

# SUSTAINABLE BLUE ECONOMY AND ITS IMPACT ON ECONOMIC GROWTH IN AFRICA. CASE STUDY: ZANZIBAR STATE

Ali Keya Anami

Faculty of Arts and Humanity,  
Department of Economics,  
Muslim University of Morogoro.

DOI: <https://doi.org/10.5281/zenodo.7794571>

Published Date: 03-April-2023

---

**Abstract:** This paper reviews the concept of blue economy in Africa, how it relates to Zanzibar and how to take advantage of the development opportunities it provides. In particular, the paper identifies the strengths of the blue economy and the opportunities available, and how these may be utilized to address development challenges and maximize societal benefits. The paper recognizes that implementation of the blue economy concept in Zanzibar is in its early stages. Therefore, it focuses on issues relating to formulation of a blue economy strategy in Zanzibar. It also aims to stimulate constructive discussion to enrich and complement the efforts on Marine Spatial Planning whereby Zanzibar can enhance the contribution of blue economy to its national economic growth, development of other sectors including trade and infrastructures and reducing rate of unemployment.

**Keywords:** Revolutionary Government of Zanzibar (RGoZ), Blue economy, Zanzibari, Unguja, Pemba, Small Island Developing States (SIDS), Least Developed Countries (LDCs), African Union, United Republic of Tanzania (URT) .

---

## Objectives of the Study

The objective of the study was to investigate the potential of the blue economy as an engine for sustainable economic development in Africa and Zanzibar as the case study. The study sought to:

Analyze the notion of the blue economy, its variants and components, including the issue of inland waterways and how both landlocked and land-linked countries can be part of the blue economy framework and the economic value chain.

Identify economic opportunities in the blue economy sector that can promote private sector development (including micro, small, and medium-sized enterprises (MSMEs), industrialization, job creation and economic development in Africa and Zanzibar as the case study.

Discuss the different experiences of countries in Africa, their national policies and strategies, at managing and promoting the blue economy sector, and what are the lessons learned, good practices and prospects, especially on facilitating economic development in Zanzibar.

Discuss the existing blue economy strategies and policies in Zanzibar in terms of their focus, content and alignment with national and regional industrialization strategies and their efficiency in promoting economic development.

## 1. INTRODUCTION

### 1.1 The Concept of Blue Economy in Africa.

Africa's "Blue world" is made of vast lakes and rivers and an extensive ocean resource base. Thirty-eight of the fifty-four African States are coastal States. More than 90 percent of Africa's imports and exports are conducted by sea and some of the most strategic gateways for international trade are in Africa, underscoring the geopolitical importance of the region. Maritime zones under Africa's jurisdiction total about 13 million square kilometers including territorial seas and approximately 6.5 million square kilometers of the continental shelf. Mauritius with its 1850 square kilometers is one of the smallest countries in Africa and in the world.

However, with its territorial waters, it becomes a country with 1.9 million square kilometers, the size of South Africa. Therefore, we have another Africa under the sea. Quite rightly, the African Union calls the Blue Economy the "New Frontier of African Renaissance". Africa's aquatic and marine spaces are an increasingly common topic of political discourse; its natural resources have remained largely underexploited but are now being recognized for their potential contribution to inclusive and sustainable development. This "Blue world" is more than just an economic space; it is part of Africa's rich geographical, social, and cultural canvas. Through a better understanding of the enormous opportunities emerging from investing and reinvesting in Africa's aquatic and marine spaces, the balance can be tipped away from illegal harvesting, degradation, and depletion to a sustainable Blue development paradigm, serving Africa today and tomorrow. If fully exploited and well managed, Africa's Blue Economy can constitute a major source of wealth and catapult the continent's fortunes (Fujita, Rod 2012).

Africa's economies continue to grow at remarkable rates, including through the exploitation of the rich endowment of land-based natural resources and commodity exports. Converting this growth into quality growth, through the generation of inclusive wealth, within environmental limits and respecting the highest social considerations, requires bold new thinking. It also involves the creation of jobs for a population on the rise. The Blue Economy offers that opportunity. For example, the International Energy Agency estimates that ocean renewable energy has a power potential sufficient to provide up to 400% of global current energy demand. Other estimates indicate that in 2010 the total annual economic value of maritime related activities reached 1.5 trillion euro. It is forecasted that by 2020, this figure will reach 2.5 trillion euro per year. Surely,

Africa needs holistic and coherent strategies to harness this potential. All water bodies, including lakes, rivers, and underground water, in addition to seas and the coast are unique resources, yet neglected and often forgotten.

The largest sectors of the current African aquatic and ocean-based economy are fisheries, aquaculture, tourism, transport, ports, coastal mining, and energy. Additionally, the Blue Economy approach emphasizes interconnectedness with other sectors, is responsive to emerging and frontier sectors, and supports important social considerations, such as gender mainstreaming, food and water security, poverty alleviation, wealth retention, and jobs creation. The Blue Economy can play a major role in Africa's structural transformation (Museveni, Y. K. (2014).

### 1.2 The Concept of Blue Economy in Zanzibar.

Zanzibar is an archipelagic state within the United Republic of Tanzania (URT) consisting of the two main islands of Unguja and Pemba and 53 islets. It shares maritime water with mainland Tanzania, the other part of the URT. According to the Zanzibar Statistical Abstract report of 2019, the projected population of Zanzibar in 2020 is 1,671,598 with an annual growth rate of 2.8%. The Zanzibar population is composed of 51% females, and 49% males, 36% of them are youths aged 15 -35. As an island state, Zanzibar greatly depends on the sea, coast and marine resources – the carrier of blue activities – for socio-economic development. About 98% of Zanzibar's international trade by volume is seaborne. These blue activities contribute to about 29% of the Zanzibar Gross Domestic Product (GDP) and employ about one-third of the population. The sea-based economy, or blue economy (BE) as it is currently known, is not a new economic phenomenon to Zanzibar. Zanzibar has been engaging in domestic and international ocean-based economic activities for centuries (Neish, I.C. and Msuya, F.E. (2013).

Evidence shows that by the 15 th century, Zanzibar was already a regional commercial hub due to the abundance of spices and fishery products exchanged internationally through long-haul seaborne trading routes along the Swahili coast and the Indian Ocean, especially with the Arab world and within East Africa. Acknowledging the importance of BE, the

Revolutionary Government of Zanzibar (RGoZ) has formally incorporated the concept as part of its national development priorities. That ambition has been fully reflected in the Zanzibar Development Vision 2050 (Vision 2050), the country's long-term development plan from 2020 to 2050. Vision 2050 recognises BE as a distinct priority area to diversify Zanzibar's economy, catalysing its transformation from subsistence-based agriculture and tourism-led services to higher value-added services and industrialisation. The BE initiative further strengthens the country's commitment to implement the United Nations Sustainable Development Goals (SDGs), especially SDG goal number 14, which emphasises the conservation and sustainable use of the oceans, seas and marine resources for sustainable development (**RGZ. (2020b)**).

The Revolutionary Government of Zanzibar (RGoZ) believes that if Zanzibar can adequately implement BE, it will enhance economic growth, increase incomes and help protect the environment. However, realising the full potential of BE calls for the inclusion and participation of all related social groups and sectors through appropriate legal and institutional frameworks.

The RGoZ has also determined to utilize its ocean resources to drive the development agenda outlined in the Zanzibar Development Vision 2050 (RGZ, 2020a) and the Zanzibar Blue Economy Policy (RGZ, 2020b). The decision to base Zanzibar's long-term strategic direction on the blue economy is justified by, on the one hand, its limited inland resources, and, on the other, its strategic geographical location providing opportunities to create significant ocean-based wealth (**RGoZ (2022)**).

Hitherto, the livelihood of a typical Zanzibari has relied mainly on coastal and maritime services, as the economy of Zanzibar has been dominated by tourism (including beach), small-scale fishing and maritime trade. However, in spite of the growth potential of coastal and marine resources, pressure from human and natural developments has posed significant challenges to development and the well-being of Zanzibar's people. Recognizing this potential, the RGoZ has embraced the blue economy as the framework for achieving Zanzibar's sustainable development (**Mkenda, A.F. and Folmer, H. (2001)**).

## 2. THEORETICAL FRAMEWORK

### 2.1 Defining the blue economy and the search for a global consensus

The concept or new paradigm of the Blue Economy emerged in the context of the Rio+20 Conference on Sustainable Development and the Green Economy. At that time it could be seen as a branch of the Green Economy. After the Rio summit in 2012, we could see the first steps of considering the potential of the oceans for growth and later on, the integration of that sector in the definition in the Sustainable Development Goals. Goal 14 "Life under water" established targets to substantially reduce marine pollution, address ocean acidification, sustainably manage marine resources and increase scientific knowledge and transfer marine technology to developing countries, in particular, small island developing states (**Rio+20 – United Nations Conference on Sustainable Development 2012.**)

The Blue Economy comprises the same principles and goals as the Green Economy. However, the concept has evolved from a "blue aspect of a green economy" to a paradigm in its own right. Oceans and lakes are seen as "development areas" that should be given an opportunity for sustainable development. The aim is sustainable management of marine resources that enables existing and new areas for economic growth and job creation without destroying the ocean habitat.

From this perspective, Blue and Green Economy are mutually supportive (**UNEP, FAO, IMO, UNDP, IUCN, World Fish Center, GRID-Arendal. (2012)**)

Greater prosperity and social justice while significantly reducing environmental risks. In this sense, the concept of the Blue Economy opens up new perspectives and new possibilities for the sustainable use of the oceans. For centuries, the seas and lakes have been seen as an unlimited resource and as a global wastebin, where environmental costs have been consistently excluded from any economic calculation. The new Blue Economy approach aims to decouple general socio-economic development from environmental degradation. The real value of the oceans and seas must become clear to enable sustainable use and protection of the ecosystem, which is not unlimited. Until today there is still no clear definition of the Blue economy with various bodies giving its own definition, according to the World Bank (World Bank. (2022).), the blue economy is the "sustainable use of ocean resources for economic growth, improved livelihoods, and jobs while preserving the health of ocean ecosystem." (**Bertazzo, Sophie (2018)**).

European Commission defines it as "All economic activities related to oceans, seas and coasts. It covers a wide range of interlinked established and emerging sectors." (**The 2018 Annual Economic Report on EU Blue Economy**).

The Commonwealth of Nations considers it "an emerging concept which encourages better stewardship of our ocean or 'blue' resources." ("**Blue economy | The Commonwealth**"(2018).

Conservation International adds that "blue economy also includes economic benefits that may not be marketed, such as carbon storage, coastal protection, cultural values and biodiversity."

The Center for the Blue Economy says "it is now a widely used term around the world with 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 countries." (**BLUE GROWTH**". **Mare. European Commission. 2014**).

A United Nations representative recently defined the Blue Economy as an economy that "comprises a range of economic sectors and related policies that together determine whether the use of ocean resources is sustainable. An important challenge of the blue economy is to understand and better manage the many aspects of oceanic sustainability, ranging from sustainable fisheries to ecosystem health to preventing pollution. Secondly, the blue economy challenges us to realize that the sustainable management of ocean resources will require collaboration across borders and sectors through a variety of partnerships, and on a scale that has not been previously achieved. This is a tall order, particularly for Small Island Developing States (SIDS) and Least Developed Countries (LDCs) who face significant limitations." The UN notes that the Blue Economy will aid in achieving the UN Sustainable Development Goals, of which one goal, 14, is "life below water".

World Wildlife Fund begins its report Principles for a Sustainable Blue Economy with two senses given to this term: "For some, blue economy means the use of the sea and its resources for sustainable economic development. For others, it simply refers to any economic activity in the maritime sector, whether sustainable or not." (**World Wildlife Fund 2018**)

As the WWF reveals in its purpose of the report, there is still no widely accepted definition of the term blue economy despite increasing high-level adoption of it as a concept and as a goal of policy-making and investment.

Although the very concept of the blue economy is still awaiting greater global consensus, the recent Nairobi Conference 2018 adopted and accepted a definition that is rapidly gaining currency. Hence, the blue economy seen as: productive pillar of the oceans, seas, lakes and rivers, including fisheries, aquaculture, tourism, transport, shipbuilding, energy, bio prospecting and underwater mining, as well as all related activities.

While the conference acknowledged the wavering consensus around the definition of the blue economy, it was also broadly accepted and understood as an economy that is largely powered by oceanic and marine resources. The term 'blue economy', itself, was originally pioneered by the Alliance of Small Island Developing States and has rapidly gained momentum across the world ("**What a 'blue economy' really is – WWF's perspective**" 2018).

Today, oceans, and marine resources more generally, are acknowledged to play a prominent role in advancing sustainable development. They, therefore, formed the basis upon which the UN Heads of States and Governments adopted the 2030 Agenda for Sustainable Development which includes Sustainable Development Goal (SDG) 14. This goal rallies the global community around the need to 'conserve and sustainably use the oceans, seas and marine resources for sustainable development' (**Isaacs, M. (23 July 2019)**).

## 2.2 Status of the Blue Economy in Africa with a case study of Zanzibar

In Africa, the huge potential of the blue economy remains untapped. Of the 54 African states, 38 are coastal countries and the continent has a total coastline of 30,500 kilometers. Yet, to date, most blue economy activities are small scale, taking place along coastal reefs using traditional methods and crafts. This means the blue economy has a huge potential for the socio-economic growth and transformation of African societies.

Many of Africa's coastal countries are also classified as Least Developed Countries (LDCs) and/or Small Island Developing States (SIDS). The United Republic of Tanzania is one of 33 LDCs in Africa and the archipelago of Zanzibar, which consists of the two main islands of Unguja and Pemba along with smaller, neighbouring islands, is a semi-autonomous region within the country.

Viewed in isolation, Zanzibar shares many characteristics of a Small Island Developing State. Ocean-based activities contribute over 29% of Zanzibar's GDP and employ around 33% of its labour force (RGZ, 2020b). Therefore, the development of blue economy strategy in Zanzibar (and for the coastal areas of Mainland Tanzania) is vitally important to national development. At present, the full resource potential of the blue economy can only be estimated due to scarcity of information. In addition, not all is known about the sector's contribution to livelihoods and businesses, especially in LDCs, since the sector is dominated by informal activities Nordic (**Development Fund (2014)**).

However, as new technologies make exploration and exploitation of ocean resources more economically viable, the social and economic benefits of embracing the blue economy become clearer. Despite the information gap, there are obvious benefits for coastal countries more so Zanzibar to embrace blue economy strategies. The benefits include; Compliance with the UN 2030 Sustainable Development Agenda, Enhanced inclusiveness, improved sustainable use of ocean resources, increased economic growth and diversification, Enhanced linkages between inland and offshore activities (**Kalumanga (2018)**).

### 3. LITERATURE REVIEW

#### 3.1 The Blue Economy a Framework for Sustainable Development in Africa.

Our oceans make up 97% of the world's water resources. This magnitude makes our earth appear as a blue planet from space. Oceans and seas provide half of the oxygen we need for life on this planet. Our seas contain 80% of all life forms, provide food for almost half of the world's population and are important resources for human mental and physical health. Oceans are involved in a complex web of economic interactions - the Blue Economy, sometimes also called Ocean Economy (**Sharafuddin, Mohammed Ali; Madhavan, Meena (2020)**).

The economic power of today's global Blue Economy is immense. It includes all industries and sectors that have to do with oceans, seas and coasts in the broadest sense, regardless of whether the activities take place on or in the sea or on land. These include: shipping, fishing, (renewable) energy production, ports, shipyards, aquaculture, algae production, tourism as well as research, development and education.

The Blue Economy in Africa covers aquatic and marine spaces, including oceans, seas, coasts, lakes, rivers, and underground water, and it comprises a range of productive sectors, such as fisheries, aquaculture, tourism, transport, shipbuilding, energy, bio prospecting, and underwater mining and related activities (**Songwe, B.A., Khamis, S.M, Khalfan, M.H., Msuya, F.E. (2016)**).

The AU plays a crucial role in developing and implementing the Blue Economy policy and strategy in the African region. Over the past decade, the African Union Commission (AUC) has built an enlarged Africa-wide consensus regarding the critical role that the Blue Economy could play in fostering structural transformation in Africa during the next decade. This is encapsulated in the African Union's 2050 Africa's Integrated Maritime Strategy (AU 2050 AIMS), which describes the Blue Economy as the "new frontier of African Renaissance." In addition, the Blue Economy is at the center of the AU's Agenda 2063, at which it was unanimously declared to be "Africa's future" and recognized as a catalyst for socioeconomic transformation. In July 2015, the African Union launched the African Day (25 July) and Decade of Seas and Oceans 2015–2025 to rally action on the Blue Economy (**United Nations Economic Commission for Africa (2015)**).

The prospects of blue economy to influence Africa's economic growth was first highlighted in the AU Integrated Maritime Strategy (AIMS) of 2050 and advanced with the adoption of the African Charter on Maritime Security and Safety and Development in Africa (or the Lomé Charter) by the African Union Assembly in 2016. As set out by the African Union's Agenda 2063, the Blue Economy is perceived as the continent's future because its benefits extend beyond the shores of coastal states and create opportunities for adjacent landlocked communities and countries.

South Africa, Seychelles and Mauritius are the success stories as far as Blue Economy is concerned in Africa. Some strides have been made in selected sectors of Africa's Blue Economy, which currently contributes \$1 trillion to the continent's economy (**Examrace 2018**).

#### 3.2 Sustainable Blue Economy a framework for Zanzibar's future economic growth

Zanzibar recognizes the role of the Blue economy in promoting socio-economic development through better stewardship of the sea and related resources. This involves the utilization of maritime and marine resources to support inclusive and

sustainable economic growth as well as creating employment opportunities. It has the potential to completely transform Zanzibar's economy. The entire coastline (about 880 km length) of both islands (Unguja and Pemba) has enormous rare marine resources and biodiversity with unlimited potential for development of a fishing industry. The 8th Government of Zanzibar has officially announced that it needs to focus on Blue economy sector aimed at promoting economic growth, social inclusion and improvement of Livelihoods of Zanzibaris while at the same time ensuring preservation of environmental sustainability of the oceans and coastal areas. The sector has diverse components that include established traditional ocean industries such as fisheries tourism maritime transport and also new emerging activities such as offshore renewable energy, aquaculture seabed extractive activities and many more (OCGS (2018)).

### 3.3 Investment opportunities in Zanzibar's Blue economy include:

**3.3.1 Fisheries:** Fisheries play an important role in the economy of Zanzibar as they provide a source of income to about 20% of the population. At present fishery in Zanzibar is largely a marine capture fishery carried out by artisanal fishers within the 12-mile territorial waters around the islands. All fishing activities takes place within 5 miles of the shore, as the fishing craft used are small. Records show many of the inhabitants of Zanzibar have been engaged in fishing activities for many generations. The fish stocks around Zanzibar include small pelagics (sardines and anchovies), coral reef fish (grouper, snapper, parrot fish, emperors), lobsters, prawns, crabs, octopus, squid, and large pelagics (tuna, billfish, sword fish, sharks, king fish, marlins). Seaweed, sea cucumber and seashells are also found. There are differences in the relative abundance of the various species between the two main islands. Reef fish are more abundant at Pemba, while small pelagics are more abundant around Unguja. Large pelagics, lobsters and shrimps appear to be more abundant in Pemba. Demand for fish is increasing as tourist hotels and restaurants seek high species. There is also a growing demand for anchovies because of their health benefits. The fishing within territorial water (12 nautical miles) is reserved for local. Investment opportunities in Fisheries include deep sea fishing, fisheries infrastructure and related activities, trade of seafood and non-edible seafood products and Aquaculture (Revolutionary Government of Zanzibar (RGZ) (2020a)).

**3.3.2 Deep Sea Fishing:** Zanzibar and Tanzania mainland share the management of deep sea fishing (fisheries located beyond 12 nautical miles). The management of the Tanzania Exclusive Economic Zone (EEZ) fishing is under the mandate of the Deep Sea Fishing Authority (DSFA) with its office located at Fumba, Zanzibar. Fisheries statistics from licensed vessels show that there are significant catches in the EEZ. As for the deep sea fishing two good seasons have been reported annually: one from February to May and the other from July to September. The most common fishing methods so far applied is long lining and purse seining. The common species available for Deep sea fishing are emperors, tuna, sword fish, marlin, kingship, sailfish and others (RGZ and Uongozi Institute (UI). (2021)).

#### i. Fisheries infrastructure and related activities:

Investments in capture fisheries and in aquaculture have to be supported by investments in infrastructure. Most of this infrastructure is not available in Zanzibar. The Government has open doors for investment in fisheries infrastructure and related activities such as:

**Boat-building yards:** All fishing boats currently are built from local wood by artisanal boat builders using very simple tools. Better designed and larger boats will be required in the future to fish in deeper waters and to take longer trips around the region.

**Plants to make fishing nets:** One of the major constraints to increasing catch is the acute shortage of fishing gears. A local plant is highly desirable. Its production could also be marketed to Tanzania Mainland and other neighboring countries.

**ii. Engine repair and maintenance workshops:** With the increase of fishing activities and bigger motorized boats, such workshops would become a vital necessity.

- a) Fish-processing and packaging plants: Increased landings of demersal fish species as well as other marine fish products would make such plants highly desirable, especially for the expanding tourist trade and for export.
- b) Ice-making plants
- c) Cold-storage services to store excess catch for better marketing opportunities
- d) Dry dock facilities

e) Development of Fishing and cruise ship ports through concession arrangements

f) Establishment of Marine laboratory through concession arrangements (**Feidi, I.H. (2005)**).

**3.3.3 Aqua/Mari culture:** The long coastline of the Zanzibar islands offers a good potential for the development of brackish-water fish farming. The large number of bays, lagoons, mangrove forests, freshwater reservoirs formed by dams (especially on Pemba Island), and other small water bodies are good farming environments. Most of these are underutilized due to the lack of proper management, use of inappropriate technologies and inadequate extension efforts. A number of freshwater, brackish water and marine species of fauna and flora are suitable for aquaculture. However, the development of aquaculture needs to be guided by promoting and incorporating the management principles that ensure its sustainability; Investment potential exists for fish, mollusks, cockles, mussels, crabs and sea cucumber, seaweed and oyster farming (**Gössling, S. (2002)**).

**3.3.4. Seaweed farming and Value Addition:** The commercial production of seaweed in Zanzibar began in 1989 and now is well established industry, based on two exotic species *Eucheumacottonii* (*Kappaphycus alvarezii*) and *Eucheumaspinosum* (*Eucheumadenticulatum*) that were introduced from the Philippines. The industry has become a widespread economic activity in coastal villages of Unguja and Pemba. It employs large number of coastal people, directly from farming activities. There are about 25,000 farmers mainly women 63% are in Pemba and 37% are in Unguja Island. The *cottonii* sp. is commercially more important compared to *spinosum* sp. Globally, million tons of wet seaweed are harvested and extracted to produce large quantity of hydrocolloids and carrageenan. Seaweed is a versatile product which is widely used as food and also as an ingredient in the food and cosmetic/chemical industries. It is also used as a fertilizer and an animal feed additive. Zanzibar is the third largest exporter of sea weed in the world after Philippines and Indonesia but mainly *spinosum* sp. Local companies are the major buyers of the dried seaweed from small scale farmers and exporting it to Europe (Denmark), USA, Vietnam, South Korea and China in raw form. The *Cottonii* sp. has low production rate in Zanzibar, only small portion (as flavor) of powder form dried seaweed are used in making some cookies, skin jelly, jam, juice, salads and soaps. As for the seaweed there is great potential for investment in the following (**RGZ. (2020b)**):

a) Farming seaweed in a deeper water through the introduction of higher productivity methods for growing seaweeds especially in areas such as deeper waters that is not now accessible to seaweed farmers.

b) Production of animal feed and fertilizer from raw seaweed.

c) Development of integrated agriculture-aquaculture (IAA) systems based on seaweed primary productivity

### **3.3.5. Industrial processing and value addition**

a) Production of primary and or secondary seaweed products (example hydrocolloids and carrageenan).

b) Development of multi-stream, zero-effluent (MUZE) process technology that starts with live crops from the sea.

c) Seaweed products in agricultural nutrients for both plants and animals applications are an immediate opportunity.

d) There is an immediate opportunity to use seaweed concentrates as plant biostimulants.

### **3.3.6. Farming other commercial seaweed species:**

**Marine biotechnology and bioprospecting:** Opportunity to use marine living resources for pharmaceutical products and chemical applications for Research and Development (R&D) as well as health care, cosmetic enzyme nutraceutical and other industries.

### **3.3.7. Extraction and use of marine non-living resources:**

a) Extraction of energy sources such as Oil and Gas

b) Extraction of minerals such as seabed mining

c) Fresh water generation – Desalination

**3.3.8 Generation of (off-shore) renewable energy:** The use of renewable non –exhaustible natural forces such as wind, wave, and tidal energy for power generation is highly encouraged

**3.3.9. Transport and trade services**

- a) Shipping and shipbuilding
- b) Maritime transport including port operations
- c) Ports and related services

**3.3.10 Coastal development**

- a) Establishment of automated vessel tracking systems through concession arrangement.
- b) Establishing a one-stop border-clearing agency at the port of entry with modern information systems, which will handle administrative clearance in areas including customs, health and technical standards and taxation through concession arrangements;

**3.3.11 Tourism and recreation services:** Tourism is one of the fastest growing industries in Zanzibar and has attracted more than 62 per cent of investment projects approved by the Authority. The sector boasts a wide variety of tourism options ranging from the historical and cultural sites of Old Stone Town, to beach and leisure activities. It is a very promising sector with high returns. With more emphasis on eco-tourism, opportunities in coastal tourism include beach hotels/resorts specifically chain hotels, water sports activities, cruise ship, Marinas, marine conservation and other coastal tourism related services (**Msuya F.E. (2011)**).

**3.3.12 Other opportunities**

- a) Carbon sequestration (blue carbon)
- b) Coastal protection (habitat protection and restoration)
- c) Waste disposal for land-based industry (assimilation of nutrients and solid waste)
- d) Existence of biodiversity (protection of species and habitats)

**4. RESULTS AND DISCUSSION**

Being important from economic, social and environmental perspectives, Zanzibar has a potential to focus this area in building new and vibrant economy aiming at reducing unemployment rate, poverty and economic growth. Currently, Zanzibar's GDP stands Sh3.1 trillion with tourism contributing 30 per cent, agriculture 20 per cent, Industry 18 per cent and other sectors carry 12 per cent with an inflation rate that stands at 2.7 per cent. All the sectors of blue economy are important to the socio-economic development of Zanzibar. The sectors that possess huge potential for value addition, local entrepreneurship and job creation are fisheries, seaweed production, coastal tourism, maritime transport and shipping (**The Citizen (2018)**).

Most of the fishing activities are currently taking place within internal and territorial waters (12 nautical miles). The estimated size of fishing grounds for Zanzibar artisanal fishermen is about 6,720 square kilometers of which 4,000 square kilometers are around Unguja and 2,720 square kilometers are around Pemba. Fishing sector contributes 2.6 per cent of Zanzibar's GDP and employs more than 200,000 people in the isles while more than 4000,000 others benefit from the sector. Zanzibar exports fish averaging 1,806 metric tons per year. Seaweed farming is a well-established industry in Zanzibar. It has created more than 25,000 jobs for the indigenous people especially women. Zanzibar is the third largest exporter of seaweed in the world, after the Philippines and Indonesia. There are two main seaweed species cultured in Zanzibar which are; *Eucheuma spinosum* and *Eucheuma cotton* (**ZDE (2004)**).

Tourism is one of the fastest growing industries in Zanzibar and has attracted more than 68 per cent of investment projects approved by Zanzibar Investment Promotion Authority (ZIPA). The sector contributes 30 per cent of the GDP, 80 per cent of foreign earnings and provides 60,000 direct employment opportunities.

Zanzibar under the leadership of Dr. Ali Mohamed Shein, started to build foundations and took several policy measures to promote Blue Economy and ensure compliance to conservation and management norms. The government revamped Zanzibar Fishing Corporation (ZAFICO) and building of Research Institute of Fisheries which is expected to complete in



2021. On the other hand, Dr. Shein purchased a fishing vessel, SEHEWA-1 and SEHEWA-II is under construction (**The Citizen (2020)**).

The government also poured Sh26 billion for improvement of Malindi Fish Market by which after its completion will employ 6000 people including 1400 employment opportunities of fish mongers. The security surveillance of deep sea has been improving to prevent illegal fishing, establishment of ZPRA, ZPDC and ongoing exploration of Oil and Gas. Other crucial steps are; the preparation in building Mpigaduri port with the assessment of cost and maps and a construction of a semi-commercial marine hatchery whose completion will go a long way to support the fishing industry even in Mainland Tanzania (**IUCN (2020)**).

The Zanzibar's president, Dr. Hussein Mwinyi has on several occasions during his election campaigns in the year 2020 pointed out that Zanzibar has not utilized its ocean area for economic benefits and he believes Blue Economy is very promising area with high returns on how Zanzibar and its people can benefit from unexploited resources in the sea. Mwinyi says he is committed to build new Zanzibar and new economy if elected as eighth president of Zanzibar. He believes Zanzibar can achieve economic growth and reduce the rate of unemployment through blue economy, trade and industrial development together with improving technical education (**ZPC (2019)**).

Among of the plans and strategies of Mwinyi on Blue Economy is promoting of marine tools such as improving security in the coastal area, establishing marine spatial plan and establishing special department of Blue Economy. Other crucial steps are; improving coastal tourism and encouraging conference and sport tourism. But great effort will be in strategic training of youths in sectors of Blue Economy to boost efficiency and widen a room for employments.

The president has been affirming to improve existing ports in terms of modern equipment and accountability, building new modern and big ports of cargo like Mpigaduri, Oil and Gas port of Mangapwani and other small fishing ports. Dr. Mwinyi has also promised to forward to establish sea weed and fish processing and industries to provide employment and to add value of ocean products. For fish traders, Mwinyi has disclosed to build fish markets and other markets (**FAO (2018)**).

## 5. METHODOLOGY OF THE STUDY

The study is primarily based on secondary data compiled through comprehensive desk research of publicly available materials at national, regional and continental levels. Official reports, books and articles were examined, and national and regional policies, frameworks, strategies and practices analysed. In some cases, consultations through direct communication with officials and experts, telephone conversations and email exchanges have been employed for clarification and verification of information.

## 6. CONCLUSION

From the discussion concerning sustainable blue economy and its impact on economic growth in Africa with a case study of Zanzibar, the study drew some principle conclusions and recommendations.

The study has shown that blue economy resources can anchor diversification in Africa through various interrelated economic activities, including fisheries; shipping; tourism; oil, gas and minerals exploitation; renewable energy development; development of backward linkages to the ship-building and repairing industries; and aquaculture. Currently, Africa is benefiting from the contribution of economic sectors, especially fisheries, shipping, tourism and minerals, but there remains untapped potential for further industrial activities in other sectors – for example: the manufacture and repair of ships, ship parts and ship equipment; construction of ports infrastructure, dry ports, and terminal facilities and equipment; mineral beneficiation and value addition; and small-scale fish processing and marketing.

The blue economy sector also provides employment opportunities as well as an avenue for investments and support to inclusive industrialization in Africa especially Zanzibar. With the increase in demand for blue economy sector products and services such as fish, seafood, energy, ports, ships and seafarers, there are opportunities to expand activities in the sector and thus create more jobs for the youth, women and other marginalized groups in both coastal and landlocked countries.

The study has shown that coastal and island countries like Zanzibar in Africa have the greatest advantages in the development of the blue economy, but must collaborate with inland States. Landlocked countries could use the resources of the inland waterways together with other connecting activities, such as education and training, ship registration and hi-tech manufacturing – to similarly benefit from the blue economy value chain. Since each country is endowed with various

natural resources, which include manpower, production of blue economy-related activities could be based on national competitive advantages. Nevertheless, both individual and collaborative efforts are needed to unlock the potential of the blue economy in Zanzibar and Africa.

The blue economy can catalyse inclusive industrialization and sustainable economic development in Zanzibar and Africa in general. Zanzibar should strongly consider the blue economy and nurture a conducive environment for it to prosper in the industrialization process. Industrialization strategies should, therefore, be implemented hand-in-hand with a blue economy. Also, education, research, environmental management and private sector participation should be prioritized. Safety and security should be strengthened, while legal, regulatory and institutional frameworks need to be established for proper management and implementation (**Zanzibar Blue Economy Policy RGZ (2020c)**).

Zanzibar is at the strategic location for Blue Economy that is why its current president Dr. Hussein Mwinyi has often pointed out, that it is important to maintain the capacity of marine ecosystems. On the other hand, Blue economy has been an important priority area for the Indian Ocean Rim Association (IORA) in terms of economic development. Tanzania (including Zanzibar) being a member of IORA can benefit enormously from the collective action adopted by IORA on blue economy.

The Zanzibaris are expecting accountability from president Mwinyi in implementing appropriate policies and management actions using the appropriate tools and concepts such as Marine Spatial Planning whereby Zanzibar can enhance the contribution of blue economy to its national economic growth, development of other sectors including trade and infrastructures and reducing rate of unemployment (**RGZ. (2020b)**).

## 7. RECOMMENDATIONS

Zanzibar and Africa could consider the following options and approaches for action to build effective and sustained partnerships for Blue Economy-centric development:

Mapping and engaging with relevant Blue Economy processes and initiatives, as well as stakeholders and key institutions (for instance, through participation in summits, workshops, and solution platforms).

Maximizing the potential of public private partnerships (PPPs), including through identifying, developing, and strengthening partnerships, such as those for research, product development, concept development, exchange of intellectual property, financial, in-kind, and/or human resources in mutually agreed ways.

Establishing a Blue Economy Transformative Knowledge for Action Network supported by an online innovation platform to stimulate new research into key, focused innovation needs for the Blue Economy.

Creating a network of stakeholders and change makers that would allow leaders and change makers to convene debate, learn, and create solutions for local, national, regional, and continental challenges.

Exploring how new higher education strategies could enable a sustainable Blue Economy for generations to come. This could include the establishment of innovative programs to attract students from diverse academic and social backgrounds and support a new generation of Blue Economy leaders.

Optimizing partnerships aimed toward "Africa for Africa." RECs, IGOs, and States could foster results-driven partnerships within the framework of AU Agenda 2063 and the AU 2050 aims. The outcomes of these partnerships in knowledge building and socioeconomic and political integration at all levels could contribute to the formulation of a new geopolitical, African centered paradigm embedding all sustainable development dimensions.

## REFERENCES

- [1] "Blue economy | The Commonwealth"(2018). Thecommonwealth.org. Retrieved 2023-03-28.
- [2] "BLUE GROWTH". Mare. European Commission. 2014. Retrieved 14 March 2023.
- [3] "What a 'blue economy' really is – WWF's perspective". WWF. 10 July 2015. Retrieved 14 March 2023.
- [4] Bertazzo, Sophie (2018). "What on Earth is the 'blue economy'? – Human Nature – Conservation..." Human Nature – Conservation International Blog. Retrieved 2023-03-28.

- [5] Examrace. "Blue Economy versus Ocean Economy- Translation in Hindi, Kannada, Malayalam, Marathi, Punjabi, Sindhi, Sindhi, Tamil, Telgu – Examrace". [www.examrace.com](http://www.examrace.com). Retrieved 2023-03-27.
- [6] FAO (2018). A new marine hatchery to benefit Zanzibar, East Africa. [online] Available at: <<http://www.fao.org/tanzania/news/detail/events/en/c/1141941/>> [Accessed 19 September 2020]
- [7] Feidi, I.H. (2005). The fisheries of Zanzibar: potential for new investments, Naga, The WorldFish Center, vol. 28(3/4), pp. 37-40
- [8] Fujita, Rod (11 July 2012). "FAO Reports 87% of the World's Fisheries are Overexploited or Fully Exploited". FAO. Retrieved 14 March 2023.
- [9] Gössling, S. (2002). Causes and Consequences of Groundwater Use: Zanzibar, Tanzania. *International Journal of Water* 2(2). pp.49–56
- [10] Isaacs, M. (23 July 2019). Blue Justice for small-scale fisheries. Retrieved 26 July 2019, from Plaas website: <https://www.plaas.org.za/blue-justice-for-small-scale-fisheries/>
- [11] IUCN (2020). Worldwide catalogue of case studies on Aquaculture and Marine Conservation, No 1: Zanzibar. IUCN - Gland, Switzerland
- [12] Kalumanga (2018), How Seaweed Farming Improve the Livelihoods of Women’s in the East Coastal area of Zanzibar Archipelago- Tanzania, *International Journal of Creative Research Thoughts MACEMP* (2009) The Status of Zanzibar Coastal Resources - Towards the Development of Integrated Coastal Management Strategies and Action Plan Ministry of Information, Tourism and Heritage (2017). Zanzibar Tourism Policy, Final Draft, December 2017
- [13] Mkenda, A.F. and Folmer, H. (2001) The Maximum Sustainable Yield of Artisanal Fishery in Zanzibar: A Cointegration Approach. *Environmental and Resource Economics*, Vol. 19, pp. 311 -328
- [14] Msuya F.E. (2011). The impact of seaweed farming on the socioeconomic status of coastal communities in Zanzibar, Tanzania. *World Aquaculture*, Vol. 42(3), pp. 45-48
- [15] Museveni, Y. K. (2014). Meet the Leader: H.E. Gen. Yoweri Kaguta Museveni. Interview with UONGOZI Institute on 15 November 2014. [https://uongozi.or.tz/videos/meet-the-leader-h-e-yoweri-kaguta-museveni/North, D. \(1991\). Institutions. Journal of Economic Perspectives, 5\(1\), 97–112](https://uongozi.or.tz/videos/meet-the-leader-h-e-yoweri-kaguta-museveni/North, D. (1991). Institutions. Journal of Economic Perspectives, 5(1), 97–112).
- [16] Neish, I.C. and Msuya, F.E. (2013). Seaweed Value Chain Assessment of Zanzibar. Report submitted for UNIDO Project no 13083 “Building Seaweed Processing Capacities in Zanzibar and Pemba: Creating value for the poor”.
- [17] Nordic Development Fund (2014). Investment Prioritisation for Resilient Livelihoods and Ecosystems in Coastal Zones of Tanzania. [online] Available at: <[https://www.ndf.fi/sites/ndf.fi/files/attach/coastal\\_profile\\_volume\\_i\\_-\\_themes\\_zanzibar.pdf](https://www.ndf.fi/sites/ndf.fi/files/attach/coastal_profile_volume_i_-_themes_zanzibar.pdf)> [Accessed 28 March 2023].
- [18] OCGS (2018). Zanzibar Statistical Abstract. OCGS (2019). Zanzibar Statistical Abstract. Pollock, A. (2007), The climate change challenge. Implications for the tourism industry. The Icarus Foundation, Ontario.
- [19] Principles for a Sustainable BLUE ECONOMY (PDF). World Wildlife Fund. p. 2. Retrieved 14 March 2023.
- [20] Revolutionary Government of Zanzibar (RGZ) (2020a). Zanzibar Development Vision 2050: Responsibly Transforming Livelihoods.
- [21] RGoZ (2013). Zanzibar Environmental Policy 2013.
- [22] RGZ and Uongozi Institute (UI). (2021). Blue Economy Forum for Socio-Economic Development and Environmental Conservation in Zanzibar. Held at Hotel Verde, Zanzibar, 12 June 2021.
- [23] RGZ. (2020b). Zanzibar Blue Economy Policy. RGZ (2020c). Hotuba ya Mhe. Hussain A. Mwinyi katika Uzinduzi wa baraza la Kumi la Wawakilishi. [https://www.youtube.com/watch?v=lz\\_S7FpsAG0](https://www.youtube.com/watch?v=lz_S7FpsAG0)
- [24] Rio+20 – United Nations Conference on Sustainable Development. [Uncsd2012.org](http://Uncsd2012.org). 22 June 2012.

- [25] Songwe, B.A., Khamis, S.M, Khalfan, M.H., Msuya, F.E. (2016). Commercial Seaweed Farming in Zanzibar Coastal Villages: Potential for Innovative and Competitive Economic Growth. *Journal of the Open University of Tanzania*, Vol. 22, pp. 153-73.
- [26] The 2018 Annual Economic Report on EU Blue Economy" (PDF). European Union: 5. 2018.
- [27] The Citizen (2018). Why Zanzibar is in danger of losing popularity as a tourist destination. [online] Available at: <[https:// www.thecitizen.co.tz/News/1840340-4617224-1o162xz/index.html](https://www.thecitizen.co.tz/News/1840340-4617224-1o162xz/index.html)> [Accessed 28 March 2023].
- [28] The Citizen (2020). Fao and Koica in partnership with Zanzibar Government transform the mariculture sector. [online] Available at: <<https://www.thecitizen.co.tz/supplement/5043016-5427528-57hu37z/index.html>> [Accessed 13 September 2020]. UNCTAD (2018).
- [29] UNEP, FAO, IMO, UNDP, IUCN, World Fish Center, GRID-Arendal. (2012). Green Economy in a Blue World. <https://www.undp.org/publications/green-economy-blue-world> World Bank. (2022). What is the Blue Economy? <https://www.worldbank.org/en/news/infographic/2023/03/25/blue-economy>
- [30] United Nations Economic Commission for Africa (2015). Africa's Blue Economy: A Policy Handbook [online]. Available at: <[https:// www.uneca.org/sites/default/files/PublicationFiles/blue-economy-policy-handbook-introduction\\_en.pdf](https://www.uneca.org/sites/default/files/PublicationFiles/blue-economy-policy-handbook-introduction_en.pdf)> [Accessed 28 March 2023]
- [31] Zanzibar Renewable Energies and Energy Efficiency Programme, Lot 1: Wind and Solar Potential Analysis and Feasibility Studies of Power Plants.
- [32] ZCT (2017). Database of Accommodation in Zanzibar.
- [33] ZDE (2004). State of the environment report for Zanzibar.
- [34] ZPC (2019). Financial Programming File, Zanzibar Planning Commission: Department for Economic Management