Opportunities Facing The Egyptian Blue Economy

Mohab Gaber

ENAVY R&D Center, Alexandria, Egypt

E-Mail: mohab_gaber@ieee.org

1. ABSTRACT: In recent years, the blue economy has been considered a hot spot topic worldwide because of the shortage of land resources and finding offshore energy resources. Egypt's rising population will necessitate more food and energy. This demand can be met by making sustainable use of marine resources. This paper discusses The Egyptian Blue Economic Model is a long-term development strategy that looks to the seas for new economic prospects, poverty reduction, food security, and long-term livelihoods. And discuss challenges facing the development of the Egyptian blue economy and how to beat these challenges. The government begins a package of steps to promote blue energy, which addresses some of the challenges highlighted in this article, such as aquaculture development, tourism, and natural gas, resulting in the increased military and naval troops for Maritime Surveillance.

Keywords: *Fisheries and Aquaculture, Maritime Tourism, Infrastructure, Eastern Mediterranean, Intelligence seaports*

2. INTRODUCTION

The theory of "Blue Economy" or "Oceans Economy" is lately and originates from the United Nations Conference on Sustainable Development held in Rio de Janeiro in 2012[1].
The phrase "blue economy" is increasingly being used to denote economic activity dependent on marine habitats or the seabed. While the term "Blue Economy" is gaining popularity (some people say, instead of "blue," use "ocean or sea," and "industry" instead of "economy."), there is no clear structure for categorizing it [2].

The Blue Economic is a long-term development strategy that looks to the ocean for new economic prospects, poverty reduction, food security, and long-term livelihoods. As a result, the Blue Economy is considered a strategy for advancing numerous Sustainable Development Goals (SDGs)[3].

The blue economy is defined by future economic growth and broad agreement on several sectors that contribute to it, such as fisheries and aquaculture, marine mining, offshore oil and gas, shipping and ports (along with related services), marine tourism, and marine infrastructure (construction and maintenance), as well as the potential value of emerging sectors like renewable energy, marine biotechnology, and pharmaceuticals.[4, 5].

In Egypt, the blue economy accounts for only 2.2 percent of Egypt's GDP. that is notwithstanding Egypt's strategic geographic location, including 3,000 kilometers of coastline on the Red and Mediterranean Seas, the Gulf of Aqaba, and 50 marine ports with 197 terminals spanning 37.5 kilometers.

A 2020 report issued by the Containerization International magazine and U.K. Lloyds Banking Group found that despite their importance to Egypt's global trade. Egypt's ports are still ranked middle of the pack in marine transportation and customs services in the 2019 Global Competitiveness Report and 2020 report, respectively.

The Major Opportunities for Economic Sectors of Blue Economy shown in Figure 1 are as follow:

- Aquaculture and Fisheries
- Maritime Transport
- Renewable Energy from the Sea
- Maritime Nutrient Pollution
- Coastal sea Tourism
- Sea Minerals
- Marine Non-Traditional Species Culture
- Transportation, shipping, and marine trade.
- Marine Research and Education.
- Surveillance at Sea.
- Sea Salt Production
- Blue Carbon Sequestrations.

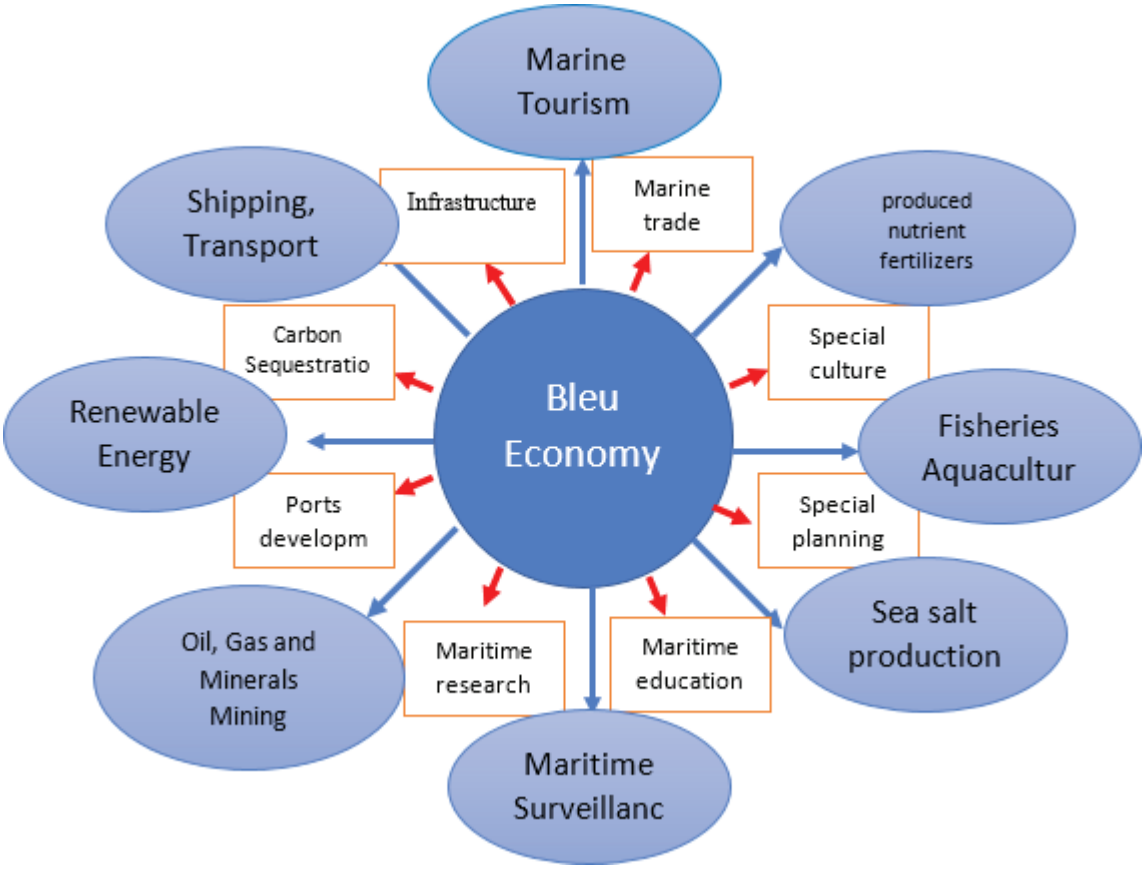

Figure 1 Major Opportunités for Economic Secutors of Blue Economy.

The above topics are significant opportunities in the blue economy and vary according to each project and country's priorities. The Port of San Diego (Port) developed its Aquaculture & Blue Technology Program (AQ&BT) in 2015, recognizing the Blue Economy sector's growth possibilities and strategic position within one of the world's premier seaports clusters of blue technology. In 2018, the project Indian Ocean Rim "Building an Indian Ocean Region" was under geopolitical terms, for 27 countries are rebranding themselves from the 'Ocean of the South' to the 'Ocean of the Center' and the 'Ocean of the Future. The primary economic sectors that can contribute to the development of the blue economy and the impediments to achieving this goal are leveraging the marine environment's untapped potential by implementing practical solutions and innovations that improve food security, poverty alleviation, nutrition and health, job creation, and trade and industrial profiles while protecting ecosystem health and biodiversity, as well as regional security and peace[6, 7].

3. BLUE ECONOMY IN EGYPT

Only 2.2 percent of Egypt's GDP comes from the blue economy. Despite Egypt's strategic geographic location, which includes 3,000 kilometers of coastline on the Red and Mediterranean Seas, the Gulf of Aqaba, and 50 marine ports with 197 terminals extending 37.5 kilometers, the country continues to struggle.

Despite their importance to Egypt's global trade, Egypt's ports are ranked in the middle of the pack in marine transportation and customs services in the 2019 Global Competitiveness Report and 2020 Report, respectively, according to Containerization International magazine and the United Kingdom's Lloyds Banking Group.

The government has begun activities to generate blue energy, which is fraught with problems. The following sections will show how important developments in the blue economy, such as aquaculture expansion and oil and gas exploration, lead to increased military and navy forces for Maritime Surveillance.

4. AQUACULTURE IN EGYPT

Although Egypt has had an aquaculture industry for millennia, modern management measures to increase production output have only lately been devised. Because of a paradigm shift away from old, extensive to semi-intensive aquaculture systems. Egypt's aquaculture industry has risen quickly toward modern, intense aquaculture systems during the last two decades. Aquaculture production increased due to the foundation and growth of small and medium-sized businesses operated by the private sector.[8]. Although Egypt has had an aquaculture industry for millennia, modern management measures to increase production output have only recently developed. Egypt's aquaculture industry has risen quickly during the last two decades because of a paradigm shift away from old, extensive, semi-intensive aquaculture systems and toward contemporary, intensive aquaculture systems.

The private sector's emergence and small and medium-sized businesses have expanded aquaculture production.[9]. Egypt's aquaculture industry uses a variety of production systems, but semi-intensive earth ponds produce the majority of freshwater aquaculture output. Aquaculture production systems, both intense and extensive, exist and are developing. Semi-intensive and extended production methods, on the other hand, are widely accepted and use earth ponds, whereas extreme production systems frequently use concrete tanks.[10].

Table 1: Egypt's aquaculture production volume by species in 2014[9]

Fish species	Production quantity (tons/year)
Nile tilapia	759,601
Carps	198,829
Mullet	119,645
Gilthead Seabream	16,967
European Seabass	15,167
Catfish	14,109
Penaeus shrimp	7235
Meager	5884
Total	1,137,437

Cage aquaculture was introduced in the Nile river catchment in the early 1990s to produce Nile tilapia and silver carp; thus, floating cages are a significant aquaculture production system, with over 37,000 operational cages throughout the country approximately 249,385 tonnes of fish annually[11, 12].

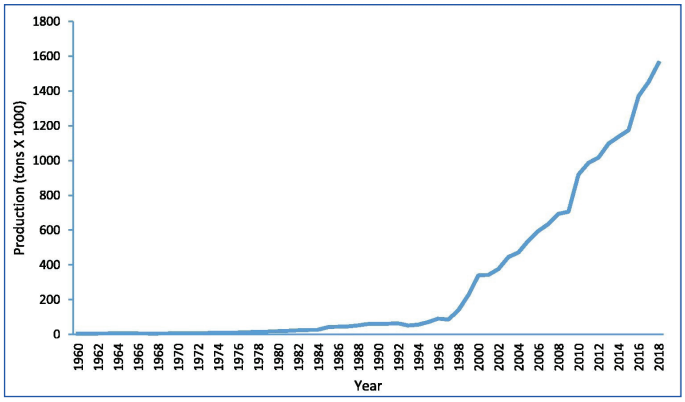

Figure 2 Aquaculture production in Egypt (1960–2018 in tons ×1000)[12]

5. MARITIME TOURISM.

Egypt's marine sector is vital to the country's economic development. As indicated by Egypt's 15 Mediterranean Sea seaports and 33 Red Sea seaports, Egypt's Geographically, it is situated at the crossroads of three continents: Europe, Asia, and Africa., with the Nile River and the Suez Canal connecting them, is crucial. To

enhance Egypt's maritime industry, the government has drawn out a long-term plan to improve the efficiency and competitiveness of the country's marine ports. Despite the global threat posed by the Covid-19 pandemic, Egypt's maritime sector has continued to grow at a steady pace.

The Egyptian Mediterranean region is the world's most popular tourist destination; for beach tourism, the lack of rain is more important than a "pleasant temperature," with only a few respondents finding "high temperatures" to be a negative factor. This is consistent with the findings that "heat waves" are considered "not too awful" and have the slightest impact on climate change. Beachgoers consider temperatures of roughly 28°C, a "soft breeze," and a blue sky to be "perfect weather"[13]. Although there is no specific data on tourism in the Egyptian Mediterranean Sea during COVID-19, figure 3 depicts international tourism arrivals in Italy from European and South Mediterranean nations (2019- 2020), indicating that COVID-19 has a significant impact on tourism.[14].

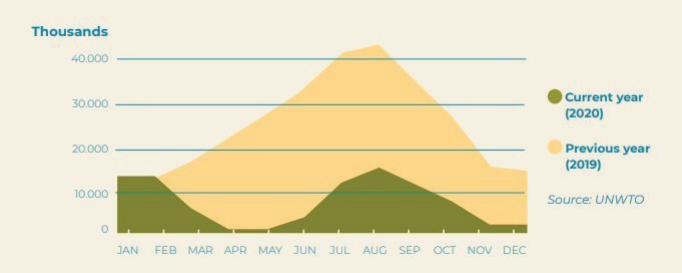

Figure 3 International Tourism Arrival in Italy in European South Mediterranean Countries (2019-2020)[14].

On the Mediterranean's northern shore, El Alamein is a fresh and promising location in Egypt. It stretches 46 kilometers from El Hammam (E) to Al Alamein (W), with longitudes of 28°56′20″ E and 29°22′41.9″E, respectively, and latitudes of 30°37′0.5″ N and 30°53′34″ N. The boom of this region began in the 1980s, with a concentration on the creation of tourism settlements and resorts. The project is promoted by high-end hotels and resorts, such as Marina El Alamein. Tourism activities are seasonal due to the pleasant weather, with the peak season lasting from June to September, with July and August being the busiest months. The activities will continue since the new tourism centers in Al Alamein village will make it the crown of the Mediterranean cities. [15].

The Red Sea's major attraction is the coral reef. This vital and still-expanding industry employs people, earns the government's cash, and provides much-needed foreign revenue. In comparison to other nations, Egypt has several coral beaches, and nature-based tourism from a single ecosystem still has a low incoming tourism and revenue stream.[16].

Every year, approximately 1.2 million tourists visit the Red Sea shore, bringing in over $1.2 billion in foreign currency and supporting over 275,000 employments. The Red Sea has become one of Egypt's most popular tourist destinations due to its unique and endangered marine biodiversity[15].

Nile cruises are now widely recognized as an emerging tourism activity, and they have become one of the most important components of Egypt's tourism industry. Now in Egypt, the target is to provide a broad and present overview of Egyptian Nile Cruises and demonstrate their resuscitation's prospects for and difficulties [17]. The coronavirus (COVID-19) pandemic, which killed millions and infected millions more, is the first. At the same time, cruise ships were stranded at sea due to the closure of ports and border crossings to prevent the disease from spreading. The pandemic affected daily life, including the economy, and tourism was no exception. The other issue was the impact of terrorism on tourism, which the Egyptians could successfully address even though terrorism had resulted in significant losses.[18, 19].

6. THE EASTERN MEDITERRANEAN: AN EMERGING GAS PROVINCE.

The Eastern Mediterranean has grown into a significant natural gas processing hub. Egypt has successfully developed it, and the region's resources can radically alter the energy landscape in the Mediterranean. To develop these resources, a plethora of significant geopolitical barriers must be overcome. Egypt held several bidding rounds after 2013, and over 100 gas exploration and production concession agreements were inked. Numerous discoveries have resulted from successful bidding rounds and price policy changes. The Zohr field, discovered in August 2015 and had recoverable reserves ranging from 651.4 to 736.3 billion cubic meters, is the most famous. This is the largest gas discovery ever made in Egypt and the Mediterranean Sea. It has been heralded as a game-changer for Egypt's and the region's gas development.[20].

Egypt, Israel, the Republic of Cyprus, Palestine, Italy,

Jordan, and Greece will meet in January 2020 to discuss energy issues. In addition, the Eastern Mediterranean Gas Forum was founded by representatives from France, the European Union (EU), and the World Bank. The EMGF intends to remove barriers to the region's exploitation of gas resources and improve regional cooperation within a multilateral framework. The key obstacles are as follows:

I. Reducing the cost of supplying gas from the eastern Mediterranean on regional and worldwide markets.

II. Markets are being opened to allow for hub activities and price discovery.

The World Bank assists efforts to address the second difficulty while also addressing the first. [21].
Infrastructure is required to transport gas created in individual countries to regional and global markets, whether in the EU or Asia, to make the natural gas export promise a reality. The region's countries, with the exception of Egypt and Israel, lack gas export infrastructure.

Egypt is both a market and an export route for East Mediterranean gas due to its domestic gas market and export infrastructure. Egypt's gas export infrastructure is well-developed, with pipelines and LNG terminals[22].
The discovery of natural gas has impacted geopolitical contacts in the Eastern Mediterranean Sea. The establishment of gas ownership is a crucial component determining whether

We foresee a scenario for rebuilding power relationships around the Eastern Mediterranean Sea, in which Competition or collaboration exists. [23].
The seven countries' ties differ in corporations and rivalry, resulting in the geopolitics of gas discovery and changes in regional and global energy markets that have standardized the implementation of viable development alternatives and the accomplishment of desired results. [24, 25].

7. DEVELOPMENT OF SEAPORTS.

Egypt has around 40 seaports, with 15 of them being commercial. On the other hand, Egypt's ports are dispersed due to a good planning and development strategy and restricted geographical connectivity. The maritime industry in the country is expected to have a $49 billion infrastructural gap. Nonetheless, government and corporate institutions have invested heavily in the industry throughout the last decade, notably through taxation, privatization, and attracting major foreign direct investment.

In this study, many problems confront port growth; the focus will be on the lake of ports' area and how the Egyptian navy resolves this problem in Abu Quir ports. The port's management in the smart management system is another critical topic.

7.1 ABU-QUIR TERMINAL CONTAINER DEVELOPMENT.

On 27 August 2020, Hutchison Ports and the Egyptian Navy inked a mega-contract to build and operate a new container port in Abu Qir, Egypt. Members of the management team traveled from Egypt, Hong Kong, and the United Kingdom to participate in the online signing ceremony. The new port will have a handling capacity of 2 million TEUs, a total quay length of 1,200 meters, and an 18-meter draught capable of handling future mega boats when it is finished. A 60-hectare container terminal yard and 100- hectares of land explicitly reserved for future growth are included in the project.
The major goal of this project is to address a lack of port facilities in the area by utilizing the fantastic position of Abou-Quir Bay to build one of the largest and most promising container terminals in the Mediterranean Sea, which the DEME group will carry out.

This vast project includes the reclamation of 1,000 hectares of new land, the deepening of the port's approach channel to 23 meters, and the dredging of a turning basin to a depth of 22 meters. Dredging will be done on a massive scale, with over 150 million m3 of water involved.

This ambitious megaproject's hive of economic activity provides extra space for Abu Qir's expansion and development, and it is expected to become a bustling financial center to complement Alexandria. A large multipurpose port complex could be built next to the Abu Qir Container Terminal.

In addition, the port terminal infrastructure will be constructed by developing a new Abo Quir village. The

new terminal will be housed within Abu Qir Naval Base, naturally protected by the Abu Qir peninsula.

The greenfield project will be connected to the national road network as well as a new two-way highway with three lanes on each side and a residential bypass that will connect it to Alexandria in less than 20 kilometers, which will connect it to Cairo, the country's capital, and other major cities. In addition, close to the Abu Qir Container Terminal, which is currently under construction, a major multifunctional port complex could be built. Some countries have succeeded in overcoming the limitations of lake land ports by focusing on dry ports[26].

7.2 WORLD PORT SUSTAINABLE TECHNOLOGY PROGRAM.

Artificial intelligence, robots, the Internet of Things, motor vehicles, 3-D printing, nanotechnology, biotechnology, materials science, energy storage, and quantum computing are all emerging technology breakthrough sectors that must be addressed to advance port management. It would significantly impact global trade and Competition, especially in seaports and logistics centers, essential parts of the global supply chain. The following fields should exist to build international ports:[27].

Artificial Intelligence (AI) Computers that are capable of "thinking" by recognizing complex patterns, interpreting data, forming conclusions, and making recommendations are referred to as "thinking."
The blockchain is a decentralized, secure, and transparent data recording and sharing system that does not rely on third-party intermediaries. The most well-known blockchain application is Bitcoin.
Computational technologies have improved computer intelligence to the point where they can process massive volumes of data at a faster rate than ever before. The introduction of the "cloud" has, on the other hand, enabled organizations to securely store and retrieve their data from any location with internet access at any time.
Virtual reality (VR) simulates the real world through immersive digital experiences, whereas augmented reality combines the digital and physical worlds.

Sensors, cloud computing platforms, Big Data analytics, Artificial Intelligence (AI), GPS tracking systems, radars, drones, real-time monitoring stations, and smart grids are all used in this forward- thinking approach to port logistics to collect, process, monitor, and analyze data and information about the economic, environmental, social, and technological aspects of port cities.[28].

For example, a single port officer is in charge of many jobs managed remotely using remote-control cranes, self-driving trucks, and IoT sensors.
These advantages are tempered by the emergence of a cyber threat that jeopardizes the security of global ports. The need of port facility security officers (PFSOs) to strengthen their cybersecurity knowledge and skills has been emphasized by cyberattacks on port facilities around the world continually [31].

8. THE BLUE ECONOMY AND MARITIME SECURITY.

Maritime security and a strong naval force are essential for the blue economy to prosper. Several maritime security conferences, particularly in the Mediterranean Sea region, have backed the Blue Economy concept. The Eastern Mediterranean region's co-evolution and interdependence of maritime security and blue economy agendas establish two key linkages between blue economy and maritime security concerns.

To begin with, maritime security aids the Blue Economy by preserving routes of navigation, protecting rights to profitable marine resources and activities within claimed maritime authority zones and providing crucial sea graphic data to marine businesses.

Second, a source of economic development and expansion, marine security contributes to the blue economy in an often-ignored way. The demand for marine security capabilities will increase as the blue economy expands, increasing investment and expansion in these capabilities.

The expanding and increasingly diverse function of maritime security in the Blue Economy can be seen in many sectors of the Eastern Mediterranean region.[29].

The events in the eastern Mediterranean drew primarily unilateral responses from states, such are naval battles,

increasing efforts to locate and extract natural gas, and legal and military measures to secure exclusive economic zones or EEZs. A few marine activities in this area sought wide, multiparty collaboration, and those formed limited, power-based quasi-alliances. This dynamic is insufficient to enhance regional maritime security or state maritime objectives. A regional maritime security plan is required to address regional attractions such as infrastructure development for the delivery of natural resources, risk management, effective migration regulation, and the resolution of border demarcation issues. Despite this, the region's current reality contradicts both theory and material incentives[30].

One of our neighbor east countries is also modernizing its fleet as part of its transition to the sea. Notably, it is acquiring a new class of German-built corvettes, the Sa'ar 6, the Israeli fleet's most advanced surface vessel. Israel is also modernizing its older Sa'ar 4.5 and Sa'ar 5 corvettes and has acquired highly capable German Dolphin 2-class submarines.

Another north neighbor country has embarked on a transformational expansion of its fleet—which is already the most powerful in the region. By 2023, Turkey will deploy twenty-four new ships, including four frigates and the country's first aircraft carrier. Additionally, it is expanding its domestic submarine program and retrofitting existing ships and submarines with modern navigation, weapon, and propulsion systems.

The Egyptian navy also expanded its fleet considerably over the past decade, including acquiring several German-built submarines due to Russia's seizure of two Mistral-class helicopter carriers in 2014. Egypt stepped in to buy the two ships, which it now operates as Gamal Abdel Nasser and Anwar el-Sadat[31].

9. CONCLUSIONS

The blue economy studies the marine environment's exploitation, preservation, and regeneration. The extent to which it can be interpreted differs depending on the organization. However, when discussing a sustainable development approach to coastal resources, the word is most employed in the context of international development. Traditional fisheries, aquaculture, maritime transport, coastal, marine, and maritime tourism, or other formal uses, to more emerging areas like coastal renewable energy, marine ecosystem services (i.e., blue carbon), seabed mining, and bioprospecting, the blue economy can cover a wide range of economic sectors.

Covid-19 had a bad impact on all maritime fields and stopped developing worldwide, although it hadn't had a bad impact because of its strategies and the lag contacts.

The Egyptian government has already embarked on a comprehensive scheme to upgrade its seaports, at the forefront of which is the Alexandria Port, and began establishing the promising seaports in the Mediterranean Sea Abu quirk port.

Aquaculture, maritime tourism, and the Eastern Mediterranean gas province are the hot issues dealing with the Egyptian governments. Besides developing the seaports infatuations and going toward smart and green ports.

Blue economy had changed the political geography in the eastern Mediterranean and nowadays the impact to the world economy due to latest development of the Russian- Ukraine war.

REFERENCES.

1. W. Center, "Green economy in a blue world: synthesis report," 2012.

2. D. Park, K. Seo, D. Kildow, and T. Judith, "Rebuilding the classification system of the ocean economy," Journal of Ocean and Coastal Economics, vol. 2014, no. 1, p. 4, 2014.

3. K.-H. Lee, J. Noh, and J. S. Khim, "The Blue Economy and the United Nations' sustainable development goals: Challenges and opportunities," Environment International, vol. 137, p. 105528, 2020/04/01/ 2020, doi: https://doi.org/10.1016/j.envint.2020.105528.

4. S. Smith-Godfrey, "Defining the Blue Economy," Maritime Affairs: Journal of the National Maritime Foundation of India, vol. 12, no. 1, pp. 58-64, 2016/01/02 2016, doi: 10.1080/09733159.2016.1175131.

5. L. E. Llewellyn, S. English, and S. Barnwell, "A roadmap to a sustainable Indian Ocean blue economy," Journal of the Indian Ocean Region, vol. 12, no. 1, pp. 52-66, 2016/01/02 2016, doi: 10.1080/19480881.2016.1138713.

6. M. G. Hussain, P. Failler, A. A. Karim, and M. K. Alam, "Major opportunities of blue economy development in Bangladesh," Journal of the Indian Ocean Region, vol. 14, no. 1, pp. 88-99, 2018.

7. M. Voyer, G. Quirk, A. McIlgorm, and K. Azmi, "Shades of blue: what do competing interpretations of the Blue Economy mean for oceans governance?," Journal of Environmental Policy & Planning, vol. 20, no. 5, pp. 595-616, 2018.

8. M. Halwart, "Fish farming high on the global food system agenda in 2020," FAO Aquaculture Newsletter, no. 61, pp. II-III, 2020.

9. M. Shaalan, M. El-Mahdy, M. Saleh, and M. El-Matbouli, "Aquaculture in Egypt: insights on the current trends and future perspectives for sustainable development," Reviews in Fisheries Science & Aquaculture, vol. 26, no. 1, pp. 99-110, 2018.

10. O. F. El- Gayar, "Aquaculture in Egypt and issues for sustainable development," Aquaculture Economics & Management, vol. 7, no. 1-2, pp. 137-154, 2003.

11. Gafrd, "General authority for fish resources development," ed: Ministry of Agriculture and Land Reclamation Cairo, Egypt, 2012.

12. B. Adeleke, D. Robertson-Andersson, G. Moodley, and S. Taylor, "Aquaculture in Africa: A comparative review of Egypt, Nigeria, and Uganda vis-a-vis South Africa," Reviews in Fisheries Science & Aquaculture, vol. 29, no. 2, pp. 167-197, 2020.

13. A. Moreno, "Mediterranean Tourism and Climate (Change): A Survey-Based Study," Tourism and Hospitality Planning & Development, vol. 7, no. 3, pp. 253-265, 2010/08/01 2010, doi: 10.1080/1479053X.2010.502384.

14. V. C. Guglielmo and V. F. Parlatore, "Post Covid-19 tourism: a pathway towards sustainable development in the Mediterranean region."

15. E. A. El-Masry, M. K. El-Sayed, M. A. Awad, A. A. El-Sammak, and M. A. El Sabarouti, "Vulnerability of tourism to climate change on the Mediterranean coastal area of El Hammam–EL Alamein, Egypt," Environment, Development and Sustainability, pp. 1-21, 2021.

16. M. Spalding, L. Burke, S. A. Wood, J. Ashpole, J. Hutchison, and P. zu Ermgassen, "Mapping the global value and distribution of coral reef tourism," Marine Policy, vol. 82, pp. 104-113, 2017/08/01/ 2017, doi: https://doi.org/10.1016/j.marpol.2017.05.014.

17. N. Helmy and K. Soliman Abd Elhalem, "Towards the Revitalization of Egyptian Nile Cruises: Opportunities and Challenges," Journal of Association of Arab Universities for Tourism and Hospitality, vol. 20, no. 1, pp. 145-174, 2021.

18. C. Ngo, A. E. Ruiz-Blake, and R. Song, "Turkey and Egypt: a case study on how terrorism affects tourism in the Mediterranean," 2020.

19. N. Anand, "Impact of COVID-19 on the Shipping and Maritime Industry," Ct. Uncourt, vol. 7, p. 23, 2020.

20. I. Kavaz, "The energy equation in the Eastern Mediterranean," Insight Turkey, vol. 23, no. 1, pp. 139-160, 2021.

21. A. Huurdeman, "An Emerging Natural Gas Hub in the Eastern Mediterranean," 2020.

22. A. Stanič and S. Karbuz, "The challenges facing Eastern Mediterranean gas and how international law can help overcome them," Journal of Energy & Natural Resources Law, vol. 39, no. 2, pp. 213-247, 2021/04/03 2021, doi: 10.1080/02646811.2020.1816739.

23. T. Kim and S. Y. Shin, "Competition or cooperation? The geopolitics of gas discovery in the Eastern Mediterranean Sea," Energy Research & Social Science, vol. 74, p. 101983, 2021/04/01/ 2021, doi: https://doi.org/10.1016/j.erss.2021.101983.

24. A. Pulhan, V. Yorucu, and N. Sinan Evcan, "Global energy market dynamics and natural gas development in the Eastern Mediterranean region," Utilities Policy, vol. 64, p. 101040, 2020/06/01/ 2020, doi: https://doi.org/10.1016/j.jup.2020.101040.

25. A. Rubino, "The political economy of Euro - Mediterranean cooperation in the gas market: The role of domestic stakeholders and the European Commission," Resources Policy, vol. 70, p. 101883, 2021/03/01/ 2021, doi: https://doi.org/10.1016/j.resourpol.2020.101883.

26. J. Jeevan, S.-l. Chen, and E.-s. Lee, "The Challenges of Malaysian Dry Ports Development," The Asian Journal of Shipping and Logistics, vol. 31, no. 1, pp. 109-134, 2015/03/01/ 2015, doi: https://doi.org/10.1016/j.ajsl.2015.03.005.

27. WORLD ON IMPACTS ITS AND (4IR) REVOLUTION INDUSTRIAL FOURTH Nahrawy, El A. 27. الثورة الصناعية الرابعة وأثرها على الموانئ البحرية والموانئ اللوجيستية في العالم. CENTERS LOGISTIC AND SEAPORTS 2020.

28. G. D'Amico, K. Szopik-Depczyńska, I. Dembińska, and G. Ioppolo, "Smart and sustainable logistics of Port cities: A framework for comprehending enabling factors, domains and goals," Sustainable Cities and Society, vol. 69, p. 102801, 2021/06/01/ 2021, doi: https://doi.org/10.1016/j.scs.2021.102801.

29. C. Rahman, N. Kliein, J. Mossop, and D. R. Rothwell, Maritime security: International law and policy perspectives from Australia and New Zealand (null). 2010, p. 202.

30. A. Rubin and E. Eiran, "Regional maritime security in the eastern Mediterranean: expectations and reality," International Affairs, vol. 95, no. 5, pp. 979-997, 2019, doi: 10.1093/ia/iiz146.

31. S. Helfont, "Cultural Challenges for Israeli Sea Power in theEastern Mediterranean," Naval War College Review, vol. 74, no