

Fostering the Blue Economy for Sustainability

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Abstract

The blue economy is a concept that envisages the sustainable use of aquatic resources for economic growth, improved livelihoods, and job creation while preserving the health of the ocean ecosystems. The blue economy is vital for Sustainable Development. It brings human well-being, social equity and environmental sustainability into harmony. The blue economy also prioritizes all three pillars of sustainability: environmental, economic, and social. Fostering the blue economy is therefore necessary for sustainability. This paper critically discusses the role of the blue economy in the sustainability agenda. It argues that the blue economy has the potential to unlock Sustainable Development throughout the world. The paper examines specific ways through which the blue economy contributes to Sustainable Development. It also examines some of the challenges facing the blue economy. The paper also suggests measures aimed at fostering the blue economy for sustainability.

1.0 Introduction

The blue economy is an emerging concept that encourages sustainable exploitation, innovation and stewardship of oceans and their life-giving ‘blue’ resources¹. According to the World Bank, blue economy refers to the sustainable use of aquatic resources for economic growth, improved livelihoods, and job creation while preserving the health of the ocean ecosystems². The blue economy has further been defined by the European

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¹ Commonwealth Blue Economy., ‘Sustainable Blue Economy’ Available at <https://thecommonwealth.org/bluecharter/sustainable-blue-economy#:~:text=The%20blue%20economy%20embraces%20economic,of%20poverty%20and%20climate%20change> (Accessed on 04/03/2024)

² World Bank Group., ‘The Potential of the Blue Economy: Increasing Long-term Benefits of the Sustainable Use of Marine Resources for Small Island Developing States and Coastal Least Developed Countries’ Available at <https://openknowledge.worldbank.org/server/api/core/bitstreams/cee24b6c-2e2f-5579-b1a4-457011419425/content> (Accessed on 04/03/2024)

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Commission as all economic activities related to oceans, seas and coasts³. It has further been pointed out that the blue economy describes the sustainable use and conservation of aquatic resources in both marine and freshwater environments⁴. These resources include oceans and seas, coastlines and banks, lakes, rivers and groundwater⁵. It has been asserted that the blue economy comprises activities that exploit aquatic resources (fisheries, mining, petroleum, biotechnologies, among others) or use aquatic environments (maritime transport, coastal tourism, among others), once they are done in an integrated, fair and circular manner⁶. Further, it has been correctly observed that the idea of blue economy has three related but distinct meanings- the overall contribution of the oceans to economies, the need to address the environmental and ecological sustainability of the oceans, and the ocean economy as a growth opportunity for both developed and developing countries⁷.

It has been argued that the concept of blue economy employs environmentally-sound and innovative infrastructure, technologies and practices, including institutional and financing arrangements, for meeting the goals of: (a) sustainable and inclusive development; (b) protecting the coasts and oceans, and reducing environmental risks and ecological scarcities; (c) addressing water, energy and food security; (d) protecting the health, livelihoods and welfare of the people in the coastal zone; and (e) fostering an ecosystem-based climate change mitigation and adaptation measures⁸. In addition, it has

³ European Commission., 'Sustainable Blue Economy' Available at https://oceans-and-fisheries.ec.europa.eu/ocean/blue-economy/sustainable-blue-economy_en (Accessed on 04/03/2024)

⁴ East African Community., 'Blue Economy' Available at <https://www.eac.int/environment/aquatic-ecosystems/blue-economy#:~:text=The%20Blue%20Economy%20describes%20the,%2C%20lakes%2C%20rivers%20and%20groundwater> (Accessed on 04/03/2024)

⁵ Ibid

⁶ Ibid

⁷ United Nations., 'Blue Economy Definitions' Available at https://www.un.org/regularprocess/sites/www.un.org.regularprocess/files/rok_part_2.pdf (Accessed on 04/03/2024)

⁸ United Nations Development Programme., 'Leveraging the Blue Economy for Inclusive and Sustainable Growth.' Policy Brief, Issue No 6/2018., Available at <https://www.undp.org/sites/g/files/zskgke326/files/migration/ke/Policy-Brief--2018---6---Blue-Economy-for-Inclusive-and-Sustainable-Growth.pdf> (Accessed on 04/03/2024)

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been observed that the blue economy emphasizes protecting and sustainably developing oceans, and implementing policies that ensure better stewardship of marine ecosystems, wildlife and other resources⁹. It is a concept that aims to harmonize economic growth with environmental conservation of aquatic resources through sustainable practices¹⁰. In addition, blue economy includes the recognition that the productivity of healthy freshwater and ocean ecosystems is a pathway for aquatic and maritime-based economies and can ensure that islands and other coastal countries, as well as land-locked States, benefit from their resources¹¹. It also requires an integrated, holistic and participatory approach that includes sustainable use and management of blue economy resources for societal progress¹².

The blue economy is vital for Sustainable Development. It has been observed that the blue economy brings human well-being, social equity and environmental sustainability into harmony¹³. Further, it has been observed that the blue economy prioritizes all three pillars of sustainability: environmental, economic, and social¹⁴. Fostering the blue economy is therefore necessary for sustainability¹⁵.

This paper critically discusses the role of the blue economy in the sustainability agenda. It argues that the blue economy has the potential to unlock Sustainable Development throughout the world. The paper examines specific ways through which the blue economy contributes to Sustainable Development. It also examines some of the

⁹ Bove. T., 'What are the Promises of a Blue Economy?' Available at <https://earth.org/blue-economy/#> (Accessed on 04/03/2024)

¹⁰ Purcell. N., 'What is the Blue Economy?' Available at <https://bluerobotics.com/what-is-the-blueeconomy/#:~:text=The%20blue%20economy%20encourages%20the,reduce%20fuel%20consumption%20and%20emissions> (Accessed on 04/03/2024)

¹¹ East African Community., 'Blue Economy' Op Cit

¹² Ibid

¹³ Commonwealth Blue Economy., 'Sustainable Blue Economy' Op Cit

¹⁴ United Nations., 'Sustainable Blue Economy Vital for Small Countries and Coastal Populations' Available at <https://www.un.org/en/desa/sustainable-blue-economy-vital-small-countries-and-coastal-populations#:~:text=A%20blue%20economy%20prioritizes%20all,environmental%2C%20economic%2C%20and%20social> (Accessed on 04/03/2024)

¹⁵ Ibid

challenges facing the blue economy. The paper also suggests measures aimed at fostering the blue economy for sustainability.

2.0 The Role of the Blue Economy in Sustainability

Sustainability refers to creating and maintaining the conditions under which humans and nature can exist in productive harmony to support present and future generations¹⁶. The need to strike a balance between the environmental, social and economic facets of development towards sustainability gave rise to the concept of Sustainable Development¹⁷. The idea of Sustainable Development refers to development that meets the needs of the present without compromising the ability of future generations to meet their own needs¹⁸. This concept seeks to foster sustainability by promoting environmental protection, economic development and social progress¹⁹. It has been adopted as the global blueprint for sustainability as envisioned under the United Nation's *2030 Agenda for Sustainable Development*²⁰ which represents a shared blue print for peace and prosperity for people and the planet in the quest towards the ideal of Sustainable Development. The Agenda envisions attainment of the ideal of Sustainable Development through 17 Sustainable Development Goals (SDGs) which seek to strike a balance between social, economic and environmental facets of sustainability²¹.

¹⁶ United States Environmental Protection Agency., 'What is Sustainability.' Available at <https://www.epa.gov/sustainability/learn-about-sustainability> (Accessed on 04/03/2024)

¹⁷ Giovannoni. E., & Fabietti. G., 'What Is Sustainability? A Review of the Concept and Its Applications.' In: Busco, C., Frigo, M., Riccaboni, A., Quattrone, P. (eds) *Integrated Reporting*. Springer, Cham. Available at https://doi.org/10.1007/978-3-319-02168-3_2 (Accessed on 04/03/2024)

¹⁸ World Commission on Environment and Development., 'Our Common Future.' Oxford, (Oxford University Press, 1987)

¹⁹ Fitzmaurice. M., 'The Principle of Sustainable Development in International Development Law.' *International Sustainable Development Law.*, Vol 1

²⁰ United Nations General Assembly., 'Transforming Our World: the 2030 Agenda for Sustainable Development.' 21 October 2015, A/RES/70/1., Available at <https://sustainabledevelopment.un.org/content/documents/21252030%20Agenda%20for%20Sustainable%20Development%20web.pdf> (Accessed on 04/03/2024)

²¹ Ibid

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The blue economy is vital in the sustainability agenda²². It has been correctly observed that the idea of blue economy recognizes that the oceans, which cover approximately 71 % of the Earth's surface, possess untapped potential to unlock Sustainable Development in various sectors²³. It has been argued that sustainable utilization of the blue economy can unlock development through in areas such as smart shipping, ports, transportation and global connectivity²⁴; employment, job creation and poverty eradication; cities, tourism, resilient coasts and infrastructure²⁵; sustainable energy, mineral resources and innovative industries²⁶; managing and sustaining marine life, conservation and sustainable economic activities²⁷; ending hunger, securing food supplies and promoting good health and sustainable fisheries²⁸; climate action, agriculture waste management and pollution-free oceans²⁹; maritime security, safety and regulatory enforcement and people, culture, communities and societies³⁰. It has further been observed that oceans play a key role in the economic development of nations through the exploitation of maritime and marine resources – for example, through shipping, commercial fishing, and oil, gas, and mineral development³¹.

According to the World Bank, marine and freshwater ecosystems play a significant contribution in achieving sustainability in areas such as food security, nutrition and health, tourism, climate change mitigation, provisions of homes and shelter, sustainable

²² Commonwealth Blue Economy., 'Sustainable Blue Economy' Op Cit

²³ Purcell. N., 'What is the Blue Economy?' Available at <https://bluerobotics.com/what-is-the-blueeconomy/#:~:text=The%20blue%20economy%20encourages%20the,reduce%20fuel%20consumption%20and%20emissions>. (Accessed on 04/03/2024)

²⁴ Kenya Maritime Authority., 'Report on the Global Sustainable Blue Economy Conference 26th-28th November 2018 Nairobi, Kenya.' Available at <http://kenyaforimo.kma.go.ke/wpcontent/uploads/2019/11/SBEC-FINAL-REPORT-8-DECEMBER-2018-rev-2-1-2-PDF2-3-compressed.pdf> (Accessed on 04/03/2024)

²⁵ Ibid

²⁶ Ibid

²⁷ Ibid

²⁸ Ibid

²⁹ Ibid

³⁰ Ibid

³¹ Commonwealth Blue Economy., 'Sustainable Blue Economy' Op Cit

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economic growth, and trade³². For example, it has been observed that the fisheries and aquaculture sector is a vital source of livelihoods, nutritious food and economic opportunities, and has a key role to play in meeting one of the world's greatest challenges: feeding a population set to rise to 9.6 billion people by 2050³³. In addition, it has been asserted that fisheries and aquaculture play a significant role in eliminating hunger, promoting health and reducing poverty³⁴. It is estimated that fish contributes over 16 percent of the animal protein consumed by the world's population and 6.5 percent of all protein consumed, with 1 billion people relying on this source of protein³⁵. Fish is also a particularly critical source of nutrition³⁶.

In addition, the blue economy is an important source of coastal and marine tourism³⁷. It has been observed that maritime or ocean related tourism, as well as coastal tourism, are vital sectors of the economy in many countries, including Small Island Developing States (SIDs) and coastal Least Developed Countries (LDCs)³⁸. Coastal and ocean-related tourism comes in various forms and includes dive tourism, maritime archaeology, surfing, cruises, ecotourism, and recreational fishing operations³⁹. It has been argued that sustainable tourism can be part of the blue economy, promote conservation and sustainable use of marine environments and species, generate income for local communities (thus alleviating poverty), and maintain and respect local cultures, traditions, and heritage⁴⁰.

³² World Bank Group., 'Growing the Blue Economy to Combat Poverty and Accelerate Prosperity' Available at <https://thedocs.worldbank.org/en/doc/446441473349079068-0010022016/original/AMCOECCBlueEconomyDevelopmentFramework.pdf> (Accessed on 04/03/2024)

³³ Convention on Biological Diversity., 'The Blue Economy is Critical to Food Security and the Fight Against Poverty' Available at <https://www.cbd.int/article/waterforbiodiversity-2> (Accessed on 04/03/2024)

³⁴ Ibid

³⁵ World Bank Group., 'Growing the Blue Economy to Combat Poverty and Accelerate Prosperity' Op Cit

³⁶ Ibid

³⁷ World Bank Group., 'The Potential of the Blue Economy: Increasing Long-term Benefits of the Sustainable Use of Marine Resources for Small Island Developing States and Coastal Least Developed Countries' Op Cit

³⁸ Ibid

³⁹ Ibid

⁴⁰ Ibid

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The blue economy also plays a key role in the transport sector⁴¹. It has been observed that the blue economy is an important source of transport through maritime transport which includes passenger transport: sea, coastal and inland passenger water transport; freight transport: sea, coastal freight and inland freight water transport; and services for transport: renting and leasing water transport equipment⁴². Further, it has been argued that inland transport is considered part of the blue economy because it includes the transportation of passengers and freight via rivers, canals, lakes and other inland waterways, including within harbours and ports⁴³. It has been also observed that shipping has for many centuries been the major form of transportation, as well as an essential communication link connecting coastal cities, countries and continents⁴⁴. The blue economy is therefore vital in the transport sector.

The blue economy also plays a crucial role in trade⁴⁵. The World Trade Organization points out that although seafood has long been traded internationally, trade has increased dramatically in recent decades such that fish and fishery products now constitute the most highly traded food commodity internationally⁴⁶. Further, it is estimated that 90% of globally traded goods are carried by sea⁴⁷. The blue economy therefore plays a key role in facilitating international trade.

In addition, the blue economy is a major source of energy⁴⁸. It has been observed that oceans play a key role in extraction of energy sources such as oil and gas which are vital

⁴¹ European Commission., 'Maritime Transport' Available at https://blue-economy-observatory.ec.europa.eu/eu-blue-economy-sectors/maritime-transport_en#:~:text=Inland%20transport%20is%20considered%20part,includin%20within%20harbours%20and%20ports. (Accessed on 04/03/2024)

⁴² Ibid

⁴³ Ibid

⁴⁴ Maritime Sector., Available at <https://www.windrosenetwork.com/Maritime-Sector> (Accessed on 04/03/2024)

⁴⁵ World Bank Group., 'Growing the Blue Economy to Combat Poverty and Accelerate Prosperity' Op Cit

⁴⁶ World Trade Organization., 'Trade and Fisheries: Key Issues for the World Trade Organization' Available at https://www.wto.org/english/res_e/reser_e/ersd201003_e.htm (Accessed on 04/03/2024)

⁴⁸ World Bank Group., 'Growing the Blue Economy to Combat Poverty and Accelerate Prosperity'

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in the global energy supply⁴⁹. Further, according to the International Renewable Energy Agency (IRENA), oceans are a source of abundant renewable energy potential, capable of driving a blue economy based on sustainable use of ocean resources⁵⁰. IRENA points out that energy harnessed from the oceans, through offshore renewables, can contribute to the decarbonisation of the power sector and to other end-use applications that are relevant for a blue economy (for example, shipping, cooling and water desalination)⁵¹. Further, it has been contended that the blue economy has made it possible to tap into emerging ocean energy technologies – including wave, tidal, ocean thermal energy conversion and salinity gradient energy which have the potential to unlock clean and sustainable energy and economic development⁵². In addition, it has been pointed out that renewable energies in the blue economy also contribute to wealth and jobs creation, in addition to the diversification, development and growth of local economies, especially in coastal areas and in developing countries⁵³.

The blue economy is also vital in climate change mitigation⁵⁴. It has been pointed out that coral reefs, mangroves, seagrass meadows and wetlands deliver critical ecosystem services such as coastal protection and carbon sequestration⁵⁵. Oceans constitute a major sink for anthropogenic emissions, absorbing nearly 25 percent of the extra carbon dioxide added to Earth's atmosphere by burning fossil fuels⁵⁶. Further, it has been pointed out that blue carbon' sinks like mangrove forests, sea grass beds and other vegetated ocean habitats are up to five times as effective as tropical forests at sequestering carbon⁵⁷. It has

⁴⁹ Ibid

⁵⁰ International Renewable Energy Agency., 'Fostering a Blue Economy: Offshore Renewable Energy' Available at https://www.irena.org/-/media/Files/IRENA/Agency/Publication/2020/Dec/IRENA_Fostering_Blue_Economy_2020.pdf (Accessed on 04/03/2024)

⁵¹ Ibid

⁵² Ibid

⁵³ Manso. J., et al., 'Renewable Energies and Blue Economy: New Trends in Global Research' *Energies*, Volume 16, No. 10 (2023)

⁵⁴ United Nations., 'Sustainable Blue Economy Vital for Small Countries and Coastal Populations.' Available at <https://news.un.org/en/story/2022/06/1121562> (Accessed on 04/03/2024)

⁵⁵ Ibid

⁵⁶ World Bank Group., 'Growing the Blue Economy to Combat Poverty and Accelerate Prosperity' Op Cit

⁵⁷ Ibid

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been argued that ocean-based mitigation has the potential to reduce emissions by more than 11 billion tonnes of greenhouse gasses per annum in 2050, which could close the global emissions gap by up to 25 per cent⁵⁸. It is therefore necessary to tap into the blue economy in order to enhance the global response to climate change.

From the foregoing, it is evident that the blue economy plays a key role in Sustainable Development. It has been argued that a healthy blue economy is key for a sustainable future both for people and the planet⁵⁹. It has been pointed out that the world's oceans – their temperature, chemistry, currents and life – drive global systems that make the Earth habitable for humankind⁶⁰. The blue economy offers the possibilities of improved efficiency in our land and ocean management, better treatment and governance of marine ecosystems, a more equitable model of global health standards, lower emissions and resilience against climate change⁶¹. It has further been asserted that the blue economy in Africa provides numerous advantages such as habitat for fish and marine life; carbon sequestration; shoreline protection; waste recycling and storing; ocean processes that influence climate and biodiversity and new emerging activities such as desalination; marine biotechnologies, ocean energy and seabed mining⁶². Fostering the blue economy is thus vital in order to achieve sustainability.

⁵⁸ International Institute for Environment and Development., 'Climate change and the Blue Economy: A Sustainable and Equitable Blue Economy Can Support Climate Action' Available at <https://www.iied.org/sites/default/files/pdfs/2023-11/22171g.pdf> (Accessed on 04/03/2024)

⁵⁹ United Nations Environment Programme., 'Enabling Sustainable, Resilient and Inclusive Blue Economies.' Available at <https://www.unep.org/explore-topics/oceans-seas/what-we-do/enablingsustainable-resilient-and-inclusive-blue-economies> (Accessed on 04/03/2024)

⁶⁰ United Nations Development Programme., 'Goal 14: Life Below Water.' Available at https://www.undp.org/sustainable-development-goals/belowwater?gclid=Cj0KCQjwzdOIBhCNARIsAPMwjbyodp8PZIkguJb9OPW9JCjZ2fPWPOOvlgrRnGolWtE86-55pcSV5saAqJCEALw_wcB (Accessed on 04/03/2024)

⁶¹ Bove. T., 'What are the Promises of a Blue Economy?' Op Cit

⁶² United Nations Development Programme., 'Leveraging the Blue Economy for Inclusive and Sustainable Growth.' Policy Brief, Issue No 6/2018., Op Cit

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The role of the blue economy in sustainability is recognized under the United Nation's *2030 Agenda for Sustainable Development*⁶³. SDG 14 seeks to conserve and sustainably use the oceans, seas and marine resources for Sustainable Development⁶⁴. SDG 14 seeks to foster the blue economy through targets such as preventing and significantly reducing marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution⁶⁵; sustainably managing and protecting marine and coastal ecosystems to avoid significant adverse impacts, including by strengthening their resilience, and taking action for their restoration in order to achieve healthy and productive oceans⁶⁶; minimizing and addressing the impacts of ocean acidification, including through enhanced scientific cooperation at all levels; regulating harvesting and end overfishing, illegal, unreported and unregulated fishing and destructive fishing practices and implementing science-based management plans, in order to restore fish stocks⁶⁷; and increasing scientific knowledge, developing research capacity and transfer of marine technology⁶⁸. Realizing the targets under SDG 14 is necessary in fostering the blue economy for sustainability.

At a continental level, Africa Union's *Agenda 2063*⁶⁹ recognizes the potential of the blue economy to trigger Sustainable Development in Africa through marine resources, fishing, tourism, energy, port operations, mining and marine transport⁷⁰. Agenda 2063 calls for the sustainable utilization and management of the Blue Economy in Africa in order to realize its potential⁷¹.

⁶³ United Nations General Assembly., 'Transforming Our World: the 2030 Agenda for Sustainable Development.' 21 October 2015, A/RES/70/1., Op Cit

⁶⁴ Ibid, Sustainable Development Goal 14

⁶⁵ Ibid

⁶⁶ Ibid

⁶⁷ Ibid

⁶⁸ Ibid

⁶⁹ Africa Union., 'Agenda 2063: The Africa we Want.' Available at https://au.int/sites/default/files/documents/33126-doc-framework_document_book.pdf (Accessed on 04/03/2024)

⁷⁰ Ibid

⁷¹ Ibid

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In addition, the Africa Blue Economy Strategy seeks to achieve an inclusive and sustainable blue economy that significantly contributes to Africa's transformation and growth⁷². It aims to guide the development of an inclusive and sustainable blue economy that becomes a significant contributor to Africa's transformation and growth, through advancing knowledge on marine and aquatic biotechnology, environmental sustainability, the growth of an Africa-wide shipping industry, the development of sea, river and lake transport, the management of fishing activities on these aquatic spaces, and the exploitation and beneficiation of deep sea mineral and other resources⁷³. The strategy outlines the key drivers of change that are shaping Africa blue economy development; strategic and technical challenges to blue economy development and identifies priority areas of intervention for sustainable blue economy development in Africa⁷⁴. This strategy is therefore key in fostering the blue economy for sustainability in Africa.

Despite its promises, several problems are affecting the sustainability of the blue economy.

3.0 Challenges facing the Blue Economy

Despite its key role in sustainability, several challenges undermine the potential of the blue economy. Among the key challenges is overfishing⁷⁵. This challenge has emerged as a result of technological improvements coupled with poorly managed access to fish stocks and rising demand⁷⁶. According to the Food and Agriculture Organization (FAO), nearly all of the major fishery resources of the world are either overharvested or are fully

⁷² Africa Union., 'Africa Blue Economy Strategy.' Available at https://www.auibar.org/sites/default/files/202010/sd_20200313_africa_blue_economy_strategy_en.pdf (Accessed on 04/03/2024)

⁷³ Ibid

⁷⁴ Ibid

⁷⁵ Muigua. K., 'Fostering Africa's Blue Economy: Problems and Promises' Available at <https://kmco.co.ke/wp-content/uploads/2023/07/Fostering-Africas-Blue-Economy-Problems-and-Promises-.pdf> (Accessed on 05/03/2024)

⁷⁶ World Bank Group., 'Growing the Blue Economy to Combat Poverty and Accelerate Prosperity' Op Cit

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utilized⁷⁷. It has further been pointed out that fish stocks are also exploited by illegal, unreported and unregulated fishing⁷⁸. In addition, it has been observed that unsustainable fishing practices driven by inadequate fisheries management mechanisms have resulted in rapidly decreasing fish habitats⁷⁹.

Another problem facing the blue economy is habitat degradation⁸⁰. This problem occurs as a result of coastal development, deforestation, mining, and unsustainable fishing practices as well as pollution, in the form of excess nutrients from untreated sewerage, agricultural run-off and marine debris such as plastics⁸¹. According to the United Nations Development Programme,(UNEP) there has been an increase in degradation of marine ecosystems through discharge of oil, the dumping of toxic waste, illegal sand harvesting and the destruction of coral reefs and coastal forests⁸². Loss of aquatic habitats, biodiversity and shrinking water levels have been identified as key threats to the sustainability of the blue economy⁸³. It is necessary to address these problems in order to foster the blue economy for sustainability.

In addition, it has been correctly observed that the blue economy has been exploited to facilitate harmful and illegal practices such as illicit trade in crude oil, arms, drug and human trafficking and smuggling of contraband goods⁸⁴. Further, it has been observed that illicit trading in fisheries results in significant economic loss for many countries⁸⁵.

⁷⁷ Food and Agriculture Organization., 'Introduction' Available at <https://www.fao.org/3/X2250E/x2250e06.htm> (Accessed on 05/03/2024)

⁷⁸ World Bank Group., 'Growing the Blue Economy to Combat Poverty and Accelerate Prosperity' Op Cit

⁷⁹ Kenya Maritime Authority., 'Report on the Global Sustainable Blue Economy Conference 26th-28th November 2018 Nairobi, Kenya.' Op Cit

⁸⁰ World Bank Group., 'Growing the Blue Economy to Combat Poverty and Accelerate Prosperity' Op Cit

⁸¹ Ibid

⁸² United Nations Development Programme., 'Leveraging the Blue Economy for Inclusive and Sustainable Growth.' Policy Brief, Issue No 6/2018., Op Cit

⁸³ Kenya Maritime Authority., 'Report on the Global Sustainable Blue Economy Conference 26th-28th November 2018 Nairobi, Kenya.' Op Cit

⁸⁴ United Nations Development Programme., 'Leveraging the Blue Economy for Inclusive and Sustainable Growth.' Policy Brief, Issue No 6/2018., Op Cit

⁸⁵ African Development Bank Group., 'Illicit Trade in Natural Resources in Africa – A Forthcoming Report from the African Natural Resources Center' Available at

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The African Union further notes that sea piracy and illegal drug trafficking are serious challenges in the blue economy sector as these incidences of piracy pose a real threat not only to the safety of vessels and their crew but also to the economies of affected countries⁸⁶. Maritime terrorism has also been identified as key challenge in the blue economy⁸⁷. Maritime terrorism is a major problem since it poses a serious threat to international peace and security⁸⁸.

Climate change is also a major problem facing the blue economy. It has been observed that climate change is already affecting the blue economy in various ways⁸⁹. For example. Sea-level rise is causing havoc on shorelines⁹⁰; changes in precipitation is causing floods and droughts in unpredictable patterns⁹¹; and rising sea temperatures is starting to change patterns of ecosystem productivity, which will, in turn, reduce the availability of fish for human consumption⁹². Further, it has been pointed out that climate change is already having wide-ranging and severe negative impacts on crucial sectors of the blue economy such as fisheries, aquaculture, and tourism⁹³. It has been asserted that if climate change continues unchecked, extreme weather such as storm surges could conceivably combine with normal lunar tides to overwhelm the ability of coastal countries to safeguard their citizens and infrastructure⁹⁴.

https://www.afdb.org/fileadmin/uploads/afdb/Documents/Events/IFF/Documents_IFF/ANRC_ILLI_CIT_TRADE_IN_NATURAL_RESOURCES.pdf (Accessed on 05/03/2024)

⁸⁶ Africa Union., 'Africa Blue Economy Strategy.' Op Cit

⁸⁷ United Nations Office on Drugs and Crime., 'Terrorism and Transport' Available at <https://www.unodc.org/unodc/en/terrorism/expertise/terrorism-and-transport.html> (Accessed on 05/03/2024)

⁸⁸ Ibid

⁸⁹ World Bank Group., 'Climate Change and the Blue Economy in Africa' Available at <https://thedocs.worldbank.org/en/doc/4659697df287ba5e0dcfcf41efdb3f8a-0320012022/original/Climate-Change-and-the-Blue-Economy-in-Africa.pdf> (Accessed on 05/03/2024)

⁹⁰ Ibid

⁹¹ Ibid

⁹² Ibid

⁹³ International Institute for Environment and Development., 'Climate Change and the Blue Economy' Available at <https://www.iied.org/sites/default/files/pdfs/2023-11/22171g.pdf> (Accessed on 05/03/2024)

⁹⁴ World Bank Group., 'Climate Change and the Blue Economy in Africa' Op Cit

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In addition to the foregoing, other key challenges facing the blue economy include inadequate management of natural habitats and resources, inadequate capacity (human skills and technology) to tap into the energy and mineral resources within the blue economy sustainably, and inadequate inclusion of local communities and peoples in blue economy⁹⁵. It is necessary to address these among other challenges in order to foster the blue economy for sustainability.

4.0 Way Forward

In order to foster the blue economy for sustainability, it is necessary to enhance its good governance⁹⁶. It has been argued that good governance and strong policies can facilitate the implementation of changes throughout the blue economy⁹⁷. In order to achieve this goal, it is necessary to strengthen science and research to generate and disseminate evidence-based knowledge and information as well to inform policy and decision making⁹⁸; strengthening governance mechanisms and institutions⁹⁹; and promote synergies within and between different levels of governments¹⁰⁰. Some of the key governance approaches that have been suggested include integrated coastal zone management which can enhance the protection of coastal and near shore resources while increasing the efficiency of their uses¹⁰¹; marine and coastal spatial planning and integrated maritime surveillance which can inform better decision making¹⁰²; and digital

⁹⁵ Muigua. K., 'Fostering Africa's Blue Economy: Problems and Promises' Op Cit

⁹⁶ Food and Agriculture Organization., 'Achieving Blue Growth through implementation of the Code of Conduct for Responsible Fisheries' Available at <https://www.fao.org/3/i4999e/i4999e.pdf> (Accessed on 05/03/2024)

⁹⁷ Ibid

⁹⁸ United Nations Economic Commission for Africa., 'The Nairobi Statement of Intent on Advancing the Global Sustainable Blue Economy.' Available at <https://archive.uneca.org/sites/default/files/uploadeddocuments/SROs/EA/HIGH-LEVEL-SUSTAINABLE-BLUE-ECONOMY-CONFERENCE-2018/nairobistatement-of-intent-advancing-global-sustainable-blue-economy.pdf> (Accessed on 05/03/2024)

⁹⁹ Ibid

¹⁰⁰ Ibid

¹⁰¹ World Bank Group., 'Growing the Blue Economy to Combat Poverty and Accelerate Prosperity' Op Cit

¹⁰² Ibid

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mapping of maritime and coastal space and natural assets which can form the basis for cross-sector analysis and planning in order to prevent conflicts and avoid externalities¹⁰³.

It is also vital to embrace regional and global cooperation for effective management of the blue economy¹⁰⁴. Blue economy assets such as oceans are shared by many countries¹⁰⁵. Therefore, the acts or omissions of one country in respect of such resources could end up affecting many other countries¹⁰⁶. As a result, enhanced regional and global cooperation would, in turn, contribute to better responses and common efforts at all levels towards the sustainable use and management of the blue economy¹⁰⁷. Regional and global cooperation is also vital in enhancing safety and security of the blue economy by combating problems such as piracy, maritime terrorism, human and drug trafficking¹⁰⁸.

Further, it is important to embrace inclusive participation in order to realize sustainable management of the blue economy¹⁰⁹. It has been suggested that promoting gender equality and the role and participation of women and youth is vital in improving management of the blue economy¹¹⁰. According to the World Bank, realizing the full potential of the blue economy also requires the effective inclusion and active participation of all societal groups, especially women, young people, local communities, indigenous

¹⁰³ Ibid

¹⁰⁴ United Nations Economic Commission for Africa., 'Harnessing the Blue Economy for Regional Integration' Available at https://archive.uneca.org/sites/default/files/uploadeddocuments/SROs/EA/ICSOE/Concept-Notes/cn_harnessing_the_blue_economy_for_regional_integration_-_23rd_icsoe.pdf (Accessed on 05/03/2024)

¹⁰⁵ Ibid

¹⁰⁶ Ibid

¹⁰⁷ Ibid

¹⁰⁸ Roy. A., 'Blue Economy in the Indian Ocean: Governance Perspectives for Sustainable Development in the Region.' Available at https://www.orfonline.org/wpcontent/uploads/2019/01/ORF_Occasional_Paper_181_Blue_Economy.pdf (Accessed on 05/03/2024)

¹⁰⁹ United Nations Economic Commission for Africa., 'The Nairobi Statement of Intent on Advancing the Global Sustainable Blue Economy.' Available at <https://archive.uneca.org/sites/default/files/uploadeddocuments/SROs/EA/HIGH-LEVEL-SUSTAINABLE-BLUE-ECONOMY-CONFERENCE-2018/nairobistatement-of-intent-advancing-global-sustainable-blue-economy.pdf> (Accessed on 05/02/2024)

¹¹⁰ Ibid

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peoples, and marginalized or underrepresented groups¹¹¹. Further, it has been suggested that traditional knowledge and practices can also provide culturally appropriate approaches for supporting improved governance¹¹². It is therefore necessary to embrace inclusive participation for enhanced management of the blue economy.

There is also need to tackle the human and environmental challenges affecting the blue economy especially overfishing, pollution, and climate change¹¹³. These problems affect the sustainability and viability of the blue economy¹¹⁴. In the fisheries sector, there is need to optimize conservation and sustainable fisheries and aquaculture resources use while minimizing conflicts in order to achieve full wealth-generating potential for fisheries and aquaculture sector¹¹⁵. This will enhance the sustainability of the fisheries and aquaculture sector while enabling all countries reap from the benefits of the blue economy in this sector¹¹⁶. It is also critical to curb pollution of blue economy resources such as oceans and lakes¹¹⁷. Further, it is imperative to confront climate change¹¹⁸. It has been pointed out that the future of the blue economy depends on ambitious and urgent global actions to build the capacity of natural and human systems to cope with and adapt to the impacts of climate change, and to mitigate further climate change by reducing greenhouse gas emissions¹¹⁹. As a result, there is need to promote the integration of blue economy and ecosystem services into climate change policies and coastal and aquatic policies¹²⁰. It has further been suggested that countries should consider embracing nature based solution

¹¹¹ World Bank Group., 'The Potential of the Blue Economy: Increasing Long-term Benefits of the Sustainable Use of Marine Resources for Small Island Developing States and Coastal Least Developed Countries' Op Cit

¹¹² Ibid

¹¹³ Muigua. K., 'Fostering Africa's Blue Economy: Problems and Promises' Op Cit

¹¹⁴ Ibid

¹¹⁵ Africa Union., 'Africa Blue Economy Strategy.' Op Cit

¹¹⁶ Ibid

¹¹⁷ Muigua. K., 'Fostering Africa's Blue Economy: Problems and Promises' Op Cit

¹¹⁸ Ibid

¹¹⁹ International Institute for Environment and Development., 'Climate Change and the Blue Economy' Op Cit

¹²⁰ Techera..E., 'Supporting Blue Economy Agenda: Fisheries, Food Security and Climate Change in the Indian Ocean.' *Journal of the Indian Ocean Region*, Volume 14, No. 1, 2018

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for the enhancement of coastal and aquatic ecosystems contribution to biodiversity and climate change objectives¹²¹.

Finally, capacity building is vital in fostering the blue economy for sustainability¹²². It has been observed that some countries especially those in the global south often lack sufficient capacity, skills and financial support to better develop their blue economy¹²³. Enhancing the human, institutional, and technical capacity of such countries is therefore key towards unlocking the potential of the blue economy¹²⁴. It is therefore necessary for these countries to enhance their capacity for developing the blue economy through measures such as improving access to maritime education, embracing partnerships between the private and public in management of the blue economy, and enhancing science, research and innovation in the blue economy¹²⁵. Developed countries should also support capacity building efforts in developing countries through financial support, technology development and transfer, and cooperation in science, research, and innovation.

Embracing the foregoing measures can foster the blue economy for sustainability.

5.0 Conclusion

The blue economy is vital in the sustainability agenda¹²⁶. Blue economy resources such as oceans play a key role in the economic development of nations through the exploitation of maritime and marine resources – for example, through shipping, commercial fishing, and oil, gas, and mineral development¹²⁷. Further, marine and freshwater ecosystems

¹²¹ Ibid

¹²² World Bank Group., 'The Potential of the Blue Economy: Increasing Long-term Benefits of the Sustainable Use of Marine Resources for Small Island Developing States and Coastal Least Developed Countries' Op Cit

¹²³ Ibid

¹²⁴ Ibid

¹²⁵ United Nations Conference on Trade and Development., 'Capacity Building: Impacts and Prospects for the Blue Economy' Available at <https://unctad.org/system/files/non-official-document/ditc-ted-04062020-OceansWebinar-UNITAR-haddad.pdf> (Accessed on 05/03/2024)

¹²⁶ Commonwealth Blue Economy., 'Sustainable Blue Economy' Op Cit

¹²⁷ Ibid

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play a significant contribution in achieving sustainability in areas such as food security, nutrition and health, tourism, climate change mitigation, provisions of homes and shelter, sustainable economic growth, and trade¹²⁸. Despite its key role in sustainability, the blue economy faces several challenges such as overfishing, habitat degradation, harmful and illegal practices such as illicit trade in crude oil, arms, drug and human trafficking and smuggling of contraband goods, and climate change¹²⁹. These problems affect the sustainability of the blue economy and need to be urgently addressed. This can be achieved through enhancing good governance of the blue economy¹³⁰; embracing regional and global cooperation for effective management of the blue economy¹³¹; promoting inclusive participation in order to realize sustainable management of the blue economy¹³²; tackling the human and environmental challenges affecting the blue economy especially overfishing, pollution, and climate change¹³³; and capacity building in order to strengthen the ability of countries to develop and manage the blue economy¹³⁴. Fostering the blue economy for sustainability is an ideal that needs to be pursued by all countries.

¹²⁸ World Bank Group., 'Growing the Blue Economy to Combat Poverty and Accelerate Prosperity' Op Cit

¹²⁹ Muigua. K., 'Fostering Africa's Blue Economy: Problems and Promises' Op Cit

¹³⁰ Food and Agriculture Organization., 'Achieving Blue Growth through implementation of the Code of Conduct for Responsible Fisheries' Op Cit

¹³¹ United Nations Economic Commission for Africa., 'Harnessing the Blue Economy for Regional Integration' Op Cit

¹³² United Nations Economic Commission for Africa., 'The Nairobi Statement of Intent on Advancing the Global Sustainable Blue Economy.' Op Cit

¹³³ Muigua. K., 'Fostering Africa's Blue Economy: Problems and Promises' Op Cit

¹³⁴ World Bank Group., 'The Potential of the Blue Economy: Increasing Long-term Benefits of the Sustainable Use of Marine Resources for Small Island Developing States and Coastal Least Developed Countries' Op Cit

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