

Policy Brief



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Issue No: 6/2018

April 2018

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Leveraging the Blue Economy for Inclusive and Sustainable Growth¹

Summary

The blue economy has a great potential to contribute to higher and faster GDP growth in Kenya. Innovation and growth in the coastal, marine and maritime sector could deliver food, energy, transport, among other products and services and serve as a foundation for sustainable development in Kenya. Diversifying the country's economy beyond land-based activities and along its coastal, marine and maritime sector is critical to achieving the Sustainable Development Goals (SDGs) and delivering smart, sustainable and inclusive growth. This is especially important in the context of the accelerated growth that the country is experiencing without any concomitant reduction in poverty. This policy brief aims to raise awareness of the importance of the blue economy to Kenya. It does this by defining the blue economy and its components to show how Kenya can leverage the blue economy's forward and backward linkages with the various sectors of the economy. The policy brief provides reflections on the necessary policies that should be implemented to leverage the blue economy for sustainable development and inclusive growth in Kenya and Eastern Africa region. It also serves as a building block for further development of policies to support the blue economy in the region.

1. Introduction²

The potential linkages between the *blue economy*, sustainable development and economic growth is recognized in the *2030 Agenda for Sustainable Development*. *SDG target 14.7* focuses on enhancing the economic benefits to Small Island Developing States (SIDS) and Least Developed Countries (LDCs) from the sustainable use of marine resources, including through the sustainable management of fisheries, aquaculture, and tourism. SIDS have been at the forefront of the *blue economy* advocacy, recognizing that oceans have a key role to play in humanity's future and that the blue economy offers an approach to sustainable development better suited to their circumstances, constraints and challenges.

¹This policy brief is an output of the Strategic Policy Advisory Unit (SPAU) in the UNDP Kenya Country Office. The Unit focuses on upstream policy interventions in the areas of human development, pro-poor policy analysis, Agenda 2030 for Sustainable Development. It also supports the national and county governments in the design and implementation of evidence-based national development plans, county integrated development plans and other relevant policy instruments.

The views expressed in this policy brief are those of the SPAU, and do not represent the views of UNDP, the United Nations or any of its affiliate organizations

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²This policy brief is an input to Sustainable Blue Economy Conference that will be hosted jointly by Kenya and Canada in Kenya, 26-28 November 2018.

The *blue economy* integrates an innovative approach to the economic exploitation of the resources of oceans, lakes, rivers and other bodies of water. The concept seeks to promote economic growth, social inclusion, and preservation or improvement of livelihoods while at the same time ensuring environmental sustainability. At its core, it refers to the decoupling of socioeconomic development through oceans-related sectors and activities from environmental and ecosystems degradation.³ The East Asian Seas (EAS) Congress (2012) defined the *blue economy* as:⁴

... a sustainable ocean-based economic model that is largely dependent on coastal and marine ecosystems and resources, but one that 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 measures.

Ebarvina (2016) notes that for many in the public and business sectors, the linkage between the *blue economy*, economic growth, and ocean and coastal resource conservation should be clarified by highlighting the following:

- i. The *blue economy* encompasses all economic activities with a direct dependence on the ocean or coastal and marine resources. These include economic activities that are (a) ocean-based, and (b) ocean-related. Ocean-based activities include those that are undertaken in the ocean (e.g., fisheries and aquaculture, offshore oil and gas, mining, ocean energy, desalination, shipping/marine transportation, marine tourism, marine construction). Ocean related activities use products from the ocean (e.g., seafood processing, marine biotechnology, chemicals, salt, etc.); and produce products and services for the ocean and ocean-based activities (e.g., ship building and repair, ports, tourist resorts, communication, maritime insurance and law, maritime technical services, etc.).
- ii. The *blue economy* also includes marine education and research as well as activities of the public sector agencies with direct coastal and ocean responsibilities (e.g., national defense, coast guard, marine environmental protection, etc.).
- iii. The ocean generates economic values that are not usually quantified, such as habitat for fish and marine life, carbon sequestration, shoreline protection, waste recycling and storing, and ocean processes that influence climate and biodiversity.
- iv. New activities are also evolving over the recent years, such as desalination, marine biotechnologies, ocean energy, and seabed mining. There are also innovations in activities that aim to protect ocean health, such as ballast water and invasive species management, waste-to-energy, wastewater treatment systems with low footprint, etc. These activities should be included and measured in the ocean economy accounts. Ecotourism, eco-ports, and eco-ships aim to make these industries more environmentally sound, while ocean energy offers low carbon and renewable energy source. These innovations and emerging markets offer opportunities for investments and business, further contributing to *blue economy* development

³ UNCTAD 2014; UN DESA 2014.

⁴ See <https://www.icriforum.org/meeting/east-asian-seas-eas-congress-2012> and quoted in Elbarvina (2016).

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2. Defining the Blue Economy

The term "*blue economy*" has been used in diverse ways. However, it is understood to comprise of a range of economic sectors and related policies that together determine whether the use of oceanic resources is sustainable. The "*blue economy*" concept seeks to promote economic growth, social inclusion, and the preservation or improvement of livelihoods while at the same time ensuring environmental sustainability of the oceans and coastal areas. It is regarded as the decoupling of socio-economic activities and development from environmental degradation and optimizing the benefits which may be derived from marine resources. The *blue economy* entails the use of sea and the use of its resources for sustainable economic development. It draws from scientific findings that ocean resources are limited and that the health of the oceans has declined drastically due to anthropogenic activities. These changes are already being profoundly felt, affecting human well-being and societies, and the impacts are likely to be amplified in the future due to population growth.

An important challenge of the *blue economy* is thus to understand and better manage the many aspects of ocean sustainability, ranging from sustainable fisheries to ecosystem health to pollution. Another significant issue emanating from SIDS as they turn to better manage their blue economies is the realization that the sustainable management of ocean resources requires collaboration of likeminded Member States and the public and private sector.

The *blue economy* conceptualizes oceans as '*development spaces*' where spatial planning integrates conservation, sustainable use, oil and mineral wealth extraction, bio-prospecting, sustainable energy production and marine transport. The *blue economy* paradigm constitutes a sustainable development framework for developing countries that addresses equity in access to development of and the sharing of benefits from marine resources; offering scope for re-investment in human development.

3. The Blue Economy Components

The *blue economy* has diverse components, including established traditional ocean industries such as fisheries, tourism, and maritime transport, but also new and emerging activities, such as offshore renewable energy, aquaculture, seabed extractive activities, and marine biotechnology and bioprospecting.⁵ A number of services provided by ocean ecosystems, and for which markets do not exist, also contribute significantly to economic and other human activity such as carbon sequestration, coastal protection, waste disposal and the existence of biodiversity. The mix of oceanic activities varies in each country, depending on their unique national circumstances and the national vision adopted to reflect its own conception of a blue economy. The World Bank (2017) highlights that in order to qualify as components of the blue economy, activities need to (as illustrated by Table 1.1):

- Provide social and economic benefits for current and future generations.
- Restore, protect, and maintain the diversity, productivity, resilience, core functions, and intrinsic value of marine ecosystems.

⁵ World Bank, 2017.

- Be based on clean technologies, renewable energy, and circular material flows that will reduce waste and promote recycling of materials.

Table 1:1: The Components of the *Blue Economy*

| Type of Activity | Ocean Service | Industry | Drivers of Growth |
|---|-----------------------------------|--------------------------------------|--|
| Harvesting of living resources | Sea food | Fisheries | Food security |
| | | Aquaculture | Demand for protein |
| Extraction of non-living resources, generation of new resources | Marine biotechnology | Pharmaceuticals, chemicals | Research and Development for healthcare and industry |
| | Minerals | Seabed mining | Demand for minerals |
| | | Energy | Oil and gas |
| | Renewables | | |
| Commerce and trade in and around the oceans | Transport and trade | Shipping | Growth in seaborne trade; International regulations |
| | | Port infrastructure and services | |
| | Tourism and recreation | Tourism | Growth of global tourism |
| | | Coastal Development | Coastal urbanization Domestic regulations |
| Response to ocean health challenges | Ocean monitoring and surveillance | Technology and R&D | R&D in ocean technologies |
| | Carbon Sequestration | Blue Carbon | Growth in coastal and ocean protection and conservation activities |
| | Coastal Protection | Habitat protection and restoration | |
| | Waste Disposal | Assimilation of nutrients and wastes | |

Source: World Bank, April 2016

As shown by Table 1.1, contribution of marine and freshwater ecosystems includes (World Bank, 2016:2):

- i. **Food security, nutrition and health:** 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 protein. Fish is also a particularly critical source of nutrition. Even in small quantities, provision of fish can be effective in addressing food and nutritional security among the poor and vulnerable populations around the globe.
- ii. **Livelihoods:** The Food and Agriculture Organization (FAO) estimates that fishers, fish farmers and those supplying services and goods to related industries assure the livelihoods of as many as 660–820 million people worldwide. In addition, women play a critical role in fishery supply chains – it is estimated that women account for 15 percent of people directly engaged in fisheries and up to 90 percent of jobs in secondary activities (particularly in fish processing, whether in the formal or informal sector). Oceans and coasts also form the foundation for extensive employment in tourism - one of the top five industries in most small island states.
- iii. **Mitigation of climate change:** Oceans constitute a major sink for anthropogenic emissions, absorbing 25 percent of the extra CO₂ added to Earth's atmosphere by burning fossil fuels. '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 carbon.

- iv. **Homes and shelter:** Roughly 40 percent of the world's population lives within 100 kilometers of the coast. Healthy coastal ecosystems provide protection from natural hazards, coastal erosion and rising sea levels particularly in SIDS and low-lying, exposed delta regions.
- v. **Sustainable economic growth:** Many developing coastal and island nations depend on tourism and fisheries for a significant part of their gross domestic product and public revenues. Aquaculture is projected to continue to grow rapidly and if done sustainably, can serve as a major source of food and a cornerstone of the blue economy. Advances in seaweed production hold promise for replacing fishmeal and animal feeds with plant materials produced with less pollution. Tourism, and particularly nature-based tourism, also provides an important path towards the sustainable development of marine and coastal ecosystems. Coastal tourism is a key component of small island state economies. The value of nature-based tourism is expected to increase over time as the supply of pristine natural assets declines while demand, which seems impervious to economic shocks, increases with rising GDPs.
- vi. **Trade:** Seafood is the most highly valued internationally traded food commodity in the world, with 36 percent of all fish produced exported in 2013-2014. At US\$139 billion in 2013, the export value of fish is more than double that of the next most traded commodity – soybeans. More than half of the fish trade originated from the waters of developing countries.

4. Leveraging the Blue Economy for Inclusive and Sustainable Growth in Kenya

To achieve strong and sustainable economic growth, Kenya is diversifying her sources of growth by prioritizing the *blue economy*. As already noted, the activities of the *blue economy* include harvesting of living resources such as sea food and marine biotechnology, extraction of non-living resources (seabed mining), and generation of untapped resources (energy and fresh water). To date, Kenya has only focused on fisheries both for domestic and export markets.

Fisheries account for only about 0.5 per cent of the Gross Domestic Product (GDP) and generate employment for over two million Kenyans through fishing, boat building, equipment repair, fish processing, and other ancillary activities. The estimated annual economic value of goods and services in the marine and coastal ecosystem of the *blue economy* in the Western Indian Ocean is over US\$22 billion with Kenya's share slightly over US\$4.4 billion (20%) with the tourism sector taking the lion's share of over US\$4.1 billion, according to the Kenya Maritime Authority (KMA) estimates. Marine fishing had an annual fish potential of 350,000 metric tonnes in 2013 worth Ksh90 billion (KMA) yet the region only yielded a paltry 9,134 metric tonnes worth Ksh2.3 billion. Therefore, the full economic potential of marine resources has not been exploited, yet Kenya has a maritime territory of 230,000 square kilometers and a distance of 200 nautical miles offshore.

Leveraging the *blue economy* for sustainable development and inclusive growth in the Eastern Africa region faces challenges of illegal and unregulated fishing, piracy and armed robbery, maritime terrorism, illicit trade in crude oil, arms, drug and human trafficking and smuggling of contraband goods. Other challenges are degradation of marine ecosystems through discharge of oil, the dumping of toxic waste, illegal sand harvesting and the destruction of coral reefs and coastal forests. Furthermore, Kenya is confronted with piracy in the Indian Ocean, illegal fishing and border disputes, the dispute with Somalia over the maritime boundary. The dispute is on a potentially lucrative triangular stretch of 100,000 square kilometers offshore territory that is about 370 kilometers from the coastline, believed to be home to huge oil and gas deposits (Wairimu and Khainga, 2017).

The foregoing suggests that for Kenya to leverage the *blue economy* for sustainable development and inclusive, thorough feasibility studies need to be conducted to quantify the opportunities of the *blue economy* and maximize returns from investments in the sector. The findings of these studies would assist in exploring the potential for public-private partnerships in areas such as research, product development, concept development, exchange of intellectual property, and financial and human resources development. At the same time, it is important for the country to learn from other countries in the Indian Ocean Region such as India, Mauritius, Seychelles, Bangladesh, Thailand, and South Africa that have taken steps to promote the blue economy bearing of course that the best approach to promote and develop the *blue economy* is to adopt a '*Sub-Regional Approach*' initiating development cooperation with likeminded Member States to identify common interests within the *blue economy* drawing on country's legislative framework, the Fisheries Management and Development Act of 2016.

The Fisheries Management and Development Act 2016 provides for the conservation, management and development of fisheries and other aquatic resources to enhance the livelihood of communities that depend on fishing. It gives guidance on the import and export trade of fish and fish products, fish quality and safety among other provisions that support sustainable utilization of marine products in Kenya.

The country should also put in place a *blue economy* conducive fiscal and regulatory environment that would encourage investment in local ship building, repair and maintenance, attract registration of ships in the country and discourage export of maritime services such as insurance and container cleaning.⁶

5. Conclusions and Policy Implications

Sustainable development implies that economic development is both inclusive and environmentally sound, and to be undertaken in a manner that does not deplete the natural resources that societies depend on in the long-term. The need to balance the economic, social, and environmental dimensions of sustainable development in relation to oceans is a key component of the *blue economy*. It is a difficult balance to reach in practice, given that the fundamental nature of the oceans often renders the use of these resources open to all who can access them, eventually resulting in overexploitation and degradation. At the same time, oceans are subject to several externalities such as habitat loss and pollution, often from land-based activities. Because of the combination of these two factors: (i) overexploitation of ocean resources due to conditions of open access and (ii) externalities such as pollution and habitat loss, the oceans are underachieving their true potential in terms of livelihoods, food security and human health, and broad economic growth for many of the world's coastal and island states. According to FAO estimates, approximately 57 percent of fish stocks are fully exploited and another 30 percent are over-exploited, depleted or recovering. Fish stocks are further exploited by illegal, unreported and unregulated fishing, responsible for roughly 11 to 26 million tonnes of fish catches annually, or US\$10-22 billion in unlawful or undocumented revenue (quoted in World Bank, 2016).

The foregoing suggests that for countries that can make the institutional reforms needed to reduce open access to ocean resources and provide secure incentives for users to take a long-term stake in these resources, there is significant potential for the oceans to contribute much more to broad-based economic growth – i.e., a *blue economy*. At the same time, there are growing examples of institutional reforms and regulatory frameworks that can provide incentives to reduce the threat that externalities like habitat loss and pollution pose to the *blue economy*. Essentially, because the oceans provide a wide range of goods and services that

⁶ For instance, country loses Ksh 17 billion annually in marine insurance as Kenya largely imports through Cost Insurance Freight (CIF). This results in the country seeking services from foreign firms in the exporting countries.

depend on the health of the underlying natural systems, returns from investments in healthier oceans is a good proposition.

Coastal and island countries that can introduce such reforms can capture some of these vast economic opportunities that healthier oceans offer:

- i. Provision of seafood from capture fisheries;
- ii. Provision of seafood from aquaculture;
- iii. Tourism and recreation; and
- iv. Marine biotechnology.

In addition to these economic opportunities captured directly by ocean users and stakeholders, healthy oceans provide several public goods that have significant values for economies, such as protection from natural hazards, cultural values associated with oceans, and carbon storage.

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