



## Commentary

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# Towards Building Blue Life Science Economy

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## Abstract

The overexploitation and lack of land resources have compelled marine governments to rely on the oceans for economic prosperity. The term for this notion is "the blue economy." As a case study, the subject research focuses on the significance of changing from a green economy to a blue economy while stressing Pakistan's blue economy's potential and problems. Pakistan has failed to maximize the use of its abundant resources. Due to several obstacles confronted by Pakistan, the blue economy's resources are not being harnessed, as indicated by the data gathered throughout this topic study. This is a fallacy; in reality, these obstacles are already being overcome. The underlying reason these resources are not being utilized is a lack of will at all levels. Lack of nautical expertise and the capacity to see the sea, or "sea blindness," is seen to be the biggest obstacle to the development of Pakistan's marine industry. Islamic nations must agree on a plan to move from the Green Economy to the Blue Economy so that musharka, ijar, and sukuk can be used to meet future needs.



## Introduction

In contrast to the green economy, which tries to reduce environmental dangers and ecological scarcities and achieve sustainable development without destroying the environment, the brown economy seeks to increase environmental degradation. Because land resources are few, maritime nations are turning to the waters to support their economy. This idea is now referred to as the "blue economy." A blue economy aims to boost social inclusion, economic growth, and the standard of living of its citizens while preserving the environment. The blue economy comprises both long-established ocean businesses like fishing, aquaculture, and seabed mining as well as emerging ones like offshore renewable energy and marine tourism. The Blue Economy also takes into account port infrastructure, shipping, and coastal development. Due to population increase and dwindling land resources, this disparity will widen, necessitating a switch from a green to a blue economy. Before going any further, it is important to learn the basics about the different sea zones.

## Insight

### Pakistan's Maritime Zones

A thorough legal foundation for the various maritime zones is provided by the 1982 United Nations Convention on the Law of the Sea (UNCLOS). As of November 2019, Pakistan is one of the 166 countries that have ratified the (UNCLOS, 1982). The next 12 NM of water, measured from the baseline, is known as the territorial sea. Pakistan's contiguous zone is comprised of 24 NM of water, as measured from the baseline. According to the country's declaration (ibid.), Pakistan's Exclusive Economic Zone (EEZ) extends up to two hundred nautical miles (NM) and encompasses 240,000 square kilometers. Pakistan now owns a total of 290,000 square kilometers of ocean in the Indian Ocean [1].

The depletion of land resources is the main factor causing the transition from a green economy to a blue economy. In addition, population growth and national, regional, and international conflicts are contributing to the depletion of the land's natural resources. Similar trends exist with nonrenewable energy, which is becoming less abundant as demand is rising, making it more likely that future demands won't be readily met. Presently, maritime nations have already begun to rely on ocean resources to sustain their rapidly expanding populations [2]. The main driver behind the transition from a green economy to a blue economy is that most maritime nations are making rapid progress in implementing the Blue Economy idea for sustainable growth and prosperity. Nevertheless, these crucial channels have not received the necessary attention from the governmental and private sectors in the majority of Islamic nations, including Pakistan. Lack of maritime

knowledge is the main obstacle to the growth of the maritime sector [3]. It is well known that the natural riches in each country's exclusive economic zone have not been fully tapped in the Indian Ocean [4].

### Resources of Pakistan's Blue Economy

#### Algae

Due to their nutritional value and chemical properties, seaweeds are an ideal source for pharmaceuticals, fertilizer, etc. The market demand for seaweed is approximately \$5 billion. Estimates place the annual global harvest at approximately 12.4 million tons. Some seaweed byproducts have shown to be quite beneficial in a number of sectors due to their chemical makeup. Around the coast of Pakistan, a variety of Chlorophyta, Phaeophyta, and Rhodophyta marine benthic algae can be found. Seaweeds are currently underutilized, despite their enormous unrealized potential. Among the benefits promised by this industry is a substantial contribution to job creation. This sector is a great place for people who use Islamic financing to invest because it gives a block area on ijar.

#### Fishery

According to an official study, Pakistan's coastal region produced 359,534 million tons of fish in 2015, but only 130,358 million tons worth \$325 million were exported. If Pakistan's fish catch is fully realized, using Islamic financing, its fish exports may generate an additional \$2.5 billion to \$3 billion yearly. March 2016 had a sharp increase in the amount of seafood exported, going from 10,482 to 11,358 metric tons. Additionally, the EEZ of Pakistan is home to 12 species of cetacean marine mammals and almost 1,000 types of fish, according to the WWF Pakistan report. In Pakistan, there are around 332,000 active fisherman and an additional 90,000 persons employed in related trade and support activities. The blue economy, employment, and food security of a nation are significantly influenced by its fishing resources. It is possible to consider investing in deep sea fishing utilizing musharka for Islamic funding.

#### Mineral resources

In the seas below, there are plenty of nonliving resources, including mines and minerals that are rich in priceless metals like zinc, aluminum, cadmium, cobalt, iron, copper, and nickel. The value of the manganese nodules alone can reach \$40,000 per square mile.

The economic worth of specific metals can be determined using current market value. If these minerals were explored, consider the value of one square kilometer of Pakistan's EEZ. The majority of Islamic countries currently rely on a weather-dependent, agriculture-based green economy. However, the finding of riches in the seabed may bring about economic advantages that are not affected by the weather. As a

result, it is possible to interpret Islamic financing through musharka in both its genuine spirit and text.

### Environmental issues

Overexploitation, urbanization, climate change, and other land-based environmental concerns are harming ecosystems and biodiversity, as well as the advantages associated with natural resources. Because of these problems on land, Islamic countries need to keep their natural capital and move from a green economy to a blue economy.

### Challenges associated with the green economy

1. Due to inadequate management, rising poverty, numerous local and international conflicts, and escalating food insecurity, the majority of Islamic nations are having difficulty implementing green economies.
2. (Islamic Conference of Environment Ministers, 2012): a lack of investment opportunities, a lack of consumer interest, lax environmental regulations, a lack of market incentives, a lackluster business culture, and excessive government red tape.
3. The majority of Islamic nations, particularly those in the Middle East and North Africa, have dry or semi-dry climates that resemble deserts and make it challenging to grow crops.
4. Drought and flooding in South Asia, Southeast Asia, North Africa, and the Middle East have an impact on the green economy on the ground and need the transformation of the blue economy. High population growth makes it hard to develop sustainably, especially in the green economy. This makes it necessary to move to the blue economy.
5. In low-income African countries, rural poverty is prevalent due to a lack of land, irrigation infrastructure, illiteracy, and remoteness. Some Islamic countries are getting poorer while conflicts and tensions are getting worse. This hurts the green economy and makes states invest in the blue economy.
6. Islam prioritizes poverty reduction and income equality. To achieve these goals, socioeconomic and environmental processes must promote sustainable development. If a green economy isn't viable, these nations may switch to blue.

Economic growth often causes environmental damage. Environmental deterioration creates a poverty trap, which worsens both. Environmental issues raise worries for present and future generations. The blue economy lacks the green economy's land-based

challenges. As states seek more economic advantages, the rivalry will intensify, adding to the importance of the Indian Ocean and its problems. Below are blue economy challenges.

### Challenges

The principal maritime routes utilized for commercial (import/export), logistics, and oil transit between ports are sea lines of communication (SLOC). The non-state actor threat to maritime trade has gained importance and constitutes a huge problem for the world and the Indian Ocean in particular. Protection of SLOCs has acquired importance in the Indian Ocean, currently known as the "Centre Stage of the 21st Century." To keep the marine business safe and secure, it is very hard to protect these SLOCs.

Pakistan is the most afflicted nation due to the unfettered flow of narcotics and illegal weapons from its neighbors. The United Nations estimates that Afghan rebels collect around \$125 million annually in taxes from opium cultivators and merchants. Fighting narcotics and weapons smugglers at sea are becoming more difficult.

### Opportunities for the Islamic financial sector in the Blue Economy

All three divisions of the Islamic banking business, musharka, Ijar, and sukuk, have enormous potential in the Blue Economy if respective governments implement blue economy-promoting laws, regulations, and incentives. In addition, they might make investments in maritime technologies, renewable energy, shipbuilding, shipbreaking, fishing, coastal tourism, maritime transportation, and so on. In other words, the shift to a blue economy generates employment in the relevant sectors. In Pakistan, the Islamic finance sector may invest in the sectors. Blue Economy offers Islamic financing alternatives. All the main consumers in this business have been well-served over the previous 60 years, so sukuk may be used for Islamic finance. Karachi Shipyard has built 445 crafts for local and foreign clients, including China, Iran, and the UAE. The shipyard also builds sugar plants, boilers, and cranes. The Karachi shipyard helped build the Guddu Thermal Power Plant, Kot Addu. By 2022, two new shipyards are planned for Karachi and Gwadar, which might be financed via Musharka or Ijar. Additionally, the ship-breaking sector presents excellent opportunity for Islamic finance via Ijar with nearby manufacturing owners. A model trash reception facility might be created and then copied in other regions with the same support of Islamic financing through Ijar from local manufacturing owners. The ship-breaking business, which employs over 12,000 people and generates annual tax revenue of over Rs. 5 billion, is a good indicator of the potential of the subject industry. It consists of 68

plots (factories). It's significant to note that 862 ships were dismantled globally in 2016, up from 768 in 2015. 668 ships were destroyed in South Asia in 2016, up from 469 in 2015.

### Ports

Coastal regions, which are essential to boosting the country's blue economy, offer considerable prospects for Islamic financing through investments in port and harbour infrastructure development. When Pakistan was founded, there was only one port. Port Qasim was constructed in the early 1970s, and the two ports are now considered the backbone of Pakistan's blue economy. The China Overseas Port Holding Company (COPHC) has been given to Chinese authorities to run the port at Gwadar. This port was built because trade was growing and China wanted to export goods through Pakistan.

The imports and exports of KPT and Port Qasim are listed in the table below. As these ports' ability to lift more cargo grows, Islamic financing could be an option for them.

### Conclusion

The genuine potential of Pakistan's maritime resources for transitioning from a green economy to a blue economy has been diligently sought out during this research. This notion holds that due to specific maritime difficulties, sea resources are not being properly explored. However, the truth is that these problems may be solved with the aid of international cooperation because they constitute less of a threat to the green economy than those on land do. The real reason for this is a lack of desire to look toward the sea or the relevant EEZ in the case of Pakistan and many other Islamic regimes.

Conducting marine awareness campaigns with the help of academics, the public, and policymakers can easily achieve this. Furthermore, it is important to recognize that the future belongs to countries with adequate maritime infrastructure along their coasts. Then, in order to move this realization forward, it is necessary to pique the interest of other Islamic countries as well as landlocked South Asian countries like the Central Asian States. However, it is necessary to inspire the will and knowledge of all Islamic countries before transitioning from a green to a blue economy by outlining the advantages that may be obtained from their particular EEZs. The shift to a blue economy ought to foster cooperative ventures amongst Islamic countries and develop regional alliances. To kickstart the blue economy in Muslim nations, an Islamic marine authority must be established.

### Competing Interest

The author declare that there is no conflict of interest.

### References

1. Khan, A. (2016). June-July 2016: Sindh Government set to place a complete ban on fishing. *Business Recorder*.
2. Dirk. (2001). UNESCO Coastal Regions and Small Islands Platform. Latvia: University of Latvia.
3. Risks, H. (2018, April). International Monetary Fund (IMF). *World Economic Outlook 2018*.
4. Arunachalam, C. B., & Suryanarayana, V. (1993). *The Indian Ocean and Its Islands Strategic, Scientific and Historical Perspectives*. New Delhi: Sage Publications.



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