The Role of the Blue Economy in Shaping India's Economic Landscape

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Abstract

The blue economy has emerged as an important concept in India, a country with a coastline of over 7,500 kilometers and rich marine biodiversity. India's marine resources are playing a vital role in the country's economic development. This sector includes important economic sectors such as fishing, maritime trade, tourism and renewable energy. The research paper presented here studies the current state of the blue economy in India, as well as examines the contribution of this sector to the country's GDP, employment, and international trade. It also analyzes the efforts made by the government to develop the country's blue economy. The paper also highlights the challenges in the development of this sector.

Key words: *Blue economy, Marine Resources, Sustainable Development, Economic Development*

1. Introduction

The concept of the blue economy has come to light in recent times as a result of the recognition of the importance of marine resources for sustainable development in various economies around the world. The blue economy mainly includes various economic activities such as fishing, aquaculture, tourism, shipping, and renewable energy. The main objectives of the blue economy is to enhance the economic growth of the country, increase employment opportunities, and sustainably use marine resources to sustain the environment. India's blue economy is playing a significant role in the country's GDP, employment generation, and foreign trade. The government has also taken several initiatives to accelerate the development of this sector. With an extensive coastline of over 7,500 kilometers and a vast Exclusive Economic Zone (EEZ), the Indian blue economy presents a multitude of opportunities and challenges. This has been investigated in the research paper presented here.

Objectives of the Study:

The present research paper is based on the following objectives.

1. To assess the current status of the Blue Economy in the country.
2. To examine the economic contribution of the Blue Economy to the economic development of India.

Sources of Data Collection:

The research presented is purely based on secondary data. Books, magazines and related websites have been used for this.

2. Review of literature:

Subhdarshani et al. (2024) emphasize the importance of implementing the Blue Economy in a way that prioritizes marine ecosystem conservation while fostering sustainable growth. They argue that Indo-Pacific governments must move beyond just agreeing on shared terminologies and should focus on harmonizing Blue Economy practices through technology and innovation. A key goal is integrating human societies with ocean ecosystems, de-commodifying labour, and reclaiming common resources. The authors advocate for a balanced approach to economic development and environmental sustainability, ensuring diversity, and promoting social transformation through effective management of resources and reduced production-consumption models.

Khanijo and Roy (2022) highlight India's strategic focus on sustainable energy and the blue economy, emphasizing the need for investment and effective policy formulation. While the blue economy offers significant opportunities, the authors also point out the challenges posed to marine ecosystems. To address these, India is taking a multisectoral approach, integrating people, nature, and diverse frameworks to foster sustainable growth. They stress that India's future in the blue economy depends on its commitment to innovation, sustainable development, and climate change adaptation, positioning the country as a key global leader in blue economy policymaking.

Panda et al. (2016) discuss the challenges faced by India's fishery sector, citing the Central Marine Fisheries Research Institute (CMFRI) report on the decline in marine landings from 3.78 million tonnes in 2013 to 3.59 million tonnes in 2014. This decrease underscores the need for improvements in the sector, particularly through technological advancements, infrastructure development, and enhanced research and development. The authors also emphasize the importance of better governance to address challenges such as pollution, illegal trade, and seabed mining. Strengthening collaborations between academic institutions, think tanks, and government bodies is crucial for promoting international trade and maritime activities in the Indian Ocean region. Additionally, they highlight the need for India to bolster its international trade relations and aim to surpass China in contributing to the blue economy.

Bhattacharya and Sachdev (2021) analyze India’s progression toward a green and blue economy, aligning with the government’s Vision 2030. They highlight that sustainable utilization of oceans, seas, and ports is central to economic growth, with strategies focused on climate change mitigation, pollution reduction, and waste management. The fishery sector, as a key pillar of the blue economy, positions India as the second-largest fish producer globally. The authors emphasize the need to equip farmers with modern skills and introduce technologies like renewable energy-powered ships. They also explore opportunities in blue minerals, hydrocarbons, and sea route-based trade, stressing the importance of strengthening ties with neighbouring maritime countries.

India’s Blue Economy and Government Initiatives:

India's Indian Ocean occupies a unique maritime location. This coastline covers nine coastal states, 12 major and about 200 minor ports with an area of over 75,000 km. There is an exclusive economic zone of over 2 million km²(Figures 1 and 2). About 95% of the country's trade in terms of volume and 68% in terms of value is carried out through maritime resources. It is worth noting here that the Blue Economy has immense potential for development in India and can play a significant role in India's overall development.

Keeping in mind the vision of creating a ‘New India’ by the year 2030, the Government of India has emphasized on the development of the blue economy to achieve inclusive and sustainable development.

Figure 1. India's Exclusive Economic Zone (EEZ

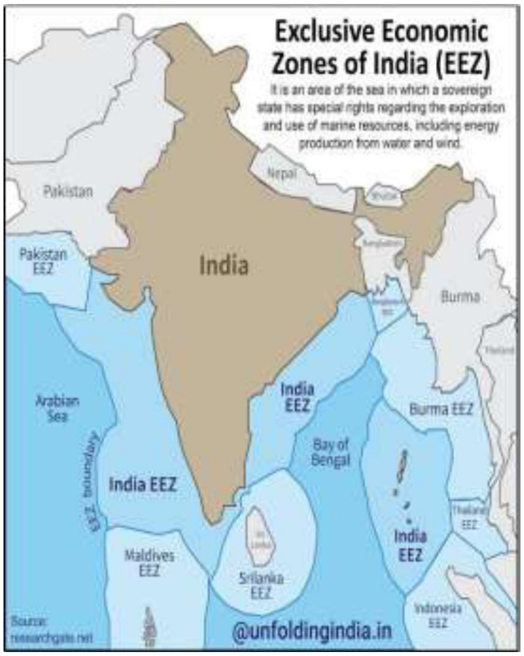


Figure 2. India's Important Marine Ports

Considering the vast potential of marine resources, several efforts have been undertaken to ensure that this sector plays an active role in the economic development of the country. The Sagarmala Project was launched in 2015 with the aim of modernizing ports, enhancing connectivity between coastal areas, and encouraging industries around port areas that create environmentally friendly practices. In addition, support is provided to fishing and aquaculture under the National Fisheries Policy. Emphasis is placed on providing basic facilities, better equipment and training to fishermen. In the year 2020, the Pradhan Mantri Matsya Sampada Yojana (PMMSY) was launched to increase fish production, provide financial support to the sector, and strengthen the entire fisheries industry. Along with this, the O-SMART program helps in understanding the ocean and managing conditions through the use of modern techniques to monitor marine conditions and prepare for climate impacts. Also, a Marine Special Planning Framework has been prepared to bring all marine economic activities such as fishing, tourism, and shipping under one framework plan.

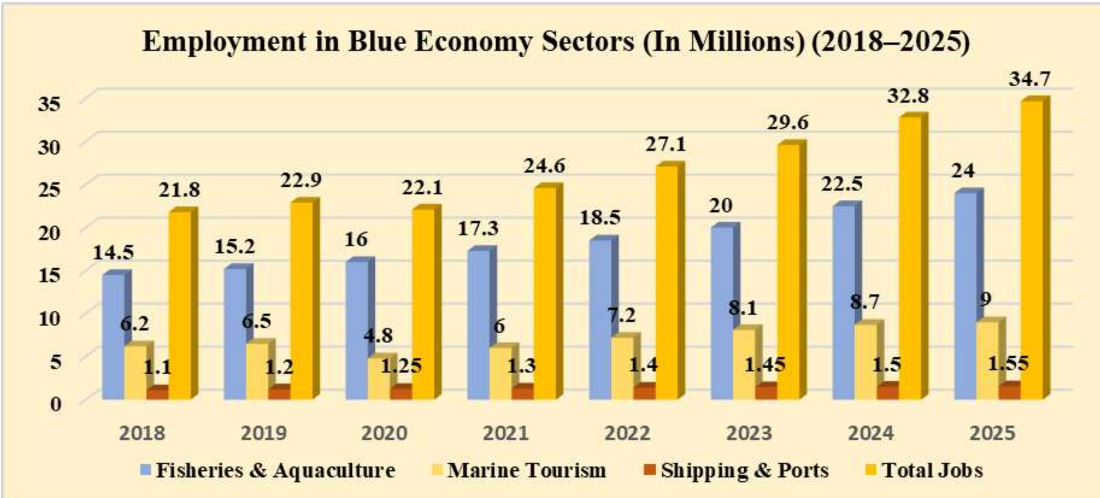
Economic impact of blue economy in India:

The Blue Economy in India aims to link the sector with economic development through the sustainable use of the country's marine resources. The economic impacts of this sector are analyzed in depth here.

Employment Trends in India's Blue Economy (2018–2025)

India's blue economy has become a significant driver of livelihoods in coastal and marine sectors. Chart No. 1 presents information on year-by-year employment creation in important industries such as fishing, marine tourism, shipping, and seaweed farming from 2018 to 2025.

Chart No. 1



Sources: Ministry of Fisheries, Animal Husbandry & Dairying – PMMSY Guidelines and Reports, Indian National Centre for Ocean Information Services (INCOIS) – Blue Economy Policy Framework, Directorate General of Employment – Labour Market Updates, Indian Ports Association & MoPSW – Maritime India Vision 2047, RIS Insight Magazine – RIS India Blue Economy Trends

India's blue economy has emerged as a major driver of employment and coastal development, with job creation in several maritime sectors continuing to increase. From 2018 to 2025, total employment through the blue economy is estimated to increase from approximately 21.8 million to 34.7 million jobs, reflecting the expansion of the sector in India's broader economic landscape. The fisheries and aquaculture sector in particular has seen significant growth. The sector is expected to grow from 14.5 million jobs in 2018 to 24 million by 2025. This trajectory reflects the successful implementation of the Pradhan Mantri Matsya Sampada Yojana (PMMSY), which aims to generate 5.5 million additional livelihoods and modernize the fisheries infrastructure.

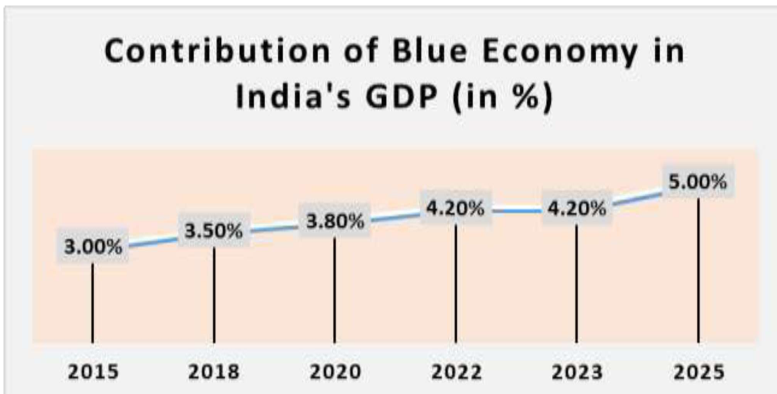
Marine tourism is also a sector that has been one of the fastest growing globally and in India. Particularly in coastal states like Kerala, Karnataka, and Tamil Nadu, coastal tourism has contributed largely to both the state economies and livelihood creation. Maritime tourism, which generates employment along India's 7,500+ km coastline, suffered a temporary setback in 2020 due to the COVID-19 pandemic. However, the sector has rapidly re-emerged with the introduction of cruise tourism, eco-tourism and government-backed coastal development initiatives, which are estimated to result in the creation of 9 million job opportunities by 2025. Shipping and ports have also witnessed a steady increase in employment, rising from 1.1 million in 2018 to 1.55 million in 2025, supported by infrastructure modernization under Sagarmala and Maritime India Vision 2047. These initiatives have not only created direct job opportunities but also expanded employment in logistics, shipbuilding and green port technology.

It is worth noting here that seaweed farming as an alternative livelihood has seen exponential growth. Although less than 100,000 jobs were created by 2025, it represents an almost 20-fold increase since 2018. This growth is consistent with national goals for sustainable development, carbon sequestration, and women-led entrepreneurship in coastal villages. Overall, this data emphasizes a multidimensional transformation: traditional maritime sectors remain strong, while blue economy pathways supported by policy and innovation are emerging and creating pathways for new, climate-resilient employment across India.

Economic Growth and GDP Contribution:

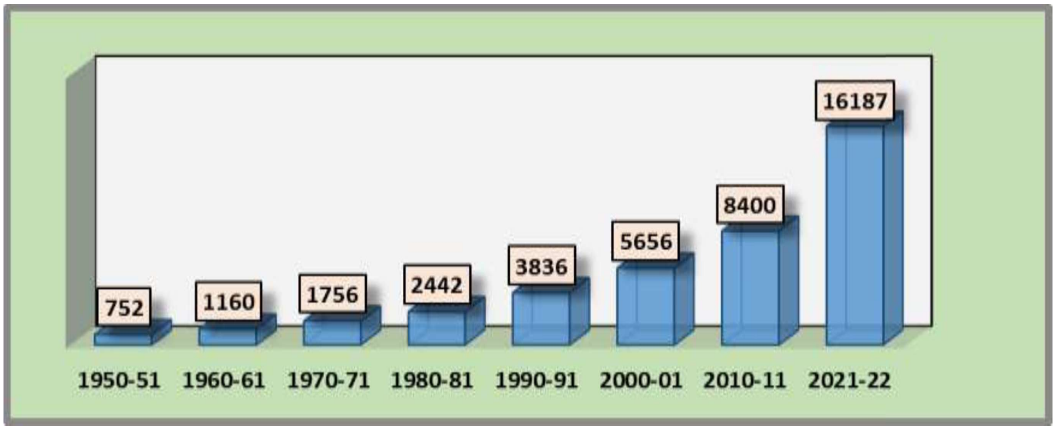
India's blue economy is a sub-sector of the Indian economy. This sector includes economic activities taking place along India's coastline, marine resources, and man-made infrastructure. It has been noted here that the blue economy contributes approximately 4% to India's GDP. This proportion is also expected to increase if the obstacles to the development of the blue economy are removed. Also, studying the fishing industry alone, it is clear that these industries contribute approximately 1.24% to the country's GDP.

Chart No. 2



India's blue economy has been growing steadily over the past few decades. The sector is making a significant contribution to the country's economic growth. A study of Graph No. 2 reveals that the blue economy contributed approximately 3.0% to India's GDP in 2015. This amounted to $63 billion, with more than half of the revenue coming from fisheries and aquaculture. The Sagarmala Project launched during this period resulted in an addition of $15 billion to maritime infrastructure. Contributions from tourism and early biotechnology complete the rest. By 2020, despite the challenges posed by global pandemics like COVID, the contribution of the blue economy to India's GDP has increased to 3.8% as a result of growth in shipping and marine biotech, particularly seaweed farming, with the sector benefiting from support from agencies like ICAR and INCOIS. This achievement shows that India is emphasizing low-carbon marine-based industries. This trend then stabilized until 2023, with the blue economy contributing 4.2% of the economy. This growth was driven by notable progress in port logistics, tourism and value-added aquaculture. The seaweed sector alone was valued at $13.5 billion. Based on this progress and as a result of government programmes such as Maritime India Vision 2047, Deep Ocean Mission and Sustainable Resource Development, the sector is estimated to contribute around 5.0% or around $200 billion to India's GDP by 2025. India's fisheries industry has played a prominent role in this progress. The sector provides food, nutrition, employment and livelihood to millions of people, and India has emerged as the second largest fish producer in the world.

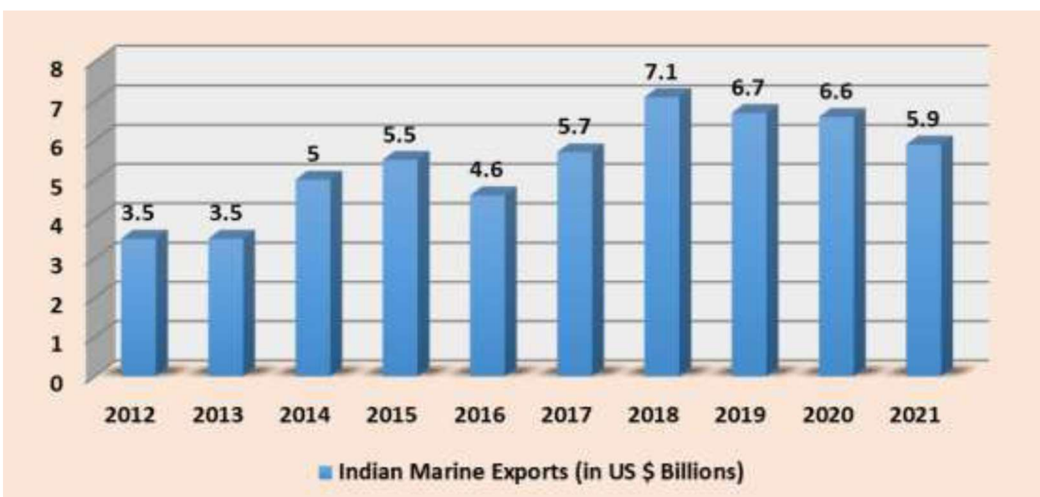
Chart No. 3
Fish Production in India (In Thousand Tonnes)



A study of Graph No. 3 shows that fish production was 752 thousand tonnes in 1950-51, which increased to more than 16 million tonnes in 2021-22. The sector has witnessed continuous growth as a result of the techniques implemented in this sector, aquaculture expansion, increasing demand, and government schemes like the Pradhan Mantri Matsya Sampada Yojana. As a result, India holds a leading position in the world in the field of fish production.

Contribution in Exports: Ocean-based industries such as fishing, shipping, port activities and marine tourism, which are part of India's blue economy, are playing a vital role in the country's exports.

Chart No. 4
Indian Marine Exports (In US $ Billions)



Source: https://www.ibef.org/blogs/importance-of-india-s-blue-economy

India is a leading exporter of marine products. The sector has emerged strong even after facing challenges like the global pandemic situation like COVID-19. Despite this situation, exports worth Rs 56,200 crore (US$ 7.2 billion) were made by this sector between April 2021 and February 2022. India's maritime industries exported about $7.3 billion in 2022-23, indicating that the sector makes a significant contribution in terms of foreign exchange earnings. These exports have seen a significant increase in shrimp and fish exports. In 2023, shrimp exports alone were recorded at around $4.5 billion. The shipping sector plays a vital role in India's international trade. In 2022-2023, India's major ports handled over 700 million tonnes of cargo. The maritime industry contributes significantly to the country's exports. Major Indian ports, mainly Mumbai, Chennai, Kolkata, play a vital role in the growth of international trade. It supports the export of a wide range of goods including petroleum products, textiles and agricultural products. The sector's contribution to exports is expected to increase as a result of initiatives and policies taken by the Government of India.

Challenges of Blue Economy in India:

India's blue economy is facing several challenges to its sustainable development. Overfishing has led to depletion of fish stocks, which is threatening biodiversity and the livelihoods of coastal communities that depend on marine resources. In addition, marine pollution such as plastic waste, oil spills, and agricultural runoff harms coastlines, marine life, and the health of people living nearby. In addition, climate change exacerbates these problems, with sea level rise, ocean acidification, and increased extreme weather events posing threats to coastal infrastructure and the productivity of marine resources. In addition, infrastructure such as ports and shipping facilities are not sufficiently developed. There is also a need to use modern technology in terms of sustainable development of marine resources. As well as regulatory and governance issues, such as unclear jurisdiction and weak enforcement of environmental laws, which hinder the effective management of marine resources. There is a lack of awareness among policymakers and the public about the importance of the blue economy for sustainable development. Geopolitical tensions and security concerns, including piracy and territorial disputes, also pose risks to economic activities in maritime areas. Finally, financing and investment for sustainable initiatives are often inadequate, as many projects require significant capital investment, and mechanisms to support long-term sustainability are often lacking.

Conclusion:

Indian economy is a unique opportunity to accelerate economic development by sustaining and incorporating blue economy through the efficient use of areas such as fishing, shipping, coastal tourism and sea - based renewal energy, with tactical conditions in the Indian ocean, marine biodiversity and the Indian Ocean. For this, the Government of India has tried to take advantage of these opportunities through schemes like Sagarmala program, Deep Ocean Mission and Prime Minister Fisheries Property Scheme. However, the first countries of the world to establish the Dedicated Sea Development Department in 1981 include the Indian economy. However, India has not made much progress as much. Challenges such as environmental degeneration, excessive fishing, poor infrastructure and climate change have proven to be obstructed in the overall development of the blue economy. Along with this, countries like Australia, Norway and the UK have made significant progress by implementing robust national maritime policies and making strategic investments. To achieve holistic development of the blue economy, India should increase investment in research and innovation, improve and expand maritime infrastructure. A policy on skill building in coastal communities should be implemented. Government, private sector and local partnerships should be strengthened. By aligning its efforts with global durability targets, employment can be created in the Indian economy, as well as protection of the maritime ecosystem, and the Indian economy in sea -based development can create a long -term development for the Indian people.

References:

Gupta S. (2023), Blue Economy- Prospects of Fisheries and Aquaculture Market in Bihar. Retrieved from https://dras.in/blue-economy-prospects-of-fisheries-and-aquaculture-market-in-bihar/

Directorate General of Employment. (2023). Labour market outlook and employment statistics. Ministry of Labour & Employment. Retrieved from https://dge.gov.in/

India Brand Equity Foundation. (2023). Seaweed and the blue economy: India's path to coastal prosperity. Retrieved from https://www.ibef.org/blogs/seaweed-and-the-blue-economy-india-s-path-to-coastal-prosperity

INCOIS. (2020). India's Blue Economy: A Draft Policy Framework. Indian National Centre for Ocean Information Services. Retrieved from https://incois.gov.in/documents/Blue_Economy_policy.pdf

Invest India. (2023). India's blue economy: Navigating the blue frontier. Retrieved from https://www.investindia.gov.in/blogs/indias-blue-economy

Juneja M. (2021), Blue economy: An ocean of livelihood opportunities in India. Retrieved from https://www.teriin.org/article/blue-economy-ocean-livelihood-opportunities-india

Kukreja & others (2022). Importance of India's Blue Economy. Retrieved from https://www.ibef.org/blogs/importance-of-india-s-blue-economy

Macrotrends. (2024). India GDP 1960–2025. Retrieved from https://www.macrotrends.net/global-metrics/countries/IND/india/gdp-gross-domestic-product

Ministry of Fisheries, Animal Husbandry & Dairying. (2023). Pradhan Mantri Matsya Sampada Yojana (PMMSY) – Reports and guidelines. Government of India. Retrieved from https://dof.gov.in/

Ministry of Ports, Shipping and Waterways. (2023). Maritime India Vision 2047. Government of India. Retrieved from https://shipmin.gov.in/

Panda P. & others (2016). Blue Economy: Opportunities and Challenges for India. Retrieved from https://bizodisha.com/2016/01/blue-economy-opportunities-and-challenges-for-india/

Research and Information System for Developing Countries (RIS). (2020). Insight magazine: Blue Economy special issue. Retrieved from https://ris.org.in/

Statistics Times. (2024). Sector-wise GDP of India. Retrieved from https://www.statisticstimes.com/economy/country/india-gdp-sectorwise.php

TERI. (2022). Blue economy: India's pathway to a sustainable, secure, and resilient economy. The Energy and Resources Institute. Retrieved from https://www.teriin.org/sites/default/files/2022-07/Blue_Economy_Publication.pdf

Vivekananda International Foundation. (2018). Maritime power through blue economy in the Indian context. Retrieved from https://www.vifindia.org/sites/default/files/Blue-economy.pdf

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