



Blue Economy: An Ocean of Livelihood Opportunities in India

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Abstract:

Blue economy for India means a number of economic opportunities related to ocean and marine ecosystems, playing an important role in generating and sustaining livelihoods. Blue Economy can help in focusing on livelihood generation, achieving energy security, building ecological resilience, and improving health and living standards of coastal communities. Blue economy would reinforce and strengthen the efforts of the Indian government as it strives to achieve the sustainable development goals (SDG) of hunger and poverty eradication along with sustainable use of marine resources by 2030. The fishery sector is a major contributor of blue economy. This paper is focus on the contribution of blue economy in generating and sustaining livelihoods in the Indian economy. This sector provides livelihood especially with marginalized and vulnerable communities.

Keywords : Blue Economy, SDG, livelihood, Marginalized, Vulnerable.

Introduction:

Blue economy for India means a vast ocean of economic opportunities playing an equally important role in generating and sustaining livelihoods. With an over 7,500-km-long coastline spread across nine coastal states, four union territories (UTs) - including two island UTs, 12 major, and 200 minor ports, India's blue economy supports 95% of the country's business through transportation and contributes an estimated 4% to its Gross Domestic Product (GDP). India is also the third largest fish producing and second largest aquaculture fish producing country in the world (NFDB 2020a).

The economic philosophy of the Blue Economy was first introduced in 1994 by Professor Gunter Pauli at the United Nations University (UNU). And later he also published the book named "The Blue Economy: 10 years, 100 innovations, 100 million jobs" in 2010. Oceans cover three-quarters of the Earth's

surface and contain 97 per cent of the Earth's water. Blue economy, through sustainable use of oceans, has great potential for boosting the economic growth by providing opportunities for income generation and jobs etc. It can support food security, and diversification to address new resources for energy, new drugs valuable chemicals, protein food, deep sea minerals, security etc. It is the next sunrise sector. Ocean have a capacity to contribute more to the human kind. It can contribute to 15 per cent of protein needs, 30 per cent of world oil and gas resources from ocean, a source for million jobs and 90 per cent of trading done through marine. Absorb 30 per cent of CO2 emissions and also contributes to GDP.

Definition:

According to the World Bank, the Blue economy is the "sustainable use of ocean resources for economic growth,

improved livelihoods, and jobs while reserving the health of ocean ecosystem.

The National Maritime Foundation, an active Indian think tank, has adopted the following definition of Blue Economy: "Marine-based economic development that leads to improved human well-being and social equity, while significantly reducing environmental risks and ecological scarcities."

Objectives:

1. To understand the concept of Blue economy.
2. To study the role of Fisheries and Aquaculture sector to generating and sustaining livelihoods in India.

Components of Blue economy:

1. Fishery and Aquaculture
2. Maritime Transport
3. Marine Tourism
4. Seawater desalination
5. Deep Sea Mining
6. Marine Biotechnology
7. Renewable Energy
8. Maritime Construction

Fisheries and Aquaculture Sector in India:

Traditional sectors like fishing, aquaculture, and fish processing have been significant sources of employment in the blue economy for many decades. The sector is evolving from subsistence farming to commercial practices, such as aquaculture, requiring a skilled workforce. Fisheries and aquaculture are an important source of food, nutrition, employment and income in India. The sector contributes around 1% to the country's Gross Domestic Product (GDP) and over 5% to the agriculture GDP. The sector provides livelihood to about 16 million fishers and fish farmers at the

primary level especially with marginalized and vulnerable communities 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.

Fisheries can be sub-categorised into two categories: marine fisheries and inland fisheries. Fisheries have contributed Rs. 46,663 crore to the economy through exports in 2019-20. In the past decade, aquaculture production has evidenced tremendous growth. In 1950-51, fish production amounted to 0.75 MMT (million metric tonnes), and in 2019- 20, it was 14.2 MMT. Out of 14.2 MMT productions, marine fish production was 3.7 MMT, and inland fish production was 10.4 MMT (Annual Report of the Ministry of Fisheries, Animal Husbandry and Dairying, 2021). There is a fear of depletion of the natural reserve of major fish species due to growing demand for consumption and increased capture due to technological advancements.

China produced 65.70 million metric tonnes of fish in 2020, making it the world's largest fish producer. This is mostly due to government policies that encourage large-scale fish farming, which is aided by advanced technology, in order to meet the growing demand for fish-based feed. India is the second largest producer of fish in the world contributing 8.10 per cent to global fish production. India is also a major producer of fish through aquaculture and ranks second in the world after China. India is the fourth largest fish exporting nation in the world after China, Canada, Vietnam and Indonesia.

Livelihood opportunities in fisheries and aquaculture in India:

Blue economy for India means a number of economic opportunities related to ocean and marine ecosystems, playing an important role in generating and sustaining livelihoods. Impact of the Covid 19 pandemic has been the loss of livelihoods and depleting job opportunities. India now faces the challenge of ensuring adequate livelihoods and jobs. Some of the major sectors that provide millions of jobs and hold prospects for more are ocean-based sectors including fisheries, shipping, tourism, deep sea mining, offshore energy

resources, marine research, ocean conservation, and ocean sciences.

Engagement in new sectors such as offshore wind, marine biology, biotechnology, and other activities like ship building and ship breaking is also rising extensively. Among these, the fisheries sector alone provides livelihood to about 16 million fisher folk and fish farmers at the primary level and almost twice that number along the value chain. The government envisions this sector to have immense potential to more than double the fisher folk and fish farmers' incomes.

Table 1: Employment generation in brackish water aquaculture in India during 2020

| Activity | Number of people engaged (in thousands) |
|--------------------------------|---|
| Fry collection | 154000 |
| Fry trading and transportation | 1500 |
| Farming | 50,000 |
| Shrimp depot workers | 1500 |
| Shrimp van/boat operators | 1500 |
| Processing factory workers | 1500 |
| TOTAL | 2,10,000 |

Source: www.ciba.res.in

The above table shows the total 2,10,000 population engaged in brackish water aquaculture out of that 1,54,000-

population engaged in fry collection and 50,000 in farming activity compare to other activities.

Table 2: Population dependent on fisheries for livelihood in India:

| State | Fishing Villages | Fishing Families | Fisher folk Population |
|----------------|------------------|------------------|------------------------|
| Andhra Pradesh | 555 (16.2) | 1,63,427 (18.7) | 605,428 (14.9) |
| Gujarat | 247 (7.2) | 62,231 (7.1) | 336,181 (8.3) |
| Tamil Nadu | 573 | (16.7) 1,92,697 | 8,02,912 (19.8) |
| Odisha | (23.7) | 1,14,238 (13.1) | 6,05,514 (14.9) |
| Karnataka | 144 (4.2) | 30,713 (3.5) | 167,429 (4.1) |
| Kerala | 222 (6.5) | 1,18,937 (13.6) | 6,10,165 (15.0) |
| Goa | 39 (1.1) | 2,189 (0.3) | 10,545 (0.3) |
| Maharashtra | 4,56(13.3) | 81,492 (9.3) | 3,86,259 (9.5) |
| West Bengal | 188 (5.5) | 76,981 (8.8) | 3,80,138 (9.4) |

Note: Figures in bracket show the shares in percentage Source: Blue Economy Working Group Report, 2020

The above table shows the population dependent on fisheries for livelihood among coastal states in India. Andhra Pradesh has the highest number of fishing families and Tamil Nadu has the highest number of fishing villages and fisher folk population in India among the major ports. Fishing as a sector is now moving from subsistence farming to commercial through farming practices such as aquaculture and this requires technical skills at every level of the value chain.

Government Initiatives: There have been efforts to boost the fisheries sector of India in order to harness its full capacity. The Blue Revolution: Integrated Development and Management of Fisheries Centrally Sponsored Scheme (CSS) was established in 2015-16 with a five-year budget of Rs. 3,000 crores (US\$ 384.3 million). The 'Fisheries and Aquaculture Infrastructure Development Fund' (FIDF) was established in 2018-19 with a fund size of Rs. 7,522.48 crores (963.5 million) to provide concessional credit to state/UT governments, their entities, and the private sector to fill significant gaps in the fisheries infrastructure. India has a National Fisheries policy for promoting 'Blue Growth Initiative' which focuses on sustainable utilization of fisheries wealth from marine and other aquatic resources. The Government of India launched Neel Kanti Mission, Pradhan Mantri Matsya Sampada Yojana (PMMSY), in May 2020, with the highest investment of Rs. 20,050 crore (US\$ 2.5 billion) to bring about a Blue Revolution through sustainable and responsible development of the country's fisheries sector.

Conclusion:

The world is looking towards oceans for a number of new emerging sectors and opportunities, but the success of these new sectors, in addition to traditional marine employment, would solely depend on oceans health and long-term sustainability of their fragile ecosystems for which it is important to boost blue economy and deduce the right plan of action to create the right balance between economy and environment.

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