

REVISITING BLUE ECONOMY: CHALLENGES AND PROSPECTS FOR THE MARITIME SECTOR OF PAKISTAN

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Abstract

The need for sustainable development amidst an ever-expanding global population and diminishing resources on land has engendered a worldwide shift from Green/Brown economy to Blue Economy. The economists estimate that the ocean economy can increase the assets up to US \$24 trillion and can be healthy for the ecosystem as well. In this aspect, Pakistan can extract maximum gains from the growth of its Blue Economy because it has an 'untapped maritime potential' that offers multiple opportunities. To securitize the significance of Blue Economy is therefore imperative for Pakistan, not only for economic dividends but also for ensuring human security of the coastal population of Pakistan. Hence, this research focuses on the Blue Economic potential of Pakistan and the opportunities and challenges that lie in this sector.

Keywords: Blue Economy, Pakistan, EEZ, UNCLOS, IMO

Introduction

The oceans and seas of the world are arguably the nature's greatest gift to mankind and the most significant natural resource. Every year, the ocean economy has an estimated turnover of between US \$3 and \$6 trillion globally. This includes employment, ecosystem services provided by the ocean, and cultural services. It is also estimated that fisheries and aquaculture contribute US \$100 billion and about 260 million jobs to the global economy per year.¹ Many states are benefiting from marine resources given the globalization of science and technology. At the same time, however, the advancement in technology and over-exploitation of the natural resources is

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¹ Asaf Humayun, and N. Zafar, "Pakistan's 'Blue Economy': Potential and Prospects," *Policy Perspectives* 11, no. 1 (2014): 57-76, <https://doi.org/10.13169/polipers.11.1.0057>.

causing environmental degradation and resource depletion too. This threatens the future generations. Many developing states have already started paying for this threat. For this reason in 2012, United Nations Conference on Sustainable Development (UNSCD) concluded that the participating countries must work on the concept of Blue Economy.²

The concept of Blue Economy was first coined by Gunter Pauli in 2010 and later discussed in detail in his book *The Blue Economy: 10 Years, 100 Innovations and 100 Million Jobs*. Pauli emphasised the shift of society from scarcity to abundance with everything what is available in the oceans and seas of the world.³ Blue Economy is now a popular concept that revolves around safeguarding oceans and seas and using water resources in an efficient way for sustainable growth and development. Pakistan also can gain maximum from investing in its blue economy given its 'untapped maritime potential' that offers multiple opportunities. Pakistan can proactively focus on some key areas that can help improve its Blue Economy such as: ports and rail-road infrastructure, the fishery sector, marine pollution and quality human resources extraction on the international shipping. It is high time for Pakistan to revisit its "National Maritime Policy" for incorporating the idea of sustainable socio-economic growth using marine sources. Pakistan's National Maritime Policy, revised in 2014, was never approved by the government. To deal with the challenges of sustainable development, Pakistan needs to internalize the concept of Blue Economy in its National Maritime Policy, which calls for securitization of the Blue Economy against internal and external challenges.⁴

This study is descriptive, analytical and exploratory, based on secondary sources: books, articles and reports. There are three possible perspectives to discuss Blue economic growth in Pakistan: international political economy, governance framework and management frameworks. However, given the untapped potential of blue economy in Pakistan, there is a dire need to build a strategy that is comprehensive and includes all the possible dimensions of blue economy frameworks. Consequently, Pakistan needs to securitize the issue to enhance prospects of blue economic development. Thus, this study analyses challenges and prospects for Pakistan in blue economy through the lens of securitization theory as purported by Barry Buzan and Ole Weaver.⁵ It argues that securitization of blue growth will not only ensure

² K. H. Lee, J. Noh and J. S Khim, "The Blue Economy and the United Nations Sustainable Development Goals," *Researchgate*, (January, 2020), <https://www.researchgate.net/publication/339067077>.

³ Gunter Pauli, *The Blue Economy: 10 Years, 100 Innovations and 100 Million Jobs* (Paradigm Publications, 2014), 59-61.

⁴ Anjum Sarfraz, "Maritime Power of Pakistan- Prospects for Enhancing Economic Development," *Journal of Current Affairs* 51(August, 2020): 63-69.

⁵ Barry Buzan, O. Weaver and J. de Wilde, *Security: A New Framework for Analysis* (Colorado: Lynne Rienner Publishers, 1998).

human security of the coastal population of Pakistan but also contribute to economic progress of the country.

Revisiting Blue Economy: Opportunities through Sustainability

Blue Economy gained global significance in 2012, during the United Nations Conference on Sustainable Development (UNSCD). Initially, green economy was considered a long-term solution for sustainability of land resources. Green economy's relevance was questioned by the Island states, asserting that world's oceans and seas required more attention and coordinated action to preserve and utilize them. Hence, it was decided that efforts be coordinated for sustainable utilization of 'ocean and sea resources' as a long term solution to the sustainable development. Alongside, the UNDESA expert group meetings continued to work towards promoting the sustainable development through oceans and seas, at the international level. The work of Global Partnership for Oceans and Global Ocean Commission holds a lot of significance in this regard along with UN five-year Action Agenda 2012-2016 that emphasises oceans and sea resources.⁶

Defining the Concept of 'Blue Economy'

World Bank defines Blue Economy as the sustainable utilization of ocean resources for preserving livelihoods and creating more job opportunities along with the protection of environment by reducing pollution (World Bank, 2017). It originated from the Rio+20 where the participants, representing their states, pledged that they would 'protect and restore' the health of the ocean ecosystems. The UN General Assembly defines, Blue Economy as a long-term strategy aimed at supporting sustainable economic growth through oceans-related sectors and activities, while improving human well-being and social equity and preserving the environment.⁷ The UN 2030 agenda for Sustainable Development Sustainable, Goal 14 emphasises 'Conserve and sustainable use the seas, oceans and marine resources for sustainable development'.

Many countries now consider the 'Blue Economy Model' as a significant tool for promoting development and creating more jobs. The scientific development, innovation, and technology are central to promoting Blue Economy. Traditional maritime activities like fisheries, coastal tourism, aquaculture, shipping and mineral resource extractions can surely contribute to generating blue economy. However, non-traditional sectors like construction and transportation of more ships, sustainable ocean wave and tidal current

⁶ "Human Development in Pakistan, UNDP," UNDP Report 2019, <http://www.pk.undp.org/content/pakistan>.

⁷ Ibid.

energy, laying communication cables as well as construction of pharmaceutical industries can be efficiently exploited to expand blue economy.⁸

The total potential for the blue economy or the ocean economy is approximately US \$ 24 trillion whereas the humanity is exploiting roughly US\$ 600 billion.⁹ South Asian states like India and Bangladesh are earning billions of dollars from the blue economy but Pakistan has been able to utilise only about US\$ 450 million with only a major focus on fish exports and fish products. Other aspects of Blue Economy have been ignored over the years. The actual potential of Pakistan with respect to blue economy is more than US\$ 100 billion. Out of the 142 coastal states in the world, Pakistan is ranked 74th in terms of the coastal length with coast to area ratio of 1:36.¹⁰

Pakistan is trying to enhance its marine resources and sea trade to benefit from the sea resources. Since 95 percent of Pakistan's trade with other countries is carried through the sea and almost all resources and minerals are imported through maritime routes, the sea trade can be said to be the jugular vein of the Pakistan's economy.¹¹ Pakistan's maritime area of responsibility encapsulates the coastline of Pakistan and includes all the maritime regions of Pakistan. The division of these maritime zones is shown in the Table 1 and Fig 1 below. It is evident that the economic model of the blue economy is feasible and needs some pragmatic measures to benefit from it. However, there are some challenges that can be assuaged through robust planning and execution.¹²

Table 1: Different Sea Zones of Pakistan

Sr. No	Type of Zone	Range (Nautical Miles)
1	Territorial Waters	12
2	Contiguous Zones	24
3	Exclusive Economic Zone (EEZ)	200

⁸ Naghmana Z. Bhatti, "Blue Growth: An Emerging Paradigm of National," *National Institute Of Maritime Affairs Policy Paper* (May, 2019), <https://bahria.edu.pk/>

⁹ Ashna Mehmood, "Blue Growth Initiatives by Pakistan: Moving towards a Sustainable Future," *Centre for Strategic and Contemporary Research*, December 13, 2021, scr.pk/explore/themes/trade-economics/blue-growth-initiatives-by-pakistan-moving-towards-a-sustainable-future.

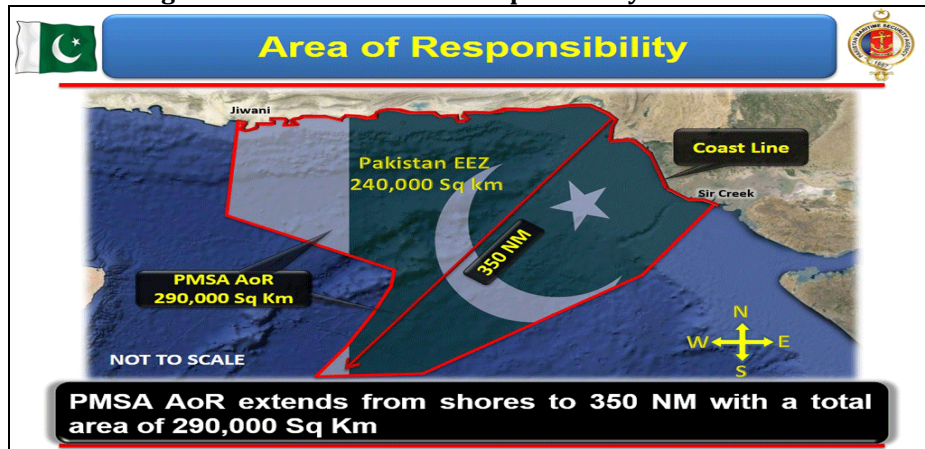
¹⁰ Dost S. Muhammad, Muhammad A. Brohi and Najeeb Ullah, "The Pakistan's Untapped Blue Economy Potential," *Journal of Global Peace and Security Studies*, vol. 2, no.1 (2021): 63-73.

¹¹ Muhammad Azam Khan, "Maritime Doctrine of Pakistan: Preserving Freedom of Seas," Pakistan Navy, Government of Pakistan, December 2018.

¹² A. Basit and M. A. Alam, "Blue Economy : Pakistan's Untapped Potentials," *The News International*, July, 2020, <https://www.thenews.com.pk/print/688791>

4	Extended Continental Shelf	350
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Figure 1: Area of Maritime Responsibility of Pakistan¹³



Theorising the Significance of Blue Economy in Pakistan

Blue economy is central to sustainable development and thus scholars across the globe have deployed different models for theorising its use and to tap its potential. Models of technological and macroeconomic management have been used to reap its benefits.¹⁴ Some have employed governance frameworks to deal with challenges of blue growth in Indian Ocean Region as well. Since blue economy is about extracting economic benefits, the international political economy models for inclusive and sustainable economic growth from marine resources have also been relevant.¹⁵

For a developing state like Pakistan, there is a need to develop a framework that is inclusive of the strengths of all the tested models employed for benefiting from Blue Economy. However, prior to focusing on devising an appropriate model, what is direly needed is that the idea of blue economy, its need and significance be appropriately securitized within Pakistan's development and security discourse. For theorizing why ocean-based economy is to be brought into the security discourse, Buzan's conception of

¹³ PMSA, "Area of Responsibility," *Pakistan Maritime Security Agency*, February, 2021, <http://pmsa.gov.pk/area-of-responsibility>.

¹⁴ C. Sanae and Cornelia E. Naune, "Successful Blue Economy Examples with an Emphasis on International Perspectives," *Marine Sciences Frontiers*, (June, 2019): 42-56, <https://doi.org/10.3389/fmars.2019.00261>.

¹⁵ Ibid., 44.

comprehensive security greatly helps.¹⁶ Pakistan can gain a lot, by internalizing comprehensive approach to security. In the twenty-first century, the traditional concept of security could not deal with all the challenges of the globalized world. There was a need to broaden the concept of security to multi-dimensional approaches emphasizing on newer sectors that might threaten states' well-being in addition to the military sector. Copenhagen school of thought took to address the challenge where primary source for their ideas was Barry Buzan and Ole Weaver 1998 work titled, *Security: A new Framework for Analysis*.¹⁷

Buzan viewed five different sectors of security as highly intertwined to each other, where none may be relegated for signifying the other. This approach actually sought to alter the state-centric and narrow view of security, by bringing in other sectors (the economic, the societal, the military, the political and the environmental) that play an important role in the well-being of states. Including these sectors was justifiable due to their direct impacts on humans and societies residing within state boundaries. As economic development is central to national security, so is economic survivability a pre-requisite for societal security – one of the five sectors of security. Copenhagen school actually diversified the possible answers to the question, "Security from Whom?" by creating space for recognition of non-traditional threats. This is first step that identify the threat and is referred as the "Securitization move". The second step is considering humans as the referent object of security.¹⁸ Giving the non-traditional security threats an importance previously attributed only to traditional threats, allowed the security experts to give due consideration to human security without relegating state security. Internalizing comprehensive security would pave the way for securitization of 'blue economy as a dire need of the hour', not only for the country's sustained economic growth but also for human development and security.

Human Security and Maritime Security linkage

The securitization concept correlates Human Security and Maritime Security. As maritime security, focuses on the UNCLOS of 1982 that regulates the law of seas to concentrate on the conflict resolution and dispute settlement in seas and oceans. Illegal, Unreported and Unregulated (IUU) discusses the threats against illegal fishing, smuggling and piracy in the developing countries, highlighting, both traditional and non-traditional threats. All these factors also

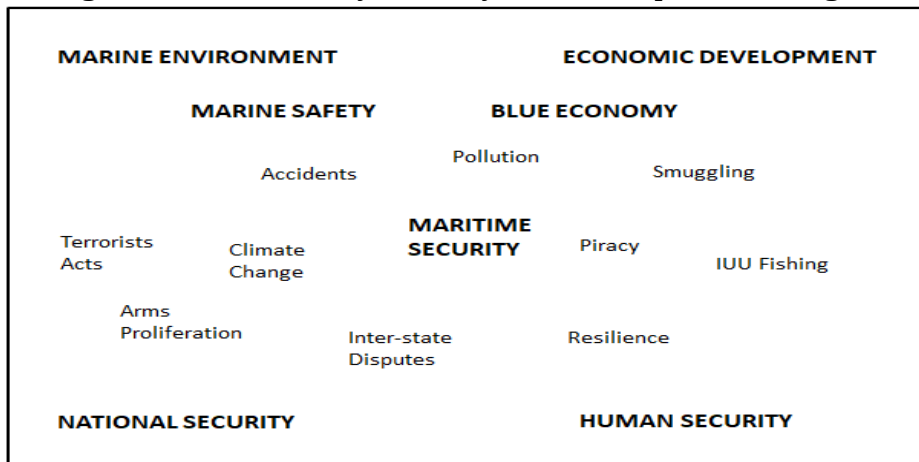
¹⁶ S. Kedia and P. Gautam, "Blue Economy Meets International Political Economy: The Emerging Picture," *Maritime Affairs: Journal of the National Maritime Foundation of India*, Vol 16, Issue 2, (2020): 46–70.

¹⁷ Barry Buzan, O. Weaver and J. de Wilde, "Security: A New Framework for Analysis."

¹⁸ Sezer Ozcan, "Securitization of Energy through the Lenses of Copenhagen School," *WEI International Academic Conference Proceedings* (March, 2013), <https://www.westeastinstitute.com/wp-content/uploads>.

impact human security. This means human security also requires maritime dimension to safeguard the livelihoods of the coastal population and create more opportunities for them.¹⁹ This inter-relation of the blue economy with the economic development and human security that feed ultimately into national security is shown in the following diagram:

Figure 2: Blue Economy, Security and Development Linkage²⁰



Maritime securitization requires civil-military coordination with special consideration and an active role by Pakistan Navy. It requires naval diplomacy, naval warfare and capacity building in the maritime sector of Pakistan.

Prospects for Blue Economy in Pakistan

Pakistan is a resource rich country but the management of these resources has not been done to its full potential. It has not been able to exploit its enormous rich resources. In order to provide human security to the people that will also help achieve sustainable economic growth of the country, there is a dire need to focus on the prospects of Blue Economy in Pakistan. There are many prospects for blue growth in Pakistan. It needs to take advantage from maritime resources. There are multifaceted opportunities for Pakistan that can be achieved by improving technology in the maritime sector; Ports Infrastructure, Shipping, Fishing and Seafood, Maritime Tourism, Ship Breaking and Water Sports. These are discussed below:

Ports Infrastructure

The most significant part of the economic might from the maritime resources is the ports infrastructure. Ports provide a state with ability to get a

¹⁹ Ibid., 31.

²⁰ Ibid., 32.

locality where ships can be docked and various types of cargo is managed. In this perspective, the hinterland connections of these ports and harbours are also crucial. The infrastructure should be managed in such a way that there are strong rail and road networks that can take the cargo to the destinations.²¹ The development of these ports provides great growth opportunity and can help people come out of the economic plight through enormous employment opportunities. There are three main commercial ports of Pakistan:

- a. Karachi Port
- b. Bin Qasim Port
- c. Gwadar Port

The port of Karachi is the oldest port of Pakistan and has been in a functioning state since 1887. The authority that governs the Karachi Port is Karachi Port Trust (KPT). There are a total of 33 berths at the Karachi Port. Out of these, 30 are meant for the handling of the containers and solid cargo while 3 are specified for the managing of liquid cargo such as molasses and oil.²²

From 2018-2019, the cargo at Karachi port declined mainly due to shifting of the coal cargo Port Qasim and decrease in the imports of the country.²³ Bin Qasim Port is also located in Karachi. The functional work on this port started in 1960s but due to political instabilities, the development of this port gained momentum only in 1973. The docking capability of the port is almost equivalent to that of Karachi Port. From 2017-18 to 2018-2019, there has been an increase in the cargo shipment of this port due to the shifting of coal cargo from Karachi to Port Qasim. It has extra space where at any time of need, new berths can be prepared. It also shares cargo of Afghanistan and Central Asian States.

Gwadar port is the third port of Pakistan. It has gained the spotlight after the China-Pakistan Economic Corridor (CPEC) initiatives. It is the first port in Baluchistan located on the south western Arabian Sea coastline. The distance of Gwadar from Karachi is 635 km and distance of Iran is 120 km. The strategic importance of the Gwadar is that it is in the proximity of the Persian Gulf. It is a deep port which is useful for docking purposes. The phase 1 of the port with worth US\$ 280 million started in 2007. It is now a fully functional sea port with three, multipurpose berths. These births are 200 meters in length and 14.5 meters in depth. Hence, the infrastructure development of these ports is a necessity for Pakistan.²⁴

Shipping

²¹ Glyn Ford, Lindsay Walker, and Chris Niblett, *The Future for Ocean Technology* (London: Frances Pinter Publishers, 1987), 28-56.

²² Ibid., 12.

²³ Karachi Port Trust, "Port Statistics," July, 2019, <http://kpt.gov.pk/pages/Default.aspx?id=50>.

²⁴ Ibid., 4.

There is enormous potential for shipping in Pakistan but there is only one flag carrier company that is operating in Pakistan i.e. Pakistan National Shipping Corporation (PNSC). PNSC comprises of 11 vessels that are of different types and sizes. The total dead weight tonnage (DWT) of these vessels is about 831,711 million tonnes (MT), but PNSC lifted the cargo of about 11.09 MT in 2021 that was about 8.437 MT less than in 2020. This is equivalent to about 10.06 percent of country's total 110.271 MT seaborne trade by volume. In terms of revenue, in the year 2018 Pakistan National Shipping Corporation has generated about 10,070 million rupees. It has been materialized by focusing on the profitable projects. There is a global competition that is responsible for creating pressures in freight rates in the global market. The freight rates have been on decline in recent years.²⁵ The Covid-19 situation however, drastically increased freight rates. For the year (2020-2021), the statistics of Pakistan sea trade and PNSC's share in that is shown in the table 2 below.

Table 2: PNSC Share in Sea Trade of Pakistan-2020-21²⁶

	Dry Bulk		Liquid Bulk		Total	
	2021	2020	2021	2020	2021	2020
Pakistan Sea Trade	77.968	66.585	32.303	27.736	110.271	94.321
PNSC's share	1.544	1.533	9.554	7.257	11.099	8.808

The annual freight bill of the Pakistan as per United Nations Convention on Trade and Development (UNCTAD) is estimated to be US\$ 4 to 5 billion. Such huge amount of money for compensation of freight bills adds troubles to the balance of payment issues. Thus Pakistan should have maximum Pakistan flagged vessels that can reduce such compensations. Increased number of vessels will grow the shipping industry and enhance the sea trade automatically. Moreover, there will be more employment opportunities for the seafarers. Thus, international trade can pace up the growth of blue economy through shipping industry.²⁷

Fisheries and Seafood Industry

²⁵ Pakistan National Shipping Corporation, PNSC Annual Report (2018), <https://pnsc.com.pk/financials/pnsc-fy-2017-2018.pdf>.

²⁶ Ibid., 21.

²⁷ Syed Khawar Ali Shah and Kanwar Muhammad Javed Iqbal, "Protection and Promotion of National Flag Carrier – PNSC: Policy Options for Pakistan," National Institute Of Maritime Affairs, January, 2019, <https://bahria.edu.pk/nima/wp-content/uploads/>.

Fishing and seafood comprise the key components of blue economy and sustainable economic growth. They aim to achieve the economic growth through accomplishment of the Sustainable Development Goal-14 (SDG-14). Pakistan is 5th on the list of the most populous states in the world with a total population of 213 million (2017 census). Although the poverty rate is on decline as compared to previous decades but the human development indicators, present a poor situation of the country in key social sectors such as health, education and nutrition value. The fishing sector of the country is a major source of nutrients and food in the country. In Pakistan, the fish industry is valued at US \$1.2 billion and has created almost 1.8 million jobs.

The indirect contribution to providing the living comes mainly through transportation and retailing. Besides this, the fisheries component of the sea food also forms an important part of the export commodities of Pakistan. The global demand for fish and sea food has increased over the years and it is estimated that the sector will grow further by 50 percent in next 15 years. The price of fish is 2.5 dollars to 2.75 dollars per kilogram in Pakistan against the regional price of 7 dollars.²⁸ Pakistan is exporter of fish to many European states as well as key exporter of seafood to China but due to poor techniques, it generates less revenue because of poor quality of the seafood products. In terms of GDP, the fisheries department contributes only 0.4 percent of the GDP. Pakistan should enhance its exports in sea products and increase its share in exports sector by focusing on the key importers of the fisheries that include western states. There is some depletion in the biodiversity of the seas due to climate change that needs to be addressed on immediate basis.²⁹

Maritime Tourism

The data from the World Travel and Tourism Council (WTTC) shows that the contribution from the tourism sector in the global GDP has mounted to 10.4 percent and there are 10 percent of the global employment opportunities associated with this sector in the year 2018. It is equivalent to 8.8 trillion dollars of revenue. Thus, tourism forms a large part of the economic sector of the GDP for many countries. According to World Travel & Tourism Council, travel and tourism sector contributed 10.4 percent to global GDP and accounted for one in four of all new jobs created across the world in 2019. On the contrary, in the case of Pakistan, this sector contributed only 3.3 percent to country's GDP indicating a wide margin of growth.³⁰

The incumbent government is keen on widening the scope of the maritime tourism for Pakistan. The revenue from the coastal tourism was only 1 percent for Pakistan in 2017 out of the total revenue generated by marine

²⁸ World Fish Publications "Fish Demand and Supply Projections," World Fish Center, 2019, <http://www.worldfishcenter.org/content/>.

²⁹ Ibid., 14.

³⁰ Gilad Goren, "Travel & Tourism: A Force for Good in the World," *The Guardian*, April 1, 2015, <https://www.theguardian.com/sustainable-business>

tourism. There is a great potential for Pakistan in marine tourism; Hingol National Park, Mud Volcanoes, Beach Lagoons, Beach sports and Cruise ships encapsulate a large amount of economic potential for Pakistan. To get advantage from this sector, there is a dire need for identification of key stakeholders in the form of public-private partnership and other ventures. The tourism sector must regulate through comprehensive policy and infrastructure development. There is a need to learn from Thailand and Maldives who have registered victories in the arena of marine tourism.³¹

Ship Breaking

Ship breaking, also known as ship demolition is a process of recycling that has contributed enormously to the maritime economy of Pakistan due to cheap labour, low price of steel and employment. Pakistan is the leading country in this sector after India and Bangladesh. The data for the top countries in the ship breaking sector is given in the Table 3. Pakistan has got the potential in this sector due to long beach, heavy tides and environmental conditions. The shipbreaking industry also acts as source of raw material for the steel as ship is made of steel. In addition to this, the essence of this sector is that it is a labour intensive sector, and there is more and more direct and indirect involvement of the labour. The data from Pakistan Shipbreaking association shows that 20,000 people are directly involved in shipbreaking industry in Pakistan.³²

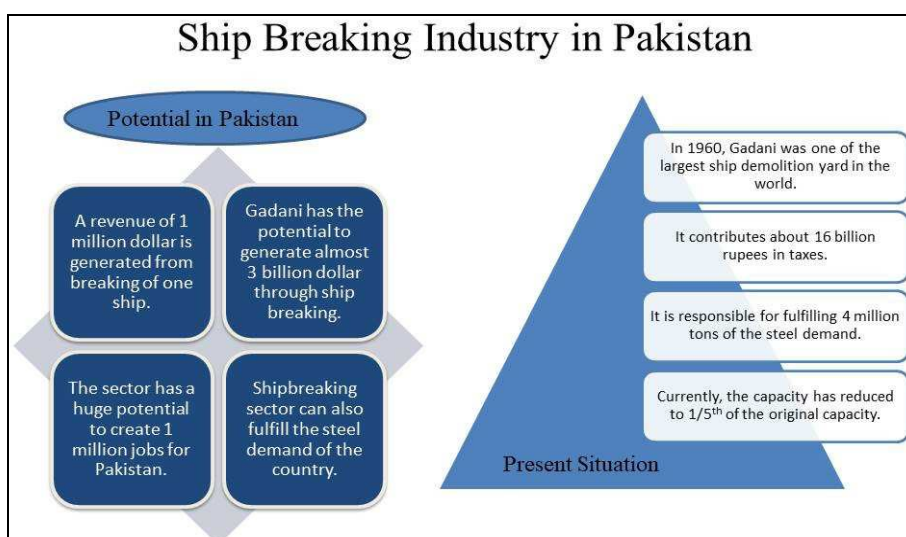
³¹ Ibid., 1-56.

³² Mark J. Spalding, "The New Blue Economy: The Future of Sustainability," *Journal of Ocean and Coastal Economies* 46 (February, 2016):23-45..

Table 3: Detail of Ship Breaking in Different Countries (million tons)

	India	Bangladesh	Pakistan
Oil Tankers	1934	3245	0
Container Ships	1750	890	750
Dry Bulk Carriers	1060	1460	2526
Offshore Vessels	320	57	77
Total (Including all)	6323	6260	3459

Source: UNCTAD, 2019.

Figure 4: Ship Breaking Industry in Pakistan³³

Water Sports

The coastal area of the sea can also open up many arenas for sports as well. The water sports forms the backbone of the maritime tourism for many maritime states. It is done to enhance the canvass of maritime tourism and sea sports are an effective tool for tourism attraction. According to data, in developed states, the sea sports comprise 1 to 2 percent of the GDP acquired from sport tourism.³⁴ The major sports in this regard are diving, surfboards, swimming, scuba diving and fishing. Pakistan has been unable to tap the true potential from maritime sports economy. The country is house to one of the

³³ Ibid., 24.

³⁴ Majid Rahmani, Mojtaba Ghadiri Masoum, and Mehdi Hajiloo, "Investigating the Potentials Role of Water-Sports Tourism in Attracting Tourists in Rural Areas," *Advances in Environmental Biology* 43 (January, 2014):56.

largest youth population and it can benefit from sports tourism. So, by creating an arena for water sports, a lot of opportunities can be created for Pakistan. It will not only provide them with a chance to get employment but also enhance the citizen productivity. Thus, there is a need of evaluation in this sector on the principles of sustainable economic growth and blue economy.³⁵

Key Challenges in the way of Blue Economy for Pakistan

Although, the year 2020 was declared by the government as the “Year of Blue Economy” but apart from publishing a recycled version of previous shipping policy, no productive effort has been done in his regard. There is no doubt that Pakistan has got enormous potential in blue economy and the recent shift of the governing class is centred on the blue economy but there are some grave challenges to the growth of blue economy in Pakistan. These challenges are posed from different perspectives and must be addressed on account of comprehensive policy measures. Some of these challenges are discussed below.

Global Perspective

From a global perspective, piracy and armed robbery have existed since the discovery of sea routes. Though, there are fewer occurrences of these types of threats in the Indian Ocean, the region is vulnerable to such type of threats. Moreover, illegal immigration and other maritime security threats do exist in this region. Maritime terrorism is another important threat in this regard due to growing US-India connivance in the region. Thus, there is a need of comprehensive policy to address these issues of maritime security.

Inter-provincial Differences

Pakistan’s approach towards exploiting blue economy has remained blind, but it was magnified after the 18th amendment. The constitutional amendment passed in 2010 enhanced the provincial autonomy for the regions that were in their jurisdiction. National Maritime Policy currently in vogue is that of 2002.³⁶ A new draft policy is awaiting Government’s approval for the past several years but it also needs to be reviewed. The reason for this delay is the inter-provincial row and lack of efforts to resolve those disputes. There are also some disputes between the provinces particularly Sindh and Baluchistan regarding fishing rights, which should be addressed at the utmost priority to extract maximum benefit from blue economy.

Infrastructure Barriers

There are some grave issues surrounding blue economy of Pakistan

³⁵ World Travel and Tourism Council, “Travel and Tourism Economic Impact,” *World Travel and Tourism Council 2019*, <http://www.wttc.org/-/media>.

³⁶ Naureen Fatima, “Policy Gaps for Maritime Tourism,” *Pakistan Observer*, February, 2020, <https://pakobserver.net/policy-gaps-for-maritime-tourism/>.

due to poor infrastructure and governance set up and the sole reason behind it is “Maritime Blindness”. This has led to the lack of willingness by the government to focus on the key sectors which could help cure the challenges in the way of Blue Economy. Some of the prominent aspects of these barriers are highlighted below:

- The greatest challenge to marine economy and marine biodiversity is millions of tons of untreated sewage that spills into Arabian Sea and our shores on daily basis. As a result, marine ecology, mangroves and other natural resources are destroyed rapidly. Also, sea level rise and intrusion inland in Indus delta have serious impact on marine biodiversity.
- There is a lack of infrastructure and assets required for exploiting the true potential of the blue economy. Pakistan is unable to control sedimentation issues in and the by-product of the sea resources due to such dearth of infrastructure.³⁷
- Pakistan clearly lags behind others in terms of technology, research and development. There have been energy potential in the tides of seas but due to poor technological progress, Pakistan is unable to get advantage from these prospects.
- There is lack of awareness among the masses regarding such huge arenas of development and opportunities. Poor education techniques in fishing are responsible for reduced amount of revenue for Pakistan.
- Different human activities in the sea shores and coastal areas have caused the destruction of coastal ecosystem. Many sea animals are on the edge of extinction and there has been no focus on such aspects.

Furthermore, unregulated fishing, over fishing, use of illegal nets and bull trawling, lack of fish processing and other products etc. are some other huge challenges.³⁸

Internalizing External Threats against Blue Economy

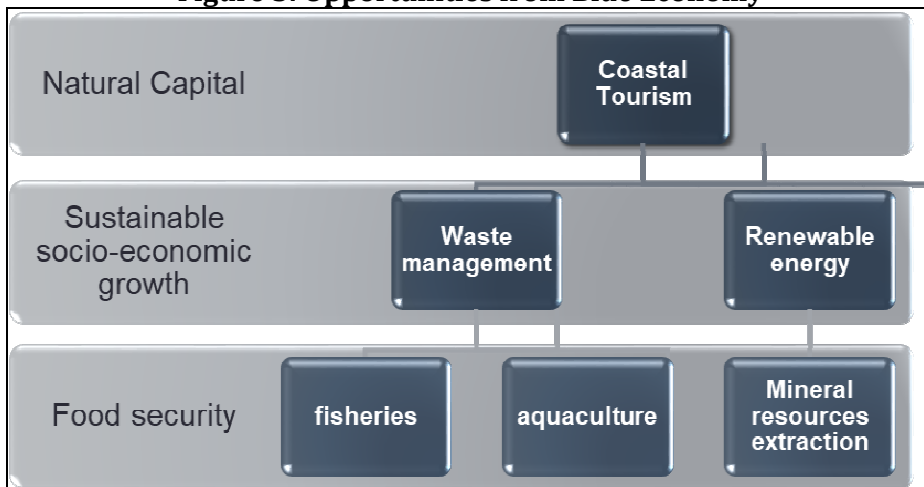
The Maritime sector of Pakistan needs to internalize all the above threats and challenges against the Blue Economy of Pakistan. It requires an efficient role of the regulatory agencies like the transport, trade, fisheries and several legal agencies as well involving border guards, coast guards to ports security and other police and intelligence services. All these agencies could work as maritime security providers to the Blue Economy of Pakistan creating many opportunities for it through sustainable socio-economic growth producing natural capital and safeguarding food security as shown in the

³⁷ Muhammad Usman Askari, Muhammad Tahir, and Nafisa Shaheen, “Blue Economy of Pakistan: Challenges and Prospects,” *Journal of the Punjab University Historical Society* (December 14, 2020): 45-67.

³⁸ Irene Banos Ruiz, “Blue Economy: Not just for Fish,” *Deutsche Welle (DW)*, March 7, 2018, <https://p.dw.com/p/2tnP6>.

following figure:

Figure 5: Opportunities from Blue Economy



Source: Compiled by the authors.

Lessons from other States

The blue economic potential varies according to the resources of any country. Therefore, it is difficult to formulate a one-size-fits all formula for the blue economic growth. However, Pakistan can learn lessons from the countries that are somewhat similar to its geography. In this regard, some of the examples are given below:

India

Indian policy think tanks have made several adjustments to the naval vision. They started a consultation process for defence and internal security for integration. In this process, target deadline was 15 years. Hence, long term policy was initiated. They decided to highlight the status of India as a strong Maritime nation: they aimed to highlight its potential to become a big blue economic model in the world. In this regard, they also took the partnership of Mauritius, Sri Lanka and Maldives. Their focus was on the socio-economic and environmental development. They also signed a project, Sagar Mala to help increase the African maritime capacities. For the research and sharing of information they have formed 'blue economy forum'. Pakistan can have a lesson from this adventure.³⁹

Mauritius

Mauritius consists of the 1.96 million square kilometres economic zone

³⁹ R. Aparna, "Blue Economy in the Indian Ocean: Governance Perspectives for Sustainable Development in the Region," *Observer Research Foundation*, January 18, 2019, <https://www.orfonline.org/research>.

and 2.3 million square kilometres of the maritime zone. Their continental shelf is of 392,000 square kilometres. It is co-managed by Seychelles as well. Their vision is to transform the nation towards a maritime state through propagation of ocean economy. Their government has developed the ministry of the maritime affairs. This step enhanced the knowledge and awareness regarding the fish farming and other blue economic resources. For example, they announced an eight year tax holiday to attract the industrial fishing investors. For the general harbour, they are also taking tree plantation measure.⁴⁰

Bangladesh

Bangladesh is keen in the blue economy. Bangladeshi officials formed an Oceanographic Research Institute in the maritime university. It was done to meet the agenda of the sustainable development goals. Moreover, Bangladesh also adopted a National Adaptation Program of Action for better governing of marine resources and development of strategy. It has also formed a climate change resilience action plan. All these activities are designed to help the marine economic activities. Blue economy provides sustainable and inclusive growth and provides opportunities for the maritime sector of Bangladesh.⁴¹

Blue Growth Initiatives

The goal of the blue economy and blue growth is to kick start sustainable approaches to the economic growth and conservation of marine resources. For sustainable ocean-led development, a clear and adaptable model that can be used is shown below.

⁴⁰ Ibid., 41.

⁴¹ M. Islam, "Blue Economy and Bangladesh: Lessons and Policy Implications," *Researchgate*, April, 2019, <https://www.researchgate.net/publication>.

Figure 6: Blue Growth Initiatives

Source: Compiled by the authors.

Enabling Conditions

Any framework for sustainable growth through blue economy is linked with the enabling conditions. These conditions include policy formulation, legislation, setting short-term and long term goals and identifying the key stakeholders. It also includes streamlining the implementation process of such growth model. Since capacity development is centred on skill development and use of technology, it is pertinent to focus on these enabling conditions while developing the model of blue economy in Pakistan.

Pakistan developed a policy of Fisheries and Aquaculture in 2007 which was revised and renamed as Deep Sea Policy in 2018. But, constitutionally, fisheries is a federal subject while aquaculture is a provincial subject, hence, there is need of a comprehensive legislative framework that is foundational for any blue growth initiative in Pakistan. Moreover, Pakistan Merchant Marine Policy was formulated in 2001 but there are no clear discussions regarding shipping and shipbreaking. These two sectors are an important part of blue economy. Thus, there is a clear need of policies that formulates comprehensive policy for the shipping industry. To increase the number of flagships, private sector must be encouraged to invest in the shipping industry.⁴²

Platforms for Sustainability

The growth model of any domain in the blue economy requires a transition. Blue growth is an environmental platform of sustainable growth. It can be achieved only through input-output channel. The subsequent changes in the input manners are likely to influence the output from the resources. The

⁴² A. Basit, and M. A. Alam, "Blue Economy: Pakistan's Untapped Potentials."

products developed from the blue growth initiatives are placed in the international market for the trade purposes. Moreover, the trade activities are interlinked among various sectors.

For example, the last platform of the blue growth initiatives is the social platform. The blue economy model is focused primarily on the identification of key holders and the community development; the marginalized groups are streamlined through the blue growth initiatives. They are also a source of food and nutrition for the coastal inhabitants. Blue community platform will enhance the awareness among the people to work in an effective manner for the marine resources and avoid any misuse of these resources.⁴³

Pillars for Sustainable Development

The current age is an era of sustainability. The increased population of the world and the depleting natural resources demand a strong urge to use blue economy as a source of sustainable growth. There are three pillars of the blue economy: economic pillar, environmental pillar and social pillar.

Economic Pillar

To formulate evidence-based policies, the statistical data is very important. This data not only helps to formulate a good policy but also assist in the implementation of that policy. For Pakistan, there have been no published databases for the marine sources, which is a drawback for their resources. All the developed countries are utilizing total economic value of the marine sources to help in predicting the true revenue from the marine sources. Total economic value is based on two types of predictions i.e. both market based and non-market based. These types of indicators help in predicting the true value of the tradable blue resources.

Pakistan should analyse the coastal and marine sources in terms of their contribution to the national economy. European Commission presented a report on Blue Economy in 2019 in which they mentioned established economy sectors. These sectors include Marine Living Resources, Coastal Tourism, Port Activities, Shipbuilding and Marine Extraction for Oil. Furthermore, these established sectors employed 7.2 percent more people as compared to 2009, similarly, it accounted for increase of 8 percent in terms of Gross Value Added (GVA).⁴⁴ Similar kinds of measures are required from Pakistan to lift the sector in terms of economy.

Environmental Pillar

⁴³ Amin Ahmed, "Blue Revolution to Enhance Fisheries Production," *Dawn*, July 2, 2018, <https://www.dawn.com/news/1417342>.

⁴⁴ Fredrick Scholaert, "The Blue Economy: Overview and EU policy Framework," *European Parliamentary Research Service*, January, 2020, <https://www.europarl.europa.eu/RegData>.

Another important dimension of the marine resources is the marine environment. The oceanic environment consists of many types of ecosystems. These are responsible for linking up the living as well as non-living components of the environment. And they are beneficial for the ecosystem services. These services are defined as the flow of advantages from the nature towards the populations. These services comprise nutrient recycling, carbon sinking, protection from coastal erosion and assimilation of the wastes. The dilemma with these types of resources is that they are intangible and are not included in the market values. Therefore, like economic pillars, these environmental pillars must also be monetized to get benefits from them in terms of blue economy.

Social Pillar

Apart from the pillars described above, there are many resources that are un-tapped and can boost blue growth as a source of socio-economic potential. Pakistan is a signatory of the sustainable development goals (SDGs) within the radar of ministry of Maritime Affairs and Pakistan Navy. There is a great focus on the social, economic and regulatory agendas to pursue the 2030 agenda of SDGs.⁴⁵ The SGD 14 in particular that discusses Marine Pollution and threats to life under water can be dealt through the aspects of Blue Economic growth through different aspects of Blue Economy.

Framework for Blue Economic Growth in Pakistan

In light of the above discussion, it is important to formulate a framework for the growth of blue economy in Pakistan. The framework is based on three levels of analysis: state level, domestic level and individual level. It will help in putting blue economy into perspective. The three levels of analysis have been described below.

Level I: State level

The state level path consists of many tasks. The most important of which is the securitization of the blue economy. Through securitization, Pakistan will be able to mainstream the arena of blue growth in the country. To make securitization moves, it is important to analyse the perceived threats that are being produced as a result of neglecting this sector. It will help in creating awareness regarding this issue. The last step will be the propagation of securitization moves. These moves must be placed towards the masses through speech acts. In this way, blue economy will be securitized and the perceived threats will help in taking extraordinary measures. To materialize this, Pakistan needs to build a comprehensive policy framework and remove discrepancies in existing policies. There is need to build management model

⁴⁵ Ibid., 14.

with good approach to securitize the issue of blue economy. These measures in turn lead to the blue growth.⁴⁶

Level II: Domestic Level

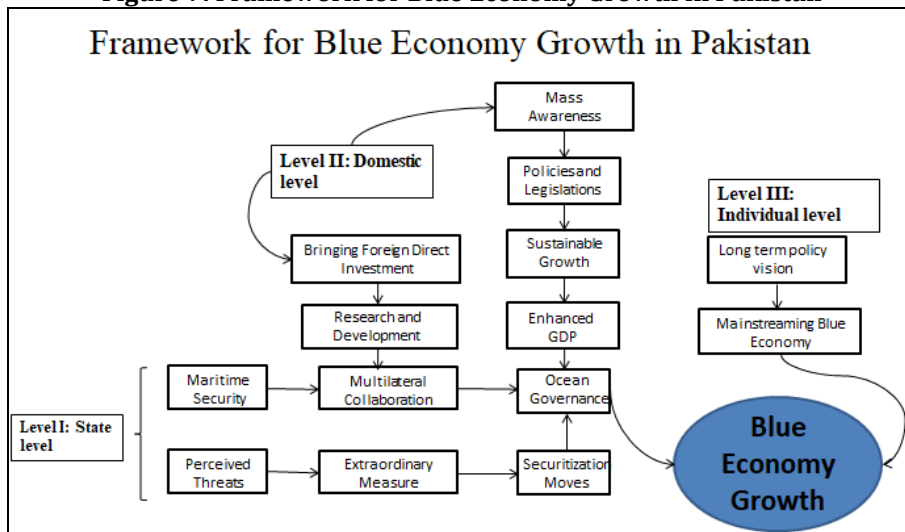
At domestic level Pakistan needs to build the infrastructure of the different sectors of blue economy. It will need a lot of investment. Foreign direct investment in this regard can play a vital role. But to attract foreign investors, there should be a clear sign of affirmation from the domestic stakeholders and proper internal security measures must be made. These investments will not only boost the blue growth but will also lead to research and development in the sector. The research and development in the blue economy sector can help Pakistan utilizing the human resource of the country which is widely ignored.

Creating mass awareness among the popular class is compulsory for blue economy growth. It can be made through media, education, trainings and workshops. The government must formulate a clear and a transparent policy and legislations on this sector so that the people realize the true potential of this sector.

Level III: Individual Level

At individual level, it is the ruling elite who have to take the bold step. To do so, there is a dire need to understand the untapped resources of the blue economy. A proper study and survey must be carried out in form of monetizing the blue resources. In this way, the leadership will be able to make long term policy visions. Once the policy visions are clear, the state level and domestic level tasks will become very easy.

⁴⁶ Aneel Salman and Amjad Ali, "Mission Possible – Transforming to Blue Society," *Maritime Study Forum*, January, 2021, <https://www.maritimestudyforum.org>.

Figure 7: Framework for Blue Economy Growth in Pakistan

Source: Compiled by the authors.

Conclusion

The foregoing discussion provides evidence that Pakistan has the potential to excel in this field of blue growth through various mechanisms, but it also faces several challenges. The foremost challenge is the lack of willingness by government to focus on this sector. The government must realize that Blue Economy can act as a parallel option for economic development of Pakistan. Other than this, Pakistan has cheap labour but there is a lack of skilled manpower and proper technology that can be utilized to extract maximum benefits from the various aspects of Blue economic growth.

Pakistan has always remained an agrarian based economy because it has a major part of its land area which is 97.14 percent. Most of the infrastructural developments have also been carried on this land area and less concentration is given to its coastal areas. The main reason for this was the state of 'Sea Blindness' as the policy makers did not realize the benefits that could be gained from sea and ocean resources. Secondly, Pakistan also lacked the infrastructure and resources to take advantage from its waters resources. In the recent times, the development at Gwadar is a ray of hope for Pakistan's sinking economy in presence of internal and external challenges. It has also created a hope for Pakistan to contribute more to the Blue economic growth of the country.

The need of the hour is to incorporate this concept of Blue Economy into the Maritime Policy of Pakistan in order to exploit the untapped ocean resources. In this respect, it is important for Pakistan to securitize its Blue Economic growth against all the external and internal challenges whether that is the economic crisis and lack of mass awareness or lack of technology. Pakistan needs to securitize its Blue Economy which can ensure Human

security through Maritime dimensions to safeguard the livelihoods of not only the coastal population but also boost country's economy.⁴⁷

Recommendations

Following recommendations may be considered to promote Blue Growth in Pakistan:

1. The Government of Pakistan needs to prioritize its Blue Economic policy because without a policy, different sectors will not be able to formulate particular strategies in their respective domains for the progress in Blue Economic Growth.
2. Maritime Tourism requires particular infrastructure also like Pakistan must launch ferry services for the foreigners landing in Karachi to go to other areas like Pasni or Gwadar.
3. Pakistan should add more tankers, containers and LNG ships into its own National Flag which can help in increasing the imports and exports of the countries at low cost.
4. The Economic Survey of Pakistan must have a separate section for the Maritime sector of Pakistan and the Government at Federal level must allocate separate resources for Blue Economic growth.
5. Pakistan can learn from the policies adopted by other states for promotion of Ocean based economy within the region like India, Bangladesh and Mauritius and also from Hong Kong and EU Conventions which adopted the recycling strategy.
6. After the accident at the Gadani shipbreaking yard, the ships demolition number is drastically decreasing. Hence, the Government must ensure the health of the labour working in this sector because this can help in increase of annual income upto 4-5 billion per year.
7. The need of the hour is to revisit the National Maritime Policy of Pakistan and incorporate Blue Economy into it.

⁴⁷ Rita Floyd, "Securitization and Security Studies," *Journal of International Relations and Development* 9, (2019):46-88, <http://wrap.warwick.ac.uk/1082/>.

