

## Blue Economy: Bangladesh Perspective

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### Abstract

*Since time immemorial economy played vital role in shaping development of any country. Journey from brown to blue economy gave rise the concept of sustainability. Bangladesh showed potential to adopt Blue Economy to harness its tremendous benefits. This study aimed to highlight how Bangladesh can tap the benefits of sustainable blue economy for her economic development. The study adopted document analysis. Extensive literature survey was carried out to determine prospects of Bangladesh for sustainable blue economy. The study highlighted the issues involved in sustainable blue economy, its impact and challenges. It also proffered the strategies to overcome the challenges. The study revealed that systematic means of harnessing ocean resources, was relatively new to Bangladesh. The study argued that incorporating Blue Economy potential policy guideline were essential.*

**Keywords:** *Blue economy, Sustainable Development, Bangladesh*

### 1. Introduction

The fossil fuel-based economy generally known as **brown economy** uses materials and energy from the environment and disposes of pollutants as a by-product. However, the brown economy is largely responsible for greenhouse gas (GHG) emissions, climate change, air pollution, water pollution, soil pollution, and many more. On the contrary, a green economy is an earth-friendly economy that ensures the optimum use of natural resources with green technology and considers

all the environmental impacts along with economic growth. However, it ignores the sustainability. Hence the Blue Economy has emerged on the global scene as a powerful and

persuasive new concept for sustainable development based on economic activities associated with the ocean. The blue economy refers to all economic activities directly or indirectly reliant on the ocean or coastal and marine resources. The activities can be broadly classified as:

- (a) Ocean-based and
- (b) Ocean-related.

Ocean based activities include: fisheries and aquaculture; offshore oil and gas extraction; mining; ocean energy; desalination; shipping/marine transportation; maritime tourism; and marine construction etc. Ocean related activities includes: seafood processing, marine biotechnology, chemicals, salt, and so on. It also includes, shipbuilding and recycling, ports, tourist resorts, communication, maritime insurance and law, maritime technical services etc.

The blue economy has the potential to significantly improve human well-being. It has the potential to improve the social balance as well. The blue economy is essentially emerging as a novel narrative on productive, long-term interaction that only has the potential to provide development chances.

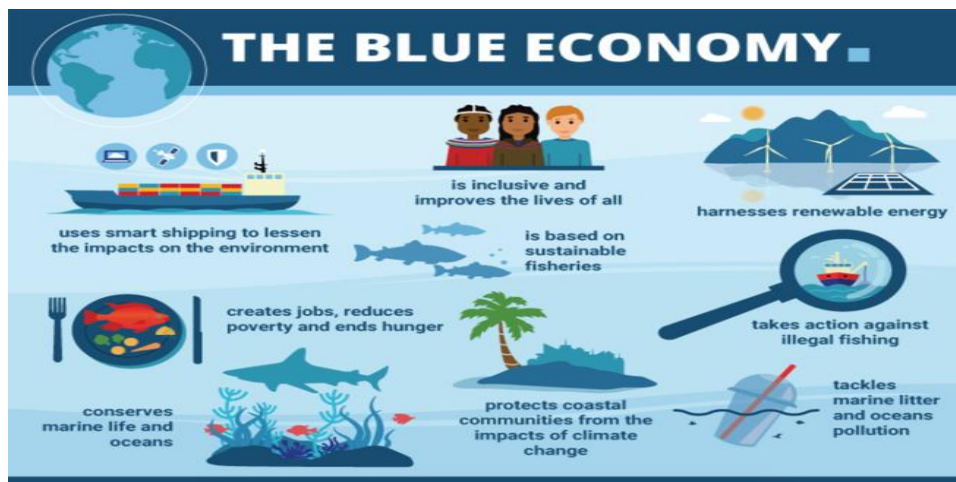
According to the United Nations Development Programme, the concept of a "Blue Economy" strives to address the need to encourage economic development while preserving ocean health and human well-being and promoting economic development. The Centre for the Blue Economy, defines blue economy as "the overall contribution of oceans to economies, the need to address issues such as the environment and ecological sustainability of oceans, and the ocean economy as a growth opportunity for both developed and developing countries." Global Progress Indicators (GPI) are being promoted as an alternative to Gross Domestic Product (GDP), ignoring income disparity and focusing on GDP growth (Revolution n.d.). Approximately 1.3 trillion dollars are invested in the ocean economy globally, proving its significant economic impact on the global economy.

The Blue Economy concept serves two key functions: first, it acknowledges the importance of the ocean to human society, and second, it facilitates the development of an economic system that encourages better stewardship of the ocean and its resources for the benefit of all humanity.

The development of "blue resources," such as maritime transportation, fishery product manufacturing, coastal tourism, and renewable energy generation, are all critical economic resources that contribute to developing the world's economic infrastructure.

The Blue Economy recognizes that the ocean provides an enormous amount of benefits that may be attributed to it. Carbon sequestration and animal habitat are two examples of critical services that are difficult to quantify and commercialize. According to some estimates, plankton living at the ocean's surface may be able to gather approximately one-third of the carbon dioxide breathed into the sky and convert it into sugars in a way similar to that of trees and plants growing on the land. When combined with global ocean currents, these factors play a key role in helping to control our climate in an environmentally friendly manner.

Figure 1 shows the core benefits/features of Blue Economy



**Figure: 1.**Features of Blue Economy [Add source]

Bangladesh has 710 km long coastline with an exclusive economic zone of 200 Nautical Miles inside the Bay of Bengal. Marine fisheries contribute 19.40 per cent of the total fish production of the country. Besides, on an average, 81.0 per cent of the international tourists visit Cox's Bazaar in Bangladesh. The ocean of

Bangladesh is contributing a noteworthy role to its overall socio-economic growth through enhancing the economic activities across the country and especially to the coastal zone at southern part.

Bangladesh has taken steps to flourish its Blue Economy in order to utilize its marine resources. Since 2015, the Government of Bangladesh (GoB) has undertaken a number of consultations and workshops on Blue Economy. In addition, Seventh-Five Year Plan (7FYP) of Bangladesh has mentioned twelve actions for maintaining a prosperous and sustainable Blue Economy, which include fisheries, renewable energy, human resources, transshipment, tourism and climate change among others. The GoB also identified 26 potential Blue Economy sectors for development of blue economy in Bangladesh.

## **2. Review of the Existing Literature**

The Blue Economy is an integrated development of the ocean economy that includes of society, environmental sustainability, and modern beneficial business. Gunter Pauli, a well-known expert in the blue economy field, stated this concept in 2010 in his book *The Blue Economy*. At the moment, the growth of the Blue Economy in the Bay of Bengal holds unlimited promise in terms of socio-economic security, energy, food security, and the preservation of livelihoods. Also contributing to its richness of natural resources, which are still largely underutilized. The term "blue economy" refers to maximizing the use of marine resources while also limiting the misuse or wasteful use of those resources. To combat climate change and achieve economic success, the ocean must continue developing strategically by discovering green, clean, and seamless mechanical elements, among other things (Patil et al. 2016).

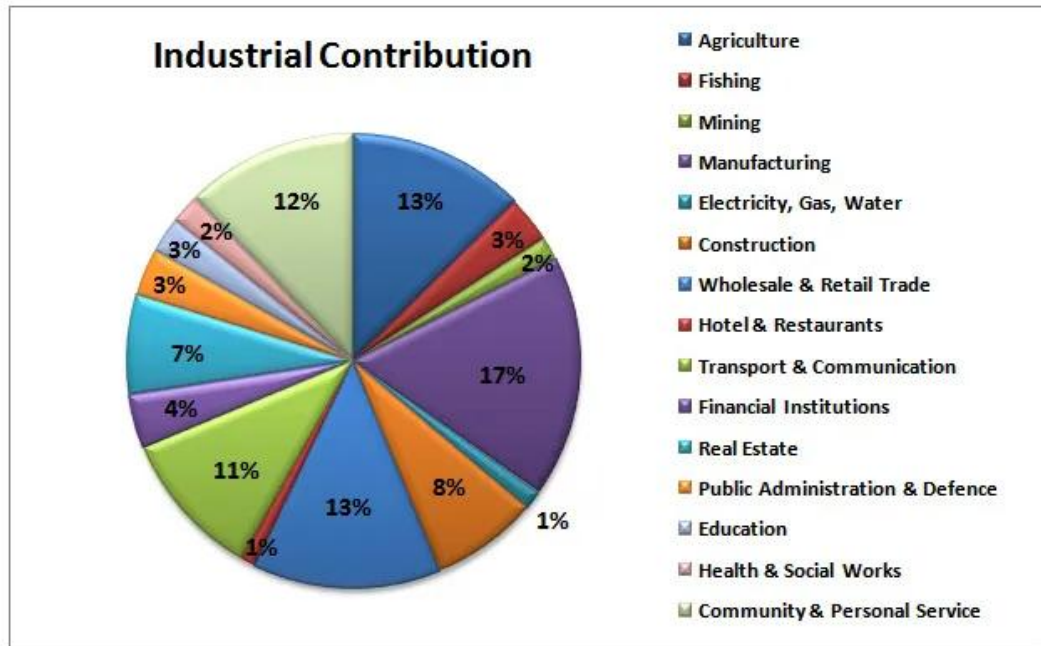
Gunter Pauli posits, "In Nature, everything is biodegradable - it is just a matter of time before it decomposes." All of the components of natural systems are interconnected and developing towards symbiosis. His book *"The Blue Economy: 10 years, 100 innovations, 100 million employment,"* has been credited for bringing the Blue Economy concept to the forefront of public discourse. According to current thought, the Blue Economy is described as the integration

of ocean economy development with social inclusion and environmental sustainability principles and the development of innovative and dynamic corporate strategies and models.

The Changwon Declaration (2012), defines blue economy as a sustainable ocean-based economic model that employs environmentally sound and innovative infrastructure, technologies, and practises, as well as institutional and financing arrangements, to achieve the goals of (a) sustainable and inclusive development; (b) protecting coasts and oceans, as well as reducing environmental risks and ecological scarcities; and (c) addressing water, energy, and other resource scarcities (Conathan and Moore 2015).

In its most basic definition, the blue economy is an economy built on marine-based resources. The blue economy refers to the marine resources made available to the world economy by nature. Fisheries, sea minerals, ports and shipping, marine tourism, deep-sea mining, and transportation and logistics are some examples of Blue Economy components.

Despite of inadequate infrastructure, corruption, Covid-19, the delayed implementation of economic reforms global financial crisis and recession, GDP of Bangladesh has grown at a rate of approximately 6 per cent per year since 1996. Though the country's services sector accounts for more than half of its GDP, nearly half of Bangladeshis are employed in the agriculture sector, with rice being the most important product. In fiscal year 2018-19, 84.21% of all exports were garments, which represented a value of US\$34.13 billion and served as the backbone of Bangladesh's manufacturing sector. According to the World Bank, Bangladesh's continued garment export growth and in 2018-19 fiscal year it contributed 11.17 per cent of GDP as the primary contributor to the country's sustained economic growth. (Khairul:2022)



**Figure: 2.** Industrial Contribution to GDP of Bangladesh [Add source]

### 3. Overview of Blue Economy Drive in Bangladesh

Traditionally, Bangladesh is a maritime nation. Her maritime history may be traced back thousands of years. Many nations in the past annexed in this part of Asia to flourish their trade and commerce as well as power. From time immemorial, inhabitants of this region depended on the Bay of Bengal for their livelihood. The scarcity of land resources and the advent of modern technology opened a new era of National Economic Growth (NEG), centred at the blue economy.

The father of the nation, Bangabandhu Sheikh Mujibur Rahman underscored the importance of endless sea resources and enacted the ‘Territorial Waters and Maritime Zones Act 1974’ to establish Bangladesh’s sovereign rights over the sea and its resources. (Alamgir and Chowdhury: 2019). A number of the most important provisions of Bangladesh's Territorial Waters and Maritime Zones Act of 1974 were subsequently incorporated into the 1982 United Nations

Convention on the Law of the Sea.(Whisnat and Reyes 2015).National Assembly of Bangladesh has recently passed the Territorial Waters and Maritime Zones (amendment Act) 2021.

Through the victory over the maritime boundary disputes with India (2014) and Myanmar (2012) under the dynamic leadership of Prime Minister Sheikh Hasina plots have been set up for rapid NEG through implementing blue economy drive.

It is expected that under the bottom and in the water column, there exists vast store of living and non-living resources. However, there is a scarcity of competent manpower to determine the availability of and explore the potential of the resources. Apart from that, appropriate technology is scarce for utilizing deep-sea fisheries and aquatic resources. To develop manpower in these fields, the country has taken initiatives to increase the availability of higher education in oceanography at Dhaka University, Chittagong University, Shahjalal University of Science& Technology, Noakhali University of Science& Technology and Patuakhali University of Science& Technology. Bangladesh University of Engineering and Technology and Military Institute of Science and Technology conduct undergraduate and postgraduate programmes on Naval Architecture and Marine Engineering. These programmes are designed to produce human resources to contribute various maritime sectors especially shipbuilding industries. (Alamgir and Chowdhury: 2019). More over 5 Government Marine Academy, number of private Marine Academy and Bangladesh Marine Fishery Academy also contribute significantly in human resource development.

Present government has also established a specialised university in the Maritime Sector in 2013 named Bangabandhu Sheikh Mujibur Rahman Maritime University, Bangladesh (BSMRMU) and a dedicated research institute“Bangladesh Oceanographic Research Institute (BORI)

Fishing and commercial shipping provide almost 30 million people with a direct source of income from maritime activities such as fisheries and commercial transportation. According to historical records, Bangladesh has regarded the Bay of Bengal as its "third neighbour. It is expected that a national maritime policy, will be enacted soon.

The economy is the most important aspect in today's world of power politics, and petroleum is the grease that keeps the wheels turning. Observant global economic forces are scanning the lands and oceans of the planet for potential mineral extraction prospects that they may exploit. Bangladesh would have to put forth a lot of effort to make the greatest possible use of her hard-earned marine resources for our benefit while evading the prying eyes of profit-hungry financial vampires and predatory economic imperialists(**Royeppen and Kornegay 2015**).

Offshore petroleum and natural gas exploration have been taking place in the Bay of Bengal, where it is considered that each of these resources may contain extremely substantial quantities. Apart from the countries of the Persian Gulf, India is the only country that produces a significant amount of oil from its offshore territories. Comparable littoral geography distinguishes Bangladesh from the rest of the world, and the country has huge potential for discovering petroleum and natural gas resources in the Bay of Bengal.

The tourism industry is rapidly becoming one of the most important sources of revenue for many countries throughout the world. Travel and tourism are considered to be part of the service industry. Due to its evolution, it has grown into a highly complex activity with a diverse network of interconnections and linkages. In addition to the increase in the overall number of tourists, the improvement in the standard of living and increase in disposable income that comes with having more leisure time is predicted to spur even greater growth. Global tourism numbers have risen in recent years due to several factors, including increased accessibility to transportation, fewer travel restrictions, more availability of information on various tourist sites, and the introduction of new marketing strategies(Mohanty et al. 2015).

In terms of natural beauty, Bangladesh is a country abounding in it. A variety of natural features surround it, including rivers, coasts, and beaches; ancient sites; religious sites; hills; forests; waterfalls; and tea gardens, to name a few. Three World Heritage Sites the Sundarban, Bagerhat's Historical Mosque, and Paharpur's Ruins of the Buddhist Vihara is a major contributor to the tourism. Many local and international tourists travel to the country and its



tourist attraction spots to take in the country's natural grandeur. About six hundred thousand people visited the country in 2016, primarily to take in and admire the country's natural beauty(Henderson and Parker 2012).

Traditionally, sea salt has been manufactured along the Bangladeshi coast of Cox's Bazar for generations, and the industry is still going strong. Salt farmers may produce approximately 20 tonnes per hectare of land during a prolonged dry season. Approximately 22 million tonnes of salt are produced annually in Bangladesh's Cox's Bazar coastline region. Small-scale, manually operated local equipment is used by most salt farms. The land is leased every year from landowners or, in some cases, from the government. Land leasing mechanisms centred on the community's needs, ample financing facilities, the utilization of mechanical equipment (water pumps, levellers, and so on), and effective weather predictions can all help increase salt production. The creation of salt farmers' cooperatives can also ensure that they have to negotiate leverage and maximize economic return (i.e., the salt price) while maintaining or improving their standard of living.(Admiral Alam 2016).

In 2013, Bangladesh's export and import value were approximately USD 67 billion, and these goods were transported by over 2500 foreign ships visiting our ports. During the past ten years, importers, exporters, and purchasers paid USD 95 billion in freight and related charges to shipping companies, airlines, and freight operators to convey goods into and out of the nation for every import and export value generated in Bangladesh. At the time of writing, there are just 74 merchant ships registered in Bangladesh, which is far too few to transport even a fifth of the country's total cargo volume(Ababouch and Carolu 2015).

#### **4. The issue involved in the Blue Economy**

The elimination of poverty and hunger in all their forms and manifestations can promote dignity, equality, and a healthy environment for all people. Our mission is to safeguard the planet's deterioration by engaging in sustainable activities and production while also considering climate change to provide shelter for the world's current and future residents and visitors. We

must ensure that everyone can live wealthy and happy lives, in which progress occurs in balance with nature and following social and economic conditions(Austin and Steinman 2015).

Coastal and blue economic resources and sustainable activities are mostly divided into the following categories: Controlling overfishing and capturing fish are two important tasks. Conservation of coastal areas for agricultural purposes and the establishment of forest assets. The development of the gas field and the government's commitment to long-term sustainability. Controlling the salinity of coastal areas helps to maintain a healthy ecology. Ship recyclability Invest in the development of the industry and adopt long-term activity. Develop a thriving shipbuilding sector and the next step in its long-term development. The port business is putting more emphasis on the prospects for transiting ships. The reformation of tourism and recreation activities is based on an original concept.

Education will be improved, and a research and development centre will be established in the Bay of Bengal. The construction of cable lines and the mining of submarines are progressing. Increasing the amount of legitimate maritime business.

Innovation in the production of energy from the strong sea currents of the Bay of Bengal. Construction of an anti -Farakka barricade and installing irrigation systems during the dry season. Marine biotechnology is a branch of biology that studies the biology of the Sea. Deep-sea mining is a source of innovation. Offshore seasonal wind energy is used to generate electricity for the grid. Innovate in modern marine logistics support—such as vessel construction and maintenance; vessel supply; ship agency; ship brokering; liners and ports; port firms; and freight forwarders. Construction of ships in the ocean Development of a disaster prevention and climate change response strategy. In recent years, there has been a considerable increase in the number of pirate attacks on ships, particularly in the Gulf of Aden, the Somali Basin, and the Indian Ocean, among other places. Because such a large water region is affected, preventing maritime piracy episodes presents a significant problem.

## **5. Impact of Blue Economy on national development of Bangladesh**

People in our country live in one of the world's poorest countries. Food insecurity and poverty affect most rural people, and other socio-economic difficulties and environmental deterioration undermine their ability to contribute to development (Admiral Alam 2016).

Sectors	Activities
Fishing	Capture fishery, Aquaculture, seafood processing
Marine Biotechnology	Pharmaceuticals, chemicals, seaweed harvesting, seaweed products, marine-derived bio-products.
Minerals	Oil and gas, deep-sea mining (exploration of rare-earth metals, hydrocarbon)
Marine Renewable Energy	Offshore wind energy production, wave energy production, tidal energy production
Marine manufacturing	Boat manufacturing, sail making, net manufacturing, boat and ship manufacturing and repairing, marine instrumentation, aquaculture technology, water construction, and marine industrial engineering.
Shipping, Port & Maritime logistics	Shipbuilding and repairing, ship owners and operators, shipping agents and brokers, ship management, liner and port agents, port companies, ship suppliers, container shipping services, stevedores, roll-on roll-off operators, custom clearance, freight forwarders, safety and training.
Marine Tourism & Leisure	Sea angling from boats, sea angling from the shore, sailing at Sea, boating at Sea, water skiing, jet skiing, surfing, sailboarding, Sea kayaking, scuba diving, swimming in the Sea, bird watching in coastal areas, whale, dolphin watching, visiting coastal natural reserves, trips to the beach, seaside and islands,
Marine Construction	Marine construction and engineering.
Marine Commerce	Marine financial services, marine legal services, marine insurance, ship finance & related services, charterers, media & publishing.

Marine ICT	Marine engineering consultancy, meteorological consultancy, environmental consultancy, hydro-survey consultancy, project management consultancy, ICT solutions, geo-informatics services, yacht design, and submarine telecom.
Education and research	Education and training, R&D.

### 6. Prospect of Blue Economy for Economic Development in Bangladesh

Commercially valuable resources as well as intangible ecological services that are essential to human well-being. The concept of the Blue Economic, which emphasizes the importance of ocean resources for national development strategies and the necessity of conserving them, was first proposed by the Pacific Small Island Developing States during the preparatory process for the United Nations Conference on Sustainable Development. This is partly because it is advised that any state with marine interests should practise the notion, garnering international prominence. While the Blue Economy is also known as the Green Economy in the Ocean Environment, it distinguishes itself by the sustainable exploitation of marine resources through the adaptation of low-carbon and resource-efficient technologies, as well as the preservation of biodiversity and the promotion of social inclusion to achieve socio-economic development in the countries involved.

Training, skill, and education are essential components of economic development, and well-trained, skilled, and educated human resources are the only ones who can participate in the globalization of business and the accompanying technological revolution. It is impossible to achieve dynamic and sustained development without a trained labour force. It is necessary to introduce appropriate courses in marine science/oceanography, ocean and coastal engineering, maritime education, and trade into the higher education system after evaluating the requirements of the global market and local industry and the needs of local industry. Bangladesh is well-positioned to create talented human resources in nearly any business due to the many eligible people. It is possible that a large number of experienced coastal and offshore engineers, navigators and merchant mariners, as well as fisheries technicians, biotechnologists, and other

experts, as well as a variety of other occupations, might significantly improve blue economic growth (Anon 2015).

## **7. Challenges militating against blue economy of Bangladesh**

### **7.1 Shortage of Skilled Manpower**

Till recent past, Bangladesh perceived seafarer as the only maritime professional which hindered the development of multi-skill maritime professional (Kabir, 2014). A close look into the component of blue economy indicates that the diversity of maritime profession includes legal practitioners, environmentalists, mariners, engineers, oceanographers, hydrographers, researchers, academicians and many more. (Alamgir and Chowdhury: 2019) The main activities of the blue economy are harvesting living resources, extraction of non-living resources and commerce and trade. Among these activities other than fishing to some extent, shipping and port services, Bangladesh lacks everywhere mainly due to shortage of skilled manpower. Though many drives are on to develop skilled manpower, the absence of a central agency is detrimental to blue economy of Bangladesh.

### **7.2 Inadequate Maritime Research**

Long-term data collection and analysis on ocean dynamics and climate change are underway. The Ocean's Dynamic significantly influences marine animals' behaviour and life strategy and contributes to their conservation. Climate change is a serious issue. Therefore, it is necessary to perform a long-term and continual research investigation to yield information on ocean dynamics and climate change, including information on generation. Long-term investigation into marine products is preserved, processed, and subjected to quality control (Bergin 2015). An effective research environment needs integration of industry, academia and research institutes. Other than BORI no significant maritime research is visible in Bangladesh. Due to non-integration required results are not achieved. Absence of research vessels has augmented the problems further.

### **7.3 Absence of transboundary fisheries resources Management**

Bangladesh shares her maritime boundary with India and Myanmar. There are numerous transboundary important fisheries resources that must be managed on a regional scale. For example, Hilsa presents a transboundary fisheries management challenge between Bangladesh, India and Myanmar. The Hilsa is one of the most popular and commercially important fish in South Asian countries like Bangladesh, India and Myanmar. Hilsa is an anadromous fish that migrates from the Bay of Bengal into the Padma, Meghna rivers and its tributaries in Bangladesh, the Hooghly, Bhagirathi and Godavari rivers in India, and the Irrawaddy River system in Myanmar, for breeding and nursing. Along with the man-made influence, river siltation, closure of migratory routes, over-fishing, use of illegal fishing gears, pollution, hydrological and climatic changes are thought to be responsible for the decline of hilsa fish production. Absence of a policy guideline mutually agreed by all the three countries made it more difficult.

### **7.4 Insufficient Maritime Trade Facility**

International shipping has both direct and indirect impacts on the livelihoods of those who rely on maritime transportation. It facilitates the creation and distribution of wealth and prosperity among nations and peoples, and creates a diverse range of jobs on ships and ashore. Maritime transportation is one of the three pillars of sustainable development. In terms of global trade, international shipping is the most important means of transportation, transporting more than 90 per cent of all global business(Whisnat and Reyes 2015).

### **7.5 Absence of Ocean Governance Policy**

To make a substantial contribution to the production and management of open-sea resources in the interest of national growth and development, the strategic goal is to make a significant contribution. The national, regional, and worldwide levels are the focal points of the discussion. The so-called "High Seas," which are defined as marine areas that are more than 200 nautical miles from the mean sea level, are governed by an international treaty known as the United Nations Convention on the Law of the Sea (UNCLOS), which came into force in 1994 and currently has 166 parties, including the European Union(UNCSD et al. 2016).

Ince the implementation of the Convention, much progress has been made in resource conservation and management, thanks to a variety of regional initiatives, such as the Large Marine Ecosystems (LMEs) projects. However, little progress has been made in combating illegal/illicit activities, such as fishing, slave transportation, and sea piracy (as outlined in Articles 99 and 100 of the Convention).

The challenges to implementing Blue Economy in Bangladesh are many. To overcome some of the challenges Bangladesh need to marshal the data, political will and financial resources to put her on the blue path and design global and regional partnership towards the achievement of ocean governance and sustainable maritime development. (Iqbal:2020)

### **7.6Lack of facilities in Deep Sea Mining**

It is necessary to exploit seabed mineral resources for the benefit of humanity. They must also be used responsibly and sustainably so that future generations are not burdened with the consequences of their misuse. Technology development and equipment for specialized tasks are now available, but an appropriate economic climate must support them. The legal component must be clarified through the UN Convention on the Law of the Sea and the International Maritime Organization. The current uncertainty in profit sharing deters investment in ocean mineral mining, especially in the mining of seabed sulphide, which is a valuable resource. Licensing and taxes for marine mineral mining in international waters could provide cash for the United Nations through the International Seabed Authority/United Nations Convention on the Law of the Sea, administered by the United Nations. The Bay of Bengal, like other oceans, contains a variety of mineral resources that are found from the coast to deep water (**Park et al. 2014**).

## **8. Strategies to mitigate Challenges militating against blue economy in Bangladesh**

### **8.1 Declaration of BSMRMU as central Agency for Maritime Education**

The cohesion among the universities, academies, institutes offering the course and carryout researches in the maritime field is a precondition for human resource development. It could otherwise be better to merge all existing maritime educational and research institutes together to form a single entity like India. (Alamgir and Chowdhury:2019). However, in the present context,

declaring BSMRMU as the central body of maritime education could accelerate the drive of developing skilled manpower in the maritime sector and foster benefits of blue economy.

### **8.2 Integration of Industry in Maritime Research**

Research Triangle comprises of industry, academia and researchers. Without industry's involvement desired output cannot be achieved. It is imperative that BSMRMU, BORI should integrate industry in their research work. It needs motivation drive through seminar, workshop and agreements. Developed countries and even in Malaysia there is industry academia centre in many universities. Integration would also help in shaping curricula according to industry's need. This would also foster the sustainability of the blue economy.

### **8.3 Acquisition of dedicated Maritime Research Vessel**

Most of the maritime research in the maritime field is mainly limited to near coast. Researchers generally hire country (both mechanised and nonmechanized) boats to collect sample. It restricts their reach and make it season bound. A deep-sea research vessel would foster the research drive and also aid to collect data that would facilitate the formulation of maritime policy. The BSMRMU or BORI may pursue to acquire a dedicated maritime research vessel and provide services to other concerned agencies.

### **8.4 Formulation of Maritime Policy**

In order to deal with transboundary resource management, foster maritime trade and facilitate deep sea mining Bangladesh need a comprehensive policy frame work. Policy should cover including others ocean governance, maritime spatial planning, costal and ocean tourism. The policy should also provide terms of references for all stake holder. Formulation of maritime policy would add values to blue economy drive.

### **8.5 Enhancement of Diplomatic Efforts**

The world has become global village. Regional, sub-regional cooperation is the norm of maritime activities. Hence it is imperative that GoB need strengthened diplomatic efforts specially with the neighbouring countries. Cooperation could be in the field research, management, security and conservations among others. The diplomatic efforts would accelerate the blue economy drive.



## 9. Conclusion

The ecology has been badly damaged because of the extensive agriculture techniques in the Bay of Bengal. Agriculture must be further increased to feed a growing population, putting the environment's long-term sustainability at risk. For example, the policies relating to blue capital are not as robust as those relating to agriculture or other terrestrial industries. When compared to other countries in the South Asian region, island states are performing far better. Even if they do not fully implement systematic Blue Economy measures to their fullest potential, Bangladesh, the Maldives, and Sri Lanka have far better socio-economic conditions than their neighbouring countries. It is possible to raise these levels even higher by increasing their Blue Economy interests and doing so in a sustainable manner. There is a great deal of variation in the Bay countries' socio-economic, political, and cultural features, and their national priorities may change due to this diversity. As a result, they must work together to find answers to poverty, which is the one issue they all have in common.

In particular, in maritime nations where natural resources are considered to be poor people's assets, it is critical to integrate the Blue Economy concept into pro-poor growth policies as soon as possible to ensure that the poor benefit from them. According to this study's findings, further quantitative research is required to develop national databases organized by the marine sector to make evidence-based judgments based on current knowledge. It will detail how the various sectors are performing and what actions should be taken. Similarly, to the agricultural sector, the GDP shares of ocean-based industries must be combined into a single category to determine the cumulative worth of the blue capital. Nations should consider bringing all industrial and environmental concerns relevant to the maritime environment under the jurisdiction of a single multidisciplinary agency. Doing so will lessen the political, institutional, and coordinating challenges. Nation-state policies must be modernized to account for the value of blue capital and to incorporate, among other things, people's rights to live in a safe and secure environment.

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*Maeen Md. Khairul Akter, "Review and Outlook, 2020 Bangladesh Garments and Textile Industry" Textile Focus*

*Khaled MK, "Ocean Governance for Sustainable Maritime Development in the Bay of Bengal BMJ Vol 4 Issue 1 Jan 2020*

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