fishing communities. In the Andaman Islands, the game fishing industry brings in a lot foreign revenue, provides employment opportunities to local communities, and has a low impact on marine ecosystems if the principles of catch and release with minimal stress to fish are followed. While an economic valuation of the game fishing sector in India remains to be undertaken, it will likely be beneficial to the local economy and is a good example of ecotourism, if done right, responsibly, and equitably.

There is total neglect of the traditional knowledge of the fish workers, in the proposed policy and there is nothing on their rights. Development without rights will lead to erosion of fish workers from their livelihood. When you go in and look at the scope of the document, the development is not actually directed towards people for whom the society's sympathies at large have been evoked. India's envisioning of the fisheries sector has for a long time been all about gaining returns from marine exports. The language used in most policy documents focuses on resource exploitation rather than management. Fisheries sustainability can be considered in six dimensions - ecological, economic, social, technological, ethical, and institutional. And Indian fisheries policies seem to be focused largely on economic and technological dimensions with short term sustainability targets in mind. There need to be greater consideration of long term sustainability and across the dimensions of social, ecological, ethical and institutional for Indian fisheries to become truly sustainable.

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