

ESSENTIAL ADVANTAGES OF A SUSTAINABLE BLUE ECONOMY¹

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ABSTRACT

Being the seventh largest in the world, the blue economy is the cornerstone of our civilization's advancement. Because they facilitate key industries including trade, transportation, tourism, and fishing, oceans are essential to the global economy. The blue economy is predicted to have an annual worth of 1.5 billion dollars and to double over the next several years. Because the blue economy has the potential to alleviate poverty and promote sustainable development, stakeholders, lawmakers, and academics are becoming more and more interested in it. Nonetheless, the health of the oceans and wildlife in them is coming under more and more threat from factors including climate change, overfishing, habitat destruction, and global pollution. These issues have had detrimental effects that are becoming more noticeable, such as the loss of livelihoods, biodiversity, and cultural legacy. As a result, an increasing number of nations have put up financial and institutional proposals to incentivize private investment and allot public funds through budgetary measures in order to streamline the shift to a blue economy that is sustainable. International collaboration, as well as the adoption of sustainable fishing and water use practices and financial frameworks for conservation, have an impact on the development of the blue economy and marine fisheries industry. However, a number of factors, such as infrastructure, corruption, and political stability, affect how well the blue economy is implemented.

Keywords: Blue Economy, Oceans, Sustainable Development.

INTRODUCTION

It is difficult to support life on Earth without the oceans since they provide food, oxygen, and water to the biosphere. Oceans are rich resources for genetic pools, minerals, and, more recently, renewable energy. They also play a critical role in providing services for climate management. They are vital to the world economy because they support important sectors including trade, transportation, tourism, and fisheries (Statista, 2024). For thousands of years, the blue economy served as the foundation for the advancement of most of our civilisation. On the other hand, ocean resources are being rapidly depleted by present economic trends. As a result, a new wave of start-ups is starting to emerge to take on the enormous potential of the blue economy, particularly with regard to climate change mitigation and sustainable resource extraction, for great and regenerative blue growth (Dealroom, 2023). The oceans, which make up two thirds of the earth, are extremely important to the climate system.

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Roughly 90% of the additional energy brought on by fossil fuels and global warming has been absorbed by them. As a result, since 1900, the top 700 meters of the ocean have warmed by roughly 1.5°C. This is contributing to the ocean's rapid reduction in biodiversity, along with pollution and overfishing. Nearly 10% of marine species worldwide were determined to be in danger of going extinct in the most recent assessment, according to the International Union for Conservation of Nature (IUCN) (Dealroom, 2023).

Nine key industries are driving the growth of a blue economy, based on the interdependence and impact on coastal and marine areas: fisheries and aquaculture; ports, shipping, and marine transport; tourism, resorts, and coastal development; oil and gas; coastal manufacturing; seabed mining; renewable energy; marine biotechnology; marine technology; and environmental services (Pemsea, 2015). The ocean economy is the seventh largest in the world, with an estimated annual worth of \$1.5 trillion. By 2030, it is predicted to have doubled to \$3 trillion. An estimated \$24 trillion is the total estimated worth of ocean assets, or natural capital. In comparison to their land area, small island states possess abundant ocean resources, which offers them a significant chance to enhance economic growth and address issues such as food insecurity, poverty, and unemployment. The depletion of marine resources, however, also poses the greatest threat to them (Thecommonwealth, 2024). Early discussion of the implications of a green economy for population growth must be promoted by the government (Baltezarević & Baltezarevic, 2015).

LITERATURE REVIEW

97% of the water resources on Earth are found in our oceans. From space, our planet appears blue due to this magnitude. Half of the oxygen required for life on Earth is found in the oceans and seas. Eighty percent of all life forms on Earth are found in our seas, which also supply food for over half of humanity and are vital for maintaining both physical and mental well-being. The blue economy is an intricate network of economic relationships including oceans. The worldwide blue economy of today has enormous economic power. Regardless of whether the operations are conducted on land, in the sea, or both, it encompasses all businesses and fields that are broadly related to oceans, seas, and coasts (Wasserdreinnull, 2024).

The sustainable use of ocean resources for economic growth, better livelihoods, and ocean health is known as the "blue economy," also known as the "ocean or maritime economy." A variety of industries are included in the blue economy, including energy, tourism, shipping, aquaculture, fisheries, and marine biotechnology. It has drawn the attention of stakeholders, academics, and politicians because to its potential to support sustainable development and reduce poverty (Smith-Godfrey, 2016). The blue economy is facing contemporary issues that could jeopardize its viability and advantages. Threats to the health of oceans and their resources include pollution, overfishing, habitat destruction, and climate change. These issues have an impact on the environment and have social, economic, and livelihood implications as well, like the loss of cultural heritage, biodiversity, and livelihoods (Bari, 2017).

As a vital tactic for sustainable development, the blue economy has recently gained traction. One initiative that encourages the sustainable use of marine resources is the European Union's "blue growth" strategy. On the other hand, by utilizing marine resources, the African Union hopes to create jobs, secure food supplies, and sustainable economic growth through the implementation of the blue economy strategy (Henderson, 2019). In 2016, the OECD published a report estimating that the ocean economy boosted the world economy by approximately USD 1.5 trillion.

The report specifically emphasized how new industries like aquaculture, marine biotechnology, and offshore wind energy have the potential to boost employment and stimulate economic growth (Rigaud et al., 2018).

The continued human activities that contaminate water bodies are having an alarming detrimental impact on the health of the seas, notwithstanding the importance of the ocean economy. The amount and quality of fish products are being negatively impacted by a number of issues, such as careless waste disposal, plastics in the water, unsustainable fishing practices, uncontrolled coastal development, and climate change. The health of the oceans has significantly declined as a result of fishing beyond acceptable limits, untreated wastewater from land being dumped into bodies of water, and ongoing ecosystem degradation (Cohen et al., 2019). A number of nations have recently proposed various institutional and finance measures to encourage private capital and commit public resources through budgetary allocations in order to close this gap and facilitate the transition to sustainable blue economies (Tirrell, 2017).

With a variety of sectoral changes, the commitments that different nations have undertaken under SDG 14 seek to instill sustainable fishing practices. Throughout the whole fisheries value chain, there will be significant expenses associated with switching from current practices to more sustainable ones. Obtaining the necessary funding to make this shift possible is still a major obstacle. Although the industry already receives money from the public and commercial sectors as well as official development assistance, it is said that these sources are insufficient to promote sustainability (Bos et al., 2015).

Sustainable fishing is a prime illustration of an attempt within the blue economy. This strategy promotes ethical fishing, lessens bycatch, and supports the long-term health of marine ecosystems as opposed to overfishing fish stocks. Consequently, it helps coastal communities by guaranteeing a reliable and long-term source of revenue (de la Maza, 2024). The development of the blue economy and the marine fisheries industry is influenced by international collaboration, as is the adoption of sustainable fishing and water use practices and a financial structure for conservation (Sarker et al., 2018).

In the context of the 1992 Rio de Janeiro United Nations Conference on the Environment and Development, or ECO-92, the foundations for the future "blue economy" were established (Neumann et al., 2017). The significance of the blue economy has grown beyond the confines of Small Island Developing States and is now a topic of international concern. This has led to a heightened level of discussion among academics, policymakers, civil society, non-governmental organizations (NGOs), the commercial sector, and other stakeholders regarding the significance of the oceans and coastal environment for sustainable development (Voyer et al., 2021).

The degree to which global ocean economies can produce just and long-lasting advantages was investigated by Cisneros-Montemayor et al. in 2021. The study makes clear that the development of a blue economy depends not only on resource availability but also on social conditions and the capabilities of government. The fuzzy logic model was employed in the study to incorporate sustainable, viable, and equitable blue economy indicators. They discovered that the blue economy implementation outcome is influenced by various aspects, including infrastructure, corruption, and national stability. In order to accomplish the objectives of the blue economy, the report recommends that policymakers involve researchers and stakeholders in the promotion of evidence-based strategies (Cisneros-Montemayor et al., 2021).

Agarwala emphasized the necessity of technological advancement in the production of energy from the ocean. The study also made clear how important it is to conduct environmental impact assessments because related technologies have an effect on the environment's biological components. The report emphasized that in order to effectively harness the uncharted territories of marine renewable energy, international cooperation and public-private collaborations are essential (Agarwala, 2022). As a result of urbanization and population growth, ocean resources are becoming increasingly important. Modayil emphasized this point. The study emphasized the necessity of using the ocean to gather resources in order to survive and thrive, as well as the negative implications of climate change on aquaculture. According to the study, the blue economy is a force for growth and transformation in the economy (Modayil, 2019). Any issue that hinders a nation's growth and development must be taken into account in conjunction with the individuals who take part in all institutional procedures. Hiring competent employees is the only way to achieve sustainable economic growth (Baltezarević et al., 2010). We can better understand the blue economy and its significance when we look at it in this larger context. The blue economy is a crucial idea for nations with coastal regions since no nation wants to lose out on possible chances for prosperity. Sensing the significance of these issues, the Seychelles and the United Arab Emirates joined forces to host the Abu Dhabi Declaration summit in 2014, emphasizing the need to cope with and adapt to climate change, preserve the marine environment, and support blue economy systems (Sustainable development, 2014).

An inclusive and sustainable blue economy includes marine-based economic growth that promotes social justice and human well-being while preserving, restoring, and restoring ocean habitats and ecosystem services as needed. All three aspects of sustainability: economic, ecological, and social, should be considered. For example, a sustainable blue economy can play a major role in financing ecologically sustainable marine conservation measures, such the establishment and upkeep of marine protected areas (MPAs) or other successful area-based conservation measures (OECMs). These regions have the potential to support maritime tourism (economic sustainability), and creating jobs via their administration can support social sustainability (Meerwissen, 2024).

The Earth and its oceans are changing in ways that make sustainable resource extraction more difficult, and the environmental effects of this change may need more cautious resource extraction techniques. These are facts that sustainable blue economies must recognize. Science plays a key role in developing blue economies that are sustainable and lessen the risks to coastal communities and ecosystems. Scientific and technological advancements have made it possible for people to detect and identify ocean resources more effectively, as well as to use them, frequently excessively. The knowledge that is at hand must be applied sensibly and responsibly. In an ever-changing world, scientific knowledge is critical to the survival of blue economies; this is especially true given the ongoing changes brought about by human activity to the ocean and coastal regions (Iybssd2022, 2022). Reducing carbon emissions, rethinking waste management, and utilizing renewable resources are all aspects of green technologies that contribute to economic growth and lessen the adverse consequences of human activity on the environment (Baltezarević, 2024).

CONCLUSION

The utilization, conservation, and renewal of the marine environment are together referred to as the blue economy. Any economic activity that has a direct or indirect connection to the seas, oceans, or coastlines is included in the blue economy. By using sustainable methods, it tries to balance economic expansion with environmental preservation.

It is commonly characterized as the sustainable use of ocean resources for economic growth, better livelihoods, and jobs. A shift from unsustainable practices to a more responsible and comprehensive use of marine resources is required by the blue economy. This economy is made up of a number of industries, including as energy, tourism, shipping, aquaculture, fisheries, and marine biotechnology. These problems affect livelihoods, the social and economic spheres, and the environment. Despite the significance of the ocean economy, ongoing human activities that contaminate bodies of water have a frighteningly negative impact on marine health. Many issues, including irresponsible trash dumping, plastics in the water, unsustainable fishing practices, uncontrolled coastal expansion, and climate change, have a detrimental impact on the quantity and quality of fish products. The study unequivocally demonstrates that the growth of the blue economy is contingent upon social conditions, government competence, and resource availability. While international cooperation and public-private cooperation are necessary to develop a sustainable blue economy, policy makers must include researchers and stakeholders in order to realize the aims of the blue economy. Because they can promote social sustainability, job growth, and maritime tourism, coastal regions stand to gain the most from a sustainable blue economy. In the modern world, scientific knowledge is crucial to the survival of blue economies because of the ongoing changes that human activity is creating to the seas and coastal regions. The idea of a blue economy has great potential, but in order to fully realize it, new funding sources and efficient application of sustainable financing techniques to problems pertaining to the ocean are needed. Funding for blue economy initiatives, which include resilience against climate change, scientific research, technological innovation, and the adoption of sustainable practices, must come from governments, international organizations, and the business sector.

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