

1(46), 2021, 5-14

http://www.up.poznan.pl/intercathedra/ pISSN 1640-3622 eISSN 2545-2045 http://dx.doi.org/10.17306/J.INTERCATHEDRA.2021.00114 Accepted for print: 4.05.2021

Naveed Anjum^{1⊠}, Magdalena Kozera-Kowalska²

¹Department of Naval Architecture and Offshore Engineering, Bangladesh ²Poznań University of Life Sciences, Poland

GROWTH OF BLUE ECONOMY THROUGHOUT HISTORY AND ITS POTENTIAL IN A DEVELOPING NATION LIKE BANGLADESH

Abstract. While the debate continues on how old our world is, our oceans are, without a doubt, the oldest witness of all the events that have transpired along the way. Their existence has remained constant throughout history and played critical parts in the formation of both facts and fiction while also garnering a whole barrage of resources. The blue economy concept deals with transforming these ocean resources into tools for development. Nations worldwide have started adopting policies regarding utilizing their blue resources, with effective conservation policies also being at the epicenter of their discussion. The ongoing pandemic certainly adds a few more points. Bangladesh, newly initiating this agenda, already has the economic backing and established a base to build upon for revolutionizing the blue resources. This article highlights Bangladesh's economic conditions and key blue sectors and attempts to establish the solidarity of Bangladesh's blue economy initiatives through a comparative and correlative approach.

Keywords: blue economy, oceans, marine resources, economic zone, Bangladesh

INTRODUCTION

Though the oceans have been a focal point of the global economy for such a long period, it was not until 2010 that writer Gunter Pauli, through his book *The Blue Economy: 10 Years, 100 Innovations, 100 Million Jobs* brought the blue economy concept into prominence (Hasan et al., 2018). The idea of 'blue economy' refers to ocean-based economics. It encompasses conservation in tandem with sustainable usages of our maritime resources through seamless and integrated spatial planning (Rahman, 2017). According to the World Bank, "the blue economy

is the sustainable use of ocean resources for economic growth, improved livelihoods and jobs, and oceans ecosystem health" (Menyoli, 2019). The National Ocean Service claims that only 5% of our oceans have been explored. According to a Commonwealth survey, the average revenue of 1.5 trillion USD/year is already generated from the maritime sector, including 500 million jobs. It covers a wide range of industries, from the development of sole industries to waste disposal. The conclusion of the 1982 UN Convention on the Law of the Sea (UNCLOS) saw the first legal step into properly fortifying our seas into sources of economic growth. However, recently,

Undergraduate student Naveed Anjum, Department of Naval Architecture and Offshore Engineering, Bangabandhu Sheikh Mujibur Rahman Maritime University, Bangladesh, e-mail: naoe18006.naveed@bsmrmu.edu.bd

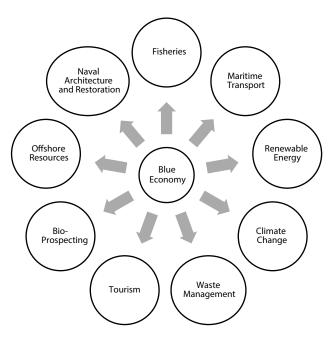


Fig. 1. Sectors of Blue Economy Source: The World Bank.

many policies and initiatives have been put into motion. A massive following is slowly gaining numbers with the UN creating its SDG-14 (2015) specifically in favor of protecting our oceans, and marine awareness is a topic of much debate among global leaders. Adopting policies regarding blue resources is now a full-fledged agenda worldwide, with improved initiatives and technology being the central outcry for propagation and conservation. And the discussion surrounding the COVID-19 pandemic also raises quite a few key issues.

Bangladesh, in particular, has started showing affinity toward adopting blue policies ever since attaining sovereign power over a vast sea area from its neighbors, namely India and Myanmar. The Maritime Zone Act of 2018 was the most notable confirmation of maritime regulation policies in Bangladesh. It is considered the most followed document by this nation when it comes to marine policy reference. As a small state, Bangladesh always attempts to cooperate with neighbors, and the blue economy policies provide the biggest scope in solidifying such neighborly relations. From the global market perspective, the Bangladeshi economy is even more stable and progressive compared to powerhouses such as China and India. Based on collected data, this paper showcases the schemes adopted by Bangladesh

to solidify its blue sectors and potentially develop upon these resources.

THE ADVENT OF BLUE POLICIES

In global politics, the geographical location of some countries bears strategic significance to the super and great powers of the world. Hence, economic and strategic diplomacy is gaining growing importance globally (Bhuiyan et al., 2015) by two verdicts, Bangladesh got confirmation of her maritime boundary. It goes without saying that the maritime boundary settlement has added a new impetus in the political and economic arena of Bangladesh. The areas we have gained under these verdicts are equivalent to winning a ,New Bangladesh'. But the challenges of taking control over it and utilizing its sea-bed resources are the main concerning issues for Bangladesh. In fact, Bangladesh is located in the strategically important region of South Asia, Asia and the world as well. In the sphere of using maritime boundary, Bangladesh can influence the regional and international politics to some extent. This is because gradual influences of India and China on regional and global politics, democratic trends of Myanmar and increasing interest of United States of America (USA). UNESCO created a privileged political space for everyone to reflect upon and re-evaluate our thinking about our relationship with the oceans. Our oceans could no longer be the mere backdrop in a prosperous generation but rather central to the climate change discourse throughout academic institutions, research programs, and negotiations concerning international politics and governance (Bossi, 2020). The roots of UNESCOs' decade-long commitment to the oceans began in 2012 with the United Nations "Blue Economy Concept Paper," which was delivered at the UN Conference on Sustainable Development. The UN's goal toward a 'Blue Horizon' has since motivated international teams to take time to navigate a well-thought-out sustainable future aiming at global and maritime perseverance. Going further back, Prof. Gunter Pauli first used the term 'blue economy' in 2010 as a wealth invention strategy through nature-inspired derivatives based on environmental correctness. Pauli's focus, at best, was on land-based resources and material. The term, however, evolved into its current conception as a purely ocean-based and ocean-corresponding concept through the Rio+20 Declarations of 2012. The Small Island Developing States (SIDS) at the conference

advocated for the sustainable use of ocean resources against the backdrop of incoherent challenges of limited land resources, environmental/ecological vulnerabilities because of natural disasters as well as geographic remoteness and isolation which did not offer them much of an economic footprint as mainland nations. Their significant numerical strength of 52 out of 194 UN member states provided the requisite negotiating leverage. Thus, the blue economy first gained traction with SIDS and later with mainland coastal states (Alam, 2019). Soon policymakers pointed to resource management and fisheries management as areas where the Pacific could improve business models to "ensure that the Pacific is not just a spectator in its development" (Dornan et al., 2018). Thus, seeing involvements of the powerhouses, slowly coalitions began to form, and nations adopted policies to directly insert blue resources into their national income, starting the blue revolution worldwide.

HIGHLIGHTS AND DIRECT RESULTS OF ADOPTING THE BLUE SCHEME IN THE INTERNATIONAL CIRCUIT

At the core of the global blue economy lays the concurrent pursuit of economic growth based on the oceans while maintaining their health to service succeeding generations at all times. The accounted number of sustainability measures available for quantifying development is overwhelming to planners, scientists, and policymakers. Hence, clarification of interrelationships, redundancy, and spatial distributions is needed (Shaker, 2015). Keeping this concept in check, newly elected US President Joe Biden has clarified that he wants to remobilize his nation's dependency on marine resources and create opportunities in that sector. His administration can also be expected to reverse the former president's directives that encouraged new offshore oil and gas development and now instead encourage offshore wind energy projects that Trump's Department of Interiors impeded. The US valued its ocean economy at 1.8% of GDP in 2010. So, policies are developed to ramp up those numbers further. Further east, China's ocean economy contributed 10% of GDP in 2014, employing 9 million people (Bücker et al., 2014; Chowdhury, 2019). China registered five voluntary commitments to SDG 14, all of which focus on successfully sustaining the oceans and creating better environmental policies. China also planned to establish 10-20 demonstration zones during the implementation of the 13th Five-Year Plan (2016– 2020) to test ocean economy policies. According to the 2019 blue economy report from the European Commission, established blue economy sectors include 'marine living resources' (i.e., fisheries, aquaculture, and fish processing and distribution), 'coastal tourism,' 'maritime transport, 'port activities,' 'shipbuilding and repair,' and 'marine extraction of oil, gas and minerals' (excluding seabed mining). In 2017, the established sectors directly employed over 4 million people (up by 7.2 % compared to 2009) and accounted for a gross value added (GVA) of €180 billion (up by 8% compared to 2009). As regards the contribution to the overall EU economy, these figures represented respectively 1.8 % of total EU employment and 1.3 % of EU GDP (Scholaert et al., 2020). The blue economy is being 'secured' environmentally across the continent of Africa in several hypothetical contexts. One of the apparent sources of environmental insecurity being addressed is plastic waste. Plastic waste which enters marine environments is not just from land-based origins but also poorly managed aquaculture schemes (e.g., polystyrene buoys) and discarded fishing gears (Jambeck et al., 2018, 258). The political ecologies of 'marine' pollution are intimately intertwined with socio-economic imperatives and land practices. The implications for the African continent are certainly daunting. Twelve million people are directly "involved in Africa's fisheries sector," whilst over half of their necessary animal protein intake comes from fish in countries such as Mozambique, Sierra Leone, and Tanzania (ibid.). Coalitions across the continent are starting to form, such as the African Marine Waste Network (a network of governments, businesses, academia, and civil society) representing 38 African coastal and island states. But still, the blue economy in Africa is far from the stable development concept that it promises to be (Childs and Hicks, 2019).

ACTIVISM FOR CONSERVATION DURING THE ONGOING PANDEMIC

The COVID pandemic has not only highlighted our mistakes from the past but also provided us with the opportunity to utilize our forgotten resources properly. None more so than the evidence of adding technology advancements in giving glimpses of the deep, we have come to know about even more sustainable perspectives to garner from blue resources. A wonder of nature that is the Mariana Trench (the estimated deepest point

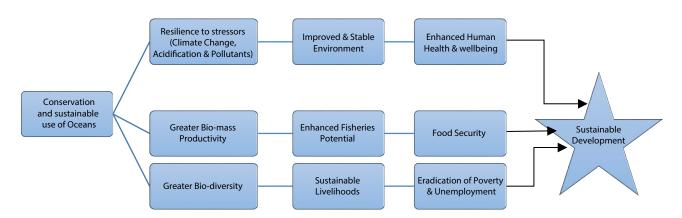


Fig. 2. Idealization chart for ocean sustainability Source: Own elaboration based on UN SDGs.

in the world's oceans) sits at a depth of 11,304 meters and remains vastly unexplored. It is so deep that even light cannot penetrate it, and the deeper we may go, the more bioluminescent (self-light-producing) beings we may encounter. Its most thorough exploration reached the depth of 6,000 meters in 2016, and scientists already claim it to have around 5 million different life forms in it. The discovery of giant squids (the largest recorded measured 59 feet), frilled sharks, and barreleye fish, among others, are just some of the bizarre findings of this fantastic place. We might even be able to find material that could help us cure even the most serious diseases, which may guide us to a healthier future. In the past decade alone, we have made a considerable number of significant discoveries that only begin to scratch the surface of many possibilities. From effects of global warming on the Arctic Circle, divers breaking new boundaries to delve deeper into the unknown, to the #OceanOptimism campaign of 2014, which saw us set new goals toward harnessing and preserving marine life and energy, huge developments were made, and we are anticipating further to take place. Since March 2020, many countries have suspended flights and stopped crew from enlisting and vessels from leaving ports. Before the COVID-19 outbreak in early 2020, cruise tourism was often cited as the fastest-growing sector of the tourism industry (Radic, 2019). Presently, some countries allow a small number of seamen to sign off from vessels after tests and quarantine. We are now in stages of recovery from the catastrophe that befell us; hence, it is high time we changed our present culture of consumerism by re-immersing into the biosphere. The COVID-19

pandemic has steadily created shockwaves through this economy, affecting most of its sectors, including all established sectors of the blue economy (Sharma and Sharma, 2020). Hence, investing our time in developing blue policies without solely profiteering will create a better future for us. Thus, it is important to identify the institutional aspects of the blue economy and how the concept is evolving as time passes (Mamun, 2020).

METHODOLOGY

The subject of the empirical study was the result of archival research and secondary data collection in the related field from previously cited documents and surveys collected through different portals. First, the research aimed to highlight key information from the sources and clarify its stance in establishing the justification of the research topic. Then, a comparative analysis was performed, indicating correlations to showcase the intended outcome.

A BRIEF INSIGHT INTO THE BANGLADESHI ECONOMY AND ITS PLACE IN GLOBAL ECONOMY

According to the IMF reports, Bangladesh had a 7.1% economic growth rate between 2007 and 2016. In 2020 (before Covid), its GDP growth was 7.7%, with its financial stocks at a rise, but overall, it was 5.2% (according to the Asian Development Bank) which still made it the best in South Asia. In 2021, it was forecasted to reach 6.8%, highlighting its steady progress in the global market. It was voted the 2nd biggest developing economy in

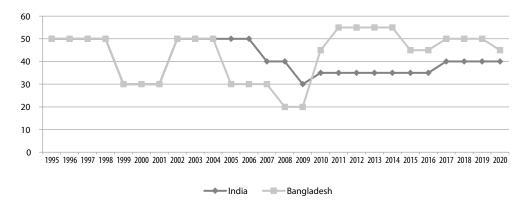


Fig. 3. Investment Freedom (Bangladesh vs. India) Source: Heritage.org

2019, and signs show that it can undoubtedly maintain its pace. Compared to its neighboring state, India, whose GDP will contract by 10.3% and per capita income by 11.2% in 2020-21, Bangladesh's GDP will increase by 3.8%, and per capita income will reduce by 2.9%, according to the projected data from the IMF. In nominal US dollars, India's per capita GDP is projected to be USD 1,877 in 2020–21, compared to Bangladesh's USD 1,888. In constant US dollar at purchasing power parity (the rate at which different currencies can be compared), India will still manage a greater per capita income (USD 5,945) than Bangladesh (USD 4,861), though it suffices to say that COVID-19 has impacted both economies. However, Bangladesh has better investment freedom, indicating that it can firmly adopt newer ideas and move forward with them.

Bangladesh's GDP growth in comparison to China is also remarkable, seeing that Bangladesh's rise is more

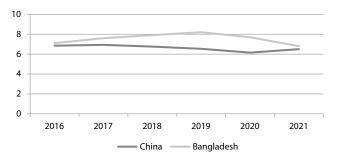


Fig. 4. GDP Growth Rate (China vs. Bangladesh) Source: Tradingeconomics.com (summarized).

constant. China's economy grew by 2.3% in 2020 as recovery from the Coronavirus pandemic accelerated. This should be considered a milestone that Bangladesh is proving resilient to the drawbacks of global catastrophes in such hard times.

Thus, it shows that Bangladesh can entertain the blue economy as one of its driving economic forces for its upcoming challenges and still have room for improvement in other sectors.

BANGLADESH AS THE PERFECT CANDIDATE TO SUCCEED

At present, Bangladesh is considered one of the most notable nations that could capture that maritime dream. Few countries are linked as intimately with maritime transport as Bangladesh, and only a few are in greater need of deploying the maritime sector more efficiently and productively to raise the level of its national economy. Giménez et al. (2014) stated that the vision 2021 plan and the associated perspective plans for 2010–2021, adopted by the Government of Bangladesh, laid out a series of development targets for 2021. A group of marine specialists determined to spur this growth is linked to the common cause through the Institute of Marine Engineering Science and Technology. Bangladesh's branch is one of 47 IMarEST branches globally and one of the most active. As Bangladesh is sited on the world's largest delta, more than 90% of its trade is transported by sea and rivers for apparent reasons. About 10,000 square kilometers (3,900 sq mi) of the total area of Bangladesh is covered with water, which is why shipping and seafarers

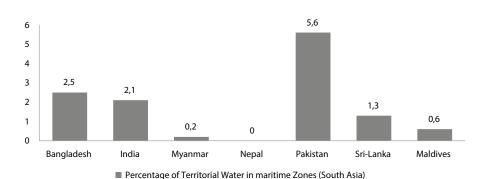


Fig. 5. South Asian Water Territories in Maritime Zones Source: Mia, 2021.

are always considered the most important factor for developing the national economy here. And, due to the ongoing focus, the following get more highlighted.

In ship-breaking, through the last three decades, Bangladesh has emerged as a leading country, and in terms of larger ships, it is top and, in terms of numbers, second only to India. A report titled *Review of Maritime Transport 2019* published by the UN Conference on Trade and Development (UNCTAD) revealed that three countries, i.e., Bangladesh, India, and Pakistan, account for 70–80% of the international recycling market for ocean-going vessels with the rest of the market covered by China and Turkey. The ship recycling industry of Bangladesh captured the global market by dismantling around 47.2% of world vessels, nearly half of the market. This highlights Bangladesh's rising dominance in the industry.

Bangladesh is entitled to 118,813 km² in the Bay of Bengal (BOB) after the final settlement of the maritime boundary disputes with its neighboring countries, namely Myanmar and India, in 2012 and 2014, respectively. This award firmly allowed Bangladesh to establish its sovereign rights over the living and non-living resources of BOB territorial waters up to 12 nm, Exclusive Economic Zone (EEZ) within 200 nm, and continental shelves extending up to 354 nm from the Chittagong coast (Alam, 2019). Finally, the total marine waters of the country stand firmly at 121,110 km² of which coastal waters and the shallow shelf sea constitute about 20% and 35%, respectively, and the remaining 45% lies in deeper waters. In fact, Bangladesh has the widest shallow shelf area within the BOB, which extends more than 100 nm (185 km), and is 3-4 times wider than those of Myanmar, even wider than the eastern coast of India and the global average (65 km). Ultimately, it now has a greater shallow bottom fishing area per unit length of coastline than its close neighbors. Though the coast of Bangladesh is now in a continuous process of reshaping itself, which will continue throughout the millennia, the national economy and overall society will benefit hugely as 20% of the population (i.e., about 30 million people) are dependent directly on our marine resources.

Recovery of minerals from the seabed and our knowledge of new sources of marine minerals like polymetallic nodules, cobalt-rich crust, polymetallic massive sulfide, kerogen, and oil shale (organic sedimentary rock for shale oil) has developed rapidly during recent decades. Oil shale and tar sands are strategically vital domestic sources of energy that need to be explored to reduce the nation's growing dependence on oil (Khan, 2019). The discovery of improved seaweed and other marine life in the Bay of Bengal has also opened an opportunity for researchers to develop better cures and medicines for future purposes. Aided by locals inhabiting near these waters, now even more indigenous species and plants are being discovered. This opens many doors for bettering our nation's science implementation, with many claiming that the cure for some untreatable conditions could be found somewhere at the bottom of the BOB.

Globally, fish provide about 3 billion people with almost 20% of their average per capita intake of animal protein. Over 90% of small-scale fisheries come primarily from developing countries like Bangladesh. The fisheries sector of Bangladesh faces several challenges such as over-fishing, fisheries resource degradation (Shamsuzzaman et al., 2017). Effective aquaculture and marine science implementation could result in better outcomes and production values for Bangladesh and its economy.

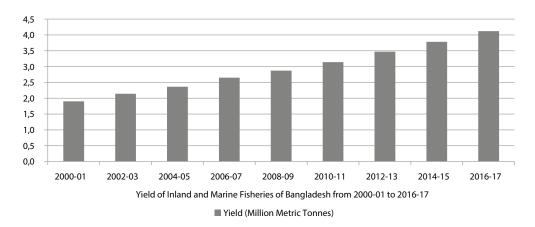


Fig. 6. Contribution of Marine Sector to the Bangladeshi Economy (as of 2018) Source: The Bangladesh Bureau of Statistics.

Small-scale fisheries play a major role in employment globally while providing almost 50% to 67% of the global fish-food catch. It also engages nearly 80–90% of fishing workers worldwide, half of whom are women. Thus, it will provide a solid ground for Bangladesh to close the gap and provide equal gender pay and work opportunities.

In 2009, offshore fields accounted for 32% of worldwide crude oil production, and this is projected to rise to around 34% in 2025. Again, electricity currently accounts for almost 18% of the world's total energy consumption. Comparison of the new and previous wind energy classification shows a good general agreement across a large scale of the global oceans (Zheng, 2018). Renewable marine energies could potentially meet a substantial share of the world's electricity needs, with offshore wind power currently being at the most developed stage. Global offshore wind capacity grew at the superficial rate of 40% per year, producing 7,100 megawatts of electricity in 2013. Notably, Europe has greatly expanded its offshore wind power sector in recent years. Since a considerable portion of Bangladesh's preferred development schemes aligns suitably with the EU's intended plans, it could be a partnership that would benefit both parties, and Bangladesh's relatively new initiatives concerning offshore projects have a brighter scope to exploit this opportunity while learning from past global successes.

The EU is one of Bangladesh's main trading partners, accounting for around 24% of total trade in 2015. In 2015, Bangladesh was recorded to be the EU's 35th

largest trading partner in goods. EU imports from Bangladesh are pre-dominated by clothing, accounting for over 90% of the EU's total imports from Bangladesh. EU exports to Bangladesh are dominated by machinery and transport equipment (49%) which help the nation's automobile industry prosper. The development of the sea/ ocean-based trade system would hugely impact their relationships and provide a firm ground for better initiatives in their future.

The food chain of the sea is naturally enormously efficient and much longer than on land. Unlike the landbased food chain, the sea-based chain does not follow the pyramid model, opting instead for its own scheme. The primary productivity of the community is highest in the seagrass bed (Asmus and Asmus, 1985) North Sea. There are lots of biomass, fewer plant-eaters, and just a small amount of meat-eaters on land. There is relatively less algae-producing biomass in the sea, which is directly transferred into plankton, and many more abundant biomasses or crustaceans can be found along the coast and fish in deeper waters. In the sea, the main predators (fish) are always available. At the same time, the land offers more vast plant-based materials (such as rice, maize, and grain) and plant-eaters (such as cattle, sheep, and goats). Both systems go hand in hand and, thus, would create opportunities for more food from the sea, nourishing our demand for sustainability. Conducted studies also show that domestic ecological restoration, as a sector, generates roughly USD 9.5 billion in sales annually and 221,000 jobs. Hence, the unemployment crisis in our country could be tackled effectively.

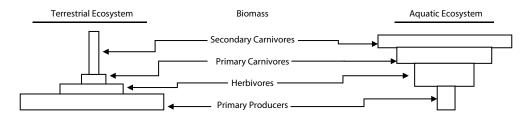


Fig. 7. Inter-Adaptability between Land-Based (L) and Sea-Based (R) Food Web System Source: Weblog.wur.eu

There are only 74 registered (as of 2014) Bangladeshi merchant ships that are insufficient to carry even a fraction of our cargo. Considering that the average import growth rate is 15.79% (last ten years) and the export growth rate is 15.43% (last ten years), the projected value of freights in the next ten years could be around USD 435 billion. Therefore, in order to retain even parts of that USD 400 billion in the country, over an extensive period (ten years), Bangladesh must facilitate local shipping companies with a view to adding more ships to its existing fleet and freight operators to establish firmer freight services, including container liner services for carrying goods to/from Bangladesh using our own, as well as chartered ships and freighters.

In early 2019, the OECD launched the Sustainable Ocean for All initiative led by their Development Cooperation Directorate (DCD). This initiative offered original solid evidence and policy space to support developing countries embarking toward sustainable ocean economies and transitioning globally into a sustainable

ocean economy that the poorest and most vulnerable countries, including small island developing states, could find beneficial. Their initiatives were based concisely on economic freedom and fairer coalitions. Bangladesh's involvement with this initiative has allowed a broader and more opportunistic approach toward aligning a better goal for the country's economic developers.

The shipbuilding industry contributes to the function of advancements by providing the necessary equipment, which covers ships and the marine pieces of equipment in which our own industries can play an important role and flourish. There are more than 300 shipyards and workshops in Bangladesh, and almost 100% of the required marine vehicles are built in these yards. Shipbuilding yards are constructing 10,000 DWT seagoing ships for export and are expected to upgrade their capacity to 25,000 DWT. Before Covid, in the dry docks of Bangladesh, about 15 ships were repaired annually, earning foreign exchange. This industry earns foreign exchange and saves a considerable sum, whereas about

Table 1. Comparison of Vessel Count between Bangladesh and Leading Asian Nations

Year	World Total (Vessel Number)	China (%)	Japan (%)	Korea (%)	Bangladesh (%)
2007	2500	16.00	20.80	9.20	0.08
2008	2250	11.11	22.22	10.00	0
2009	2850	16.29	22.58	16.45	0.10
2010	3000	20.26	21.79	13.08	0.10
2011	3950	20.78	13.25	12.73	0.03
2012	5050	29.38	14.85	14.85	0.35
2013	6600	33.33	11.21	19.70	0.08
2014	5400	30.00	16.50	13.33	0.57

Source: Bangladesh Shipyard Statistics, 2014.

100% of vehicles/rolling stocks need to be imported from abroad in road and rail transportation. At present, ships built in Bangladesh are exported to around 12 countries in Asia, Africa, and Europe. Now, our focus is to get more orders from different international buyers. And the Bangladesh Government is also formulating policies for this export-oriented industry. Hence, it needs to be promoted and nurtured in all possible ways, including its linked businesses, while giving opportunities and incentives for growth and expansion in the long run.

The Honorable Prime Minister Sheikh Hasina emphasized that the blue economy could play an essential role in the economic upliftment of the country in the context of poverty alleviation and food security while combating climate change impacts and setting SDGs. Underlining it as a window of opportunity, the Prime Minister also expressed her resolve to turn the Bay of Bengal into a hub of economic development and prosperity, claiming that marine resources and services could significantly contribute to the development of other potential sectors like pharmaceuticals and agrobased industry, while also enhancing foreign trade and exchange. This, along with the Governments' involvement in procuring the best results from this sector, only points toward better things for the country's future.

CONCLUSIONS

The blue economy initiative aims to promote smart, sustainable, and inclusive growth with employment opportunities in Bangladeshi core maritime economic activities in the short, medium, and long-term time frames. What is more, the blue economy initiative distinctly aims to encourage synergies and foster framework conditions that support the national maritime economic activities and their enchained values. In this paper, the author attempted to highlight the success of past adoption of the blue policies and how they exemplify Bangladesh's current approach. Because Bangladesh is only beginning to unearth its role in marine history, its potential for blue success is higher than ever. The studies conducted show that Bangladesh has both the economic stability and progressive characteristics further to apply the newer and broader concepts of the blue initiatives even when compared to global leaders such as China and India. From trade relations to infrastructural development, further even to resource discovery, among others, Bangladesh has all the necessary bases to build upon solidly. The presented results are certainly not exhaustive, but they can be a valuable source of knowledge. Hence, the author feels that the research is causal and needs to be continued. The question remains on how deep we can actually dig and tread to establish a more sustainable future for the coming generations.

REFERENCES

- Alam, K. (2019). Blue economy development of sea resources for Bangladesh. Bangladesh: Ministry of Foreign Affairs.
- Atakpa, S.D. (2018). Blue economy in a nutshell. Project: Blue Economy.
- Asmus, H., Asmus, R. (1985). The importance of grazing food chain for energy flow and production in three intertidal sand bottom communities of the northern Wadden Sea. Helgoländer Meeresunters., 39(3), 273-301.
- Bhuiyan, M.N.U., Rahman, M.M., Ali, M.A., Selim, S.A.M. (2015). Maritime Boundary Confirmation of Bangladesh: Potentialities of Sea Resources and Challenges Ahead. Cost and Managements, 43(5), 18-24.
- Bossi, L. (2020). Blue Ecofeminism: Rethinking Our Oceans and Remembering the Goddess. Lang., Cult., Environ., 1,
- Bücker, C., Jenisch, U., Lutter, S., Matz-Lück, N., Messner, J., Petersen, S., Rüpke, ... Berndt, C. (2014). World Ocean Review 2015: Living with the oceans 3. Marine resources-Opportunities and risks. Hamburg: Maribus.
- Childs, J., Hicks, C.C. (2019). Securing the blue: Political ecologies of the blue economy in Africa. J. Political Ecol., 26(1), 324-340. https://doi.org/10.2458/v26i1.23162
- Chowdhury, M.M.H. (2019). Maritime Education and National Economic Growth: Bangladesh Perspective. BMJ, 3, issue 1, 32-42.
- Dornan, M., Morgan, W., Newton Cain, T., Tarte, S. (2018). What's in a term? "Green growth" and the "blue-green economy" in the Pacific islands. Asia Pac. Policy Stud., 5(3), 408-425.
- Giménez, L., Jolliffe, D., Sharif, I. (2014). Bangladesh, a Middle Income Country by 2021: What Will It Take in terms of Poverty Reduction? Bangladesh Dev. Stud., 37(1-2), 1-19.
- Hasan, M.M., Hossain, B.M.S., Alam, M.J., Chowdhury, K.M.A., Karim, A.A., Chowdhury, N.M.K. (2018). The Prospects of Blue Economy to Promote Bangladesh into a Middle-Income Country. Open J. Mar. Sci., 8(3), 355-369.
- Jambeck, J., Hardesty, B.D, Brooks, A.L., Friend, T.K., Teleki, J., ... Wilcox, C. (2018). Challenges and emerging solutions to the land-based plastic waste issue in Africa. Marine Policy, 96, 256-263.

- Khan, A.A. (2019). Georesource Potential and Geohazard Status of the Bay of Bengal vis-à-vis Sustainable Development of 'Blue Economy'. BMJ, 3, issue 1, 43-60.
- Mamun, S.M (2020). Blue Economy and the Circuitry of the Circle. University of Oxford Department of International Development TMCD Working paper series, August, 1–30.
- Menyoli, E. (2019). Understanding the blue economy approach. Stakeholders forum 2018-2019.
- Mia, J. (2020). Prospects of the Blue Economy for Bangladesh. Maritime Campus, 3(03).
- Pauli, G. (2010) The Blue Economy: 10 Years, 100 Innovations, 100 Million Jobs. Paradigm Publications, United States, 386.
- Radic, A. (2019). Towards an understanding of a child's cruise experience. Curr. Issues Tour., 22(2), 237-252. https://doi. org/10.1080/13683500.2017.1368463
- Rahman, M.R. (2017). Blue economy and maritime cooperation in the bay of bengal: Role of Bangladesh. Procedia Eng., 194, 356-361. https://doi.org/10.1016/j.proeng.2017.08.157

- Shaker, R.R. (2015). The spatial distribution of development in Europe and its underlying sustainability correlations, Appl. Geogr., 63, 304-314.
- Scholaert, F., Margaras, V., Pape, M., Wilson, A., Kloecker, C.A. (2020). The blue economy: Overview and EU policy framework (issue January). Brussels: European Union.
- Shamsuzzaman, M.M., Islam, M.M., Tania, N.J., Abdullah Al-Mamun, M., Barman, P.P., Xu, X. (2017). Fisheries resources of Bangladesh: Present status and future direction. Aquaculture and Fisheries, 2(4), 145-156.
- Sharma, B., Sharma, B. (2020). Blue Economy: Impact Of Corona. Int. J. Manag., 11(09), 717-728.
- Zheng, Ch., Xiao, Z., Peng, Y., Li, C., Du, Z. (2018). Rezoning global offshore wind energy resources. Renewable Energy, 129, part A, 1-11. https://doi.org/10.1016/j.renene. 2018.05.090

ROZWÓJ BŁĘKITNEJ GOSPODARKI NA PRZESTRZENI DZIEJÓW I JEJ POTENCJAŁ W KRAJU ROZWIJAJĄCYM SIĘ NA PRZYKŁADZIE BANGLADESZU

Abstrakt. Debata na temat długości istnienia świata trwa już długo Istnieje jednak pewność co do tego, że najstarszymi świadkami wszystkich wydarzeń, które się na nim działy, były oceany. Ich obecność pozostaje niezmienna na przestrzeni dziejów i odegrała kluczową rolę w kształtowaniu zarówno faktów, jak i mitów. Oceany zgromadziły również liczne zasoby, które obecnie błękitna gospodarka przekształca w narzędzia rozwoju. Narody na całym świecie zaczęły przyjmować strategie dotyczące wykorzystania swoich błękitnych zasobów, przy czym ważny punkt w dyskusji stanowi również skuteczna polityka ich ochrony. Trwająca pandemia także przyczyniła się do powstania kilku nowych problemów dotyczących tego tematu. Bangladesz, który niedawno rozpoczął realizację tej agendy, ma już zaplecze gospodarcze i podstawę do zrewolucjonizowania swoich błękitnych zasobów. W niniejszym artykule zwrócono uwagę na warunki gospodarcze Bangladeszu i kluczowe sektory błękitnej gospodarki, a także podjęto próbę określenia solidarności inicjatyw błękitnej gospodarki Bangladeszu poprzez podejście porównawcze i korelacyjne.

Słowa kluczowe: błękitna gospodarka, oceany, zasoby morskie, strefa ekonomiczna, Bangladesz