



# **AN ASSESSMENT OF THE STATUS OF BLUE ECONOMY SECTORS IN KENYA**

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# 1. Introduction

Blue economy is among the most important sectors of the economy in globally and in Kenya as well.

SDG 14: “Life below water” covers fisheries, tourism, oil and gas development, renewable energy, and other maritime activities

Its contribution is immense and thus has been receiving a lot of attention lately (COP 9 held in Kenya in August 2018 and SBEC in November 2018)

SBEC revolved to work towards economically vibrant, socially inclusive and environmentally resilient blue/ocean economy

Kenya on its part resolved to establish at the **University of Nairobi an Institute for Blue Economy and Ocean Studies (IBEOS) (The Maritime Centre/Fish force Academy)** to undertake research, offer technical assistance and capacity building in all ocean matters, and sustainable use of its resources.



## 2. Oceans and the Blue Economy

The Blue Economy comprises the economic activities that create sustainable wealth from the world's oceans and coasts, lakes and rivers.

It is the sustainable use of ocean resources for economic growth, improved livelihoods and jobs and ocean ecosystem health.

The concepts rests on the following principles:

- *Sustainable and inclusive growth and development*
- *Reducing the risk of over exploitation and risky methods of extraction/usage of the ocean's resources*
- *Enhancing the welfare of coastline communities in terms of economic opportunities and social protection*
- *Ensuring resilience of countries to natural disasters and the impact of climate change.*



## 2. Oceans and the Blue Economy

The global oceans and seas cover more than 72% of the earth's surfaces and provide food, jobs, and recreation for a large portion of the world's population; has and have become significant drivers of global GDP (World Bank, 2017).

They are a means of transport for 80% of global trade (UNCTAD, 2012) **Further, the coastal ecosystems support** the economies of coastal communities and their resilience.

Kenya for example is endowed with rich natural resources; mangrove forests, coral reefs, terrestrial forests, sandy beaches and seagrass beds.

Coral reefs, mangroves, salt marshes, seagrass beds and deep-sea habitats generate high biodiversity and productive waters which in turn support economies and livelihoods (Samoilys et al. 2015).



## 2. Oceans and the Blue Economy

**Globally, the European Commission estimates that the Blue Economy represents over 5 million jobs and contributes €500 Billion per year (Malshini, 2019).**





## 2. Oceans and the Blue Economy

Global oceans are critical for addressing many of the global challenges facing the planet in the decades to come, from world food security and climate change to the provision of energy, natural resources and environment.

The importance of oceans for sustainable development has been recognized from the beginning of the UNCED process, Agenda 21, the Johannesburg Plan, implementation and reaffirmation documented in the Rio+20 Conference.

Ongoing trends of exploitation and therefore the degradation of marine and coastal ecosystems for sustainable developments of oceans have been insufficient (UN, 2014).

FAO data on fisheries indicates that close to 90% of global fish stocks are fully or over exploited.

In 2018, the total global capture fisheries production reached the highest level ever recorded at 96.4 million tons, a 5.4% increase from the average of the previous three years (FAO, 2020).



## 2. Oceans and the Blue Economy

**The mangrove coverage is diminishing in most countries in the region – Kenya and Tanzania lost about 18 per cent of their mangroves over 25 years, and Mozambique lost 27 per cent over a shorter timeframe (Bosire 2015).**

**Increasing pollution and unsustainable coastal development have further contributed to the loss of biodiversity, ecological functions and the decline in provision of environmental services**

**Climate change also threatens to compromise the very foundations of broad swathes of coastal development, rising atmospheric CO<sub>2</sub> levels are undermining fundamental aspects of many marine ecosystems through ocean acidification; & changing ocean chemistry at a speed faster than at any time in the last 300 million years.**



## 2. Oceans and the Blue Economy

The potential of the oceans to meet sustainable development needs is enormous; but only if they can be maintained in and/or restored to a healthy, and productive state.

“Development Spaces” where spatial planning integrates conservation, sustainable use, oil and mineral wealth extraction, bioprospecting, sustainable energy production and marine transport need to be embraced for improved human well-being and social equity, while significantly reducing environmental risks and ecological scarcities (UNEP, 2013)





## 2. Oceans and the Blue Economy

The ocean economy is a smart investment that can deliver social, economic, and environmental benefits to our people, and that Kenya is keen to fully realize the potential of its 142,400 square kilometre Exclusive Economic Zone to enhance development and productivity while protecting the marine resources (President of Kenya, 2020)

Thus there is need to have a concerted efforts, work with communities and other development partners to ensure restoration of degraded resources and protect, conserve and preserve the existing ones.



## 2. Oceans and the Blue Economy

### *Objectives*

**To assess the current contribution of ocean sectors to Kenya's GDP;**

**To assess the values of ocean sectors and potentials for further development and investment**

**To identify the policy and governance gaps in each ocean sector; and**

**Make recommendations on the policy tools that can support the development of a sustainable blue economy in Kenya.**



## 2. Oceans and the Blue Economy

### Report Approach/Methodology

A review of secondary information data available online including research publications, conference papers, UN reports, concept papers published by various independent organizations as well as non-governmental organizations and policy documents, was undertaken

Any gaps that might exist this report will be addressed during validation and will be done through interviews of some key informers and researchers.

Sufficient time and field work resources are expected to improve this report. Besides, a planned Validation workshop is expected to further improve the content and structure of this report.



### 3. Contribution of Ocean Sectors to Kenya's GDP

#### *Coastal and deep sea fisheries, mariculture and aquaculture*

Kenya's Gross Domestic Product at current prices in 2019 was estimated at **Ksh.9.74 trillion (US\$ 97.4 billion)** with the highest sectoral contribution being from Agriculture, Forestry and Fisheries sector accounting for over a third of the **GDP with 3.33 trillion (US\$ 33.3 billion)**.

Fisheries sub-sector made a relatively low contribution of **Ksh. 48.82 billion which translates to 0.05 % of the GDP (KNBS, 2020)**.

Fishing activities are gendered, men being the main actors and women mainly engaged in processing and marketing of fish (Ochiewo, 2004). Women also glean in the intertidal areas during the low spring tides for octopus



## 2. Contribution of Ocean Sectors to Kenya's GDP

There are about 27,000 people who are engaged in fishing and related activities, including over 13,400 small-scale fishers who depend on the marine fisheries for their livelihood and income.

**Mariculture**, which is the cultivation of aquatic animals and plants in marine and estuarine (brackish) waters, was introduced to address the widespread poverty and livelihood needs of coastal communities and bring about development in the rural coastal areas (Ochiewo et al., 2020; Mirera and Ngugi 2009)



### 3. Contribution of Ocean Sectors to Kenya's GDP

Mariculture employs mainly women (Odhiambo et al., 2020) and therefore contributes to empowering women as owners of farms or as important actors in fisheries value chain and marketing; thus participating in societal decision making .

**Seaweed farming in Kwale County and mud crab (Scylla serrata) farming at Dabaso and Che Shale in Kilifi County** are classic cases of successful mariculture initiatives that provide livelihood and income to the local communities.

However, most mariculture initiatives have stagnated at pilot phase over the past 4 decades resulting in mariculture making little contribution to livelihoods and national economy.



### 3. Contribution of Ocean Sectors to Kenya's GDP

With the opening up of the commercial offshore tuna fisheries through the Blue Economy development interventions, the contribution of fisheries, mariculture and aquaculture to the GDP will increase.

However, Covid19 pandemic is expected to impact negatively on economic growth

The per capita seafood consumption in Kenya is estimated to be 3.4 kg which is mainly from fresh water sources as production from marine fisheries is estimated to be much lower than production from freshwater bodies in Kenya.



### 3. Contribution of Ocean Sectors to Kenya's GDP

*Kenya's GDP (current prices Ksh. Millions) with contribution from fisheries.*

Year	2015	2016	2017	2018	2019
Total GDP	6,284,185	7,022,963	8,165,842	8,892,111	9,740,360
Agriculture, Forestry and Fishing	1,897,347	2,182,198	2,844,263	3,032,085	3,326,299
Fishing and Aquaculture	40,300	34,909	36,608	43,580	48,815
Fisheries proportion of GDP	0.06	0.05	0.05	0.05	0.05





### 3. Contribution of Ocean Sectors to Kenya's GDP

#### *Contribution of Coastal and marine tourism to GDP*

The tourism industry is among the significant contributors to Kenya's economic development and most economies in the world, both developed and emerging

In Kenya, it is a crucial driver of economic growth and development, accounting for **8.2 % of total GDP** in 2019 (WTTC, 2020).

The sector also contributes to a total employment of about **1.1 million people** (Ministry of Tourism & Wildlife, 2018)

Via forward and backward linkages with other sectors of the economy, it contributes about **1.6 million jobs, or 8.5% of total employment** (WTTC, 2020).



### 3. Contribution of Ocean Sectors to Kenya's GDP

The ocean economy is approximated to account for only 4% of Kenya's national total GDP

Among the blue economy subsectors, coastal tourism is the largest contributor to the ocean economy accounting for about 65% of blue economy contribution, followed by marine tourism with around 28%. Most of the other subsectors contribution are way less than 1%.

The sector remains largely unexploited. With a maritime territory of 230,000 square KMs and a distance of 200 nautical miles offshore, Kenya's Coastal and marine tourism could make a much larger contribution to the economy



### 3. Contribution of Ocean Sectors to Kenya's GDP

#### *Contribution of Ports, harbors and maritime transport to GDP*

According to 2019 data, the dominance in the contribution of agriculture, forestry and fishing to nominal GDP has continued with Sectors related to the blue economy such as maritime transport, marine forestry, fishing and aquaculture have continued to contribute a meagre **1.8%** of GDP

**Revenue Contribution:** The total revenues from ports, harbours and marine transport increased from **Kshs. 29.9 billion in the 2013/14** financial year to kshs 34.8 billion in **2014/15**, kshs **38.8 billion in 2015/16**, kshs **40.2 billion in 2016/17** and kshs **43.6 in 2017/18** representing an average **8%** annual change over the entire period.



### 3. Contribution of Ocean Sectors to Kenya's GDP

*Profit before tax* registered an average increase of **16.6%** over the entire period **reaching kshs 10.3 billion in the 2017/18** financial year.

Operating revenues showed a similar trend over the review period and registered an overall annual change of **8%**.

These improvements can be attributed to continued infrastructure investment.

*The general cargo traffic increased by 9.3% on average with dry cargo imports increasing by 14.3% and liquid bulk imports by 4.8%.*

*Total imports handled through the port increased by 8.2% over the review period. Imports handled grew at an average rate of 6%, exports 5% and total throughput gat 6%.*



### 3. Contribution of Ocean Sectors to Kenya's GDP

*Container traffic* increased from a total of 436.7 thousand TEUs in 2005 to about 1,076.1 thousand TEUs in 2015, an increase of 12.6% on average.

Our analysis also shows that containerized imports increased by 9.8% of the traffic while containerized exports increased by 10.1% of the traffic on average

Analysis shows that total port revenue increased from **Kshs 29,920,987 million in 2013/14** to **Kshs 43,629,543 million in 2017/18** representing an average annual increase of about **9%** over the entire period.



### 3. Contribution of Ocean Sectors to Kenya's GDP

***Employment:*** An increase of one million tons of port throughput is associated with an increase in employment in the port region of 0.0003% implying that in a region with one million employees, employment would increase by 300 units while in the long run this increase would be 7500 units

In the local context, increased throughput not only necessitated the direct injection of capital to facilitate port expansion of new terminals, but also the advent of inland container depots (ICDs) and container freight stations (CFSs),  
The ports and CFSs are responsible for around 10,000 direct and indirect employment opportunities. Other indirect benefits include employment opportunities created in port related entities such as banks, insurance companies, freight forwarding, transport, etc



### 3. Contribution of Ocean Sectors to Kenya's GDP

***Asset Creation:*** Data also shows that the share of the book value of KPA assets in sub-sector GDP has increased over time from 4.4% in the 2013/14 FY, to 4.5% in the 2014/15 FY and attained a high of 5% in the 2017/18 FY

***Hinterland***                      ***Infrastructural***  
***Development:*** Increase in EPZs and SEZs. One notable project is the SGR that connects the Port of Mombasa to Nairobi, and Suswa, where the Naivasha ICD is located.



### 3. Contribution of Ocean Sectors to Kenya's GDP

*Vibrant Local Economy* -This is in the form of: a) *increased consumer spending and tax remittances* b) *tourism promotion* c) *decongesting Mombasa City* d) *Environmental Protection*

*Customs Duty Collected by KRA*  
*:Customs duty collected by KRA does not go to KPA coffers but is utilized in the entire economy and can hence be considered as an indirect benefit*

In this regard, KRA collected customs duty amounting to Ksh. 502,634 million in the 2015/16 FY which increased to Ksh. 559,342 million in the 2016/17 FY, to Ksh. 621,585 million in the 2017/18 FY, Ksh.686,313 million in the 2018/19 FY before declining to Ksh. 656,933 million in the 2019/20 FY.

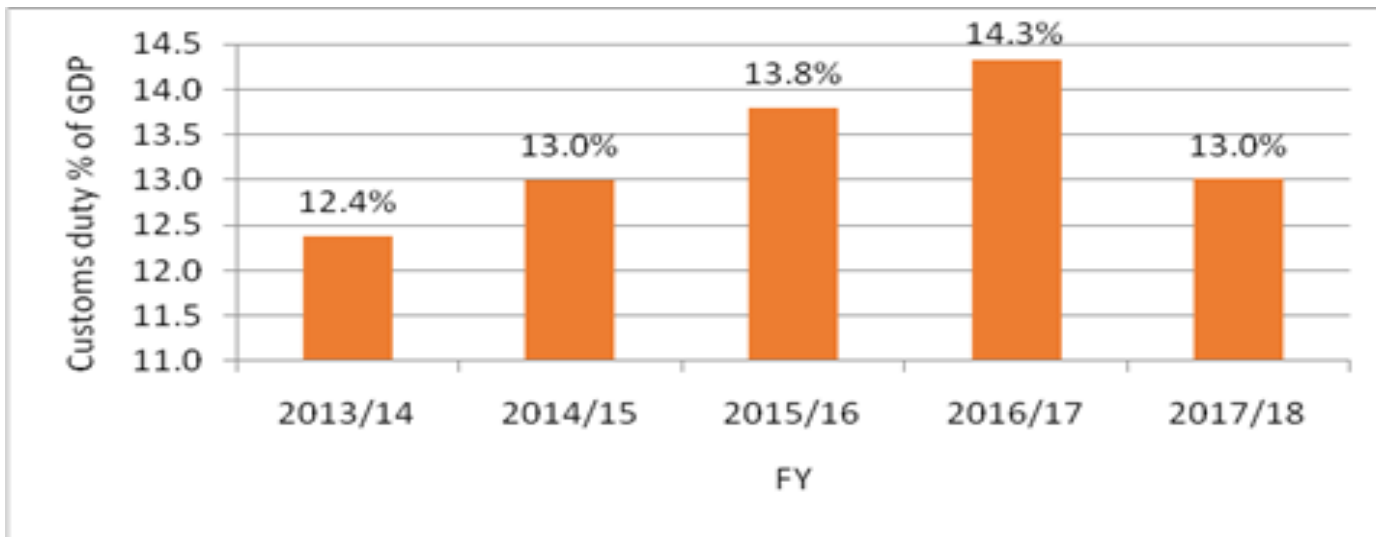
Chart 3, below, presents data on customs duty collected by KRA while chart 4, below, shows customs duty as a % of GDP. Note the upward trend save for the 2019/2020 FY when it declined to 13.0% from 14.3% in the 2018/19 FY.





### 3. Contribution of Ocean Sectors to Kenya's GDP

#### Customs duty as a percent of GDP





### **3. Contribution of Ocean Sectors to Kenya's GDP**

#### **Coastal and offshore oil and gas and renewable energy**

**The Government of Kenya through a Gazette Notice Number 3344 of 13th May 2016, constituted sixty-three (63) petroleum exploration blocks, of which thirty-seven (37) are located in the Lamu basin. The Lamu basin is the largest basin and extends offshore.**

**If the identified oil and gas reserves continue to yield even a small portion of the expected outcome, then Kenya will gain from income earnings and savings on fuel imports that will significantly change the national economy and contribute to poverty alleviation among the local residents.**



### 3. Contribution of Ocean Sectors to Kenya's GDP

#### *Coastal and offshore oil and gas and renewable energy*

**The coastal regions has huge potential for renewable energy; solar, wind, tidal and wave.**

**Although tidal energy is viable in the coast, it has not been exploited compared to wind and solar that are becoming popular in the area and even receiving government support.**





### 3. Contribution of Ocean Sectors to Kenya's GDP

#### *Contribution of coastal agriculture to GDP*

According to Waaijenberg (2000), 25% of the coastal land is non-agricultural, 50% is suitable for ranching and 25% is suitable for crop farming.

Agricultural activities along the Kenyan coast produce both food and non-food products for subsistence and commerce, and traditional shifting cultivation and slash and burn farming practices are widespread

Livestock production contributes significantly to the Kenyan coastal economy, and there are 85 ranches within the coastal region, 25 of which are operational.

Livestock production is mainly concentrated on the marginal land of the coastal region, which accounts for some 69 % of the total coastal area



### 3. Contribution of Ocean Sectors to Kenya's GDP

#### *Contribution of coastal agriculture to GDP*

**Tree crops (cashews, coconuts, citrus and mangoes) occupy about 50 % of the coastal arable land.**

**Coastal agriculture is more susceptible to climate change and anthropogenic disturbance.**

**According to USAID (2018), a sea level rise of 30 cm is estimated to threaten 17 percent (4,600 hectares) of Mombasa with inundation. This would greatly affect the available agricultural limited land for the coastal residents.**

**Irrigation of crops such as sugarcane and rice in the coastal areas have contributed construction of a sugarcane factory in Kwale County and a rice miller in Tana Delta area**



### 3. Contribution of Ocean Sectors to Kenya's GDP

#### *Contribution of coastal agriculture to GDP*

The coastal region is unable to produce enough food to feed its population and has to import food from upcountry. As a result the Poverty levels in the coastal counties are way above the Kenyan average poverty level of 12.2%

In Lamu County, the agricultural sector contributes 90% of the total household income. The main crops grown here are maize, cowpeas, dolichos, cassava, pigeon peas, and green grams. commercial crops are mangoes, coconut, cotton, bixa, and simsim. According to Lamu CIDP, 2018, the county is the largest producer of cotton (40%), simsim (50%) and bixa (40%) of all the amounts produced and grown in Kenya



### 3. Contribution of Ocean Sectors to Kenya's GDP

#### *Contribution of coastal agriculture to GDP*

Livestock accounts for 30% of all agricultural production. The main animals kept are cattle, sheep, goat and poultry (GoK, 2017)

Land tenure issues in the County have significantly contributed to lack of access which partly explains why Poverty level in the County is about 31.6%, according to KNBS report of 2019.

In Kwale County, agriculture as a source of income accounts for 80.6% of all house household incomes. The sector employs about 62,681 in the county . Kilifi County is classified as an arid and semi-arid area and 65% of Kilifi faces seasonal water shortage Main food crops grown include cassava, maize, cow peas, rice, and green grams. Fruits; mangoes and bananas including cashew nuts and coconuts (Kilifi County, 2017).



### 3. Contribution of Ocean Sectors to Kenya's GDP

#### *Contribution of coastal agriculture to GDP*

TaitaTaveta has the largest area being an ASAL with only 12% (205,500 ha) constituting of arable land and being 3.7% of the national arable land.

Due to proximity to Tsavo, human wildlife conflicts are common, further threatening production.

The poverty level of the County is at 57% and food poverty stands at 48% thus the County is not food self-sufficient. Land in the County is communally owned with approximately 35% having title deeds (TaitaTaveta, 2017).





### 3. Contribution of Ocean Sectors to Kenya's GDP

#### *Contribution of coastal and marine forestry to GDP*

The Kenyan coast is endowed with rich natural resources that support the local and national economy; mangrove forests, coral reefs, terrestrial forests, sandy beaches and seagrass beds.

The Kenyan coastal forests are part of the eastern coastal forests and are known for the high number of endemic fauna and flora.

The forests extend from the Somalia to Mozambique and are a biodiversity hotspots with more than **4500 species from 1050 genera** and are referred to as the **'Swahili center of endemism'** (Burgess and Clarke, 2000; Luke, 2005; Fungomeli et al., 2019)



### 3. Contribution of Ocean Sectors to Kenya's GDP

#### *Contribution of coastal and marine forestry to GDP*

The entire environment and natural resources sector in Kenya contributed about US\$ 3 million to the country's GDP in 2019, approximately 3.2% (KNBS, 2021). Forestry and logging industry contributed about US\$ 1.2 million.

While recent figures on economic valuations on coastal forests are lacking, as of 2008, the 660 square kilometres of coastal forests were valued at US\$ 133 million while the 500 square kilometres of mangroves were valued at US\$ 500 million (UNEP, 2009)



### 3. Contribution of Ocean Sectors to Kenya's GDP

#### *Contribution of coastal and marine forestry to GDP*

Formal forest sector in the country employs 18,000-50,000 people directly and 300,000-600,000 people indirectly making it a major source of employment particularly in the rural areas (MENR, 2016).

However, the contribution of coastal forests to Kenya's GDP remains under-reported due to the omission of value addition of forest products by the manufacturing sector, the omission of the provision of wood and non-wood forest products to the subsistence economy as well as the omission of the provision of ecosystem services



### 3. Contribution of Ocean Sectors to Kenya's GDP

#### *Contribution of coastal and marine forestry to GDP*

Mangrove forests in Kenya provide timber products for construction, furniture and boat building. Mangrove species such as *Rhizophoramucronata* and *Ceriopstagal* are preferred due to their excellent wood quality and resistance to termites.

About 96,739 scores of mangrove poles (1 pole= 20 poles) were harvested across the Kenyan coast in 2014

Up to 90% of rural household energy requirements are met by coastal forests (Githitho, 2004). The forests also provide opportunities for wood carving that generate between US\$ 20-25 million annually in export revenues



### 3. Contribution of Ocean Sectors to Kenya's GDP

#### *Contribution of coastal and marine forestry to GDP*

Coastal forests provide 70-80% of the medicine used by the poor local communities. Communities around the Arabuko-Sokoke forest earned approximately US\$ 37,000 in 2001 from bee-keeping and butterfly farming.

Also game meat.

Coastal forests are rich in minerals as well, mainly titanium, silica sand and lead.

Salt works have been established in Ngomeni, Kurawa and Gongoni (Matiku, 2004; UNEP, 2009). Titanium mining in Kenya generated earnings of \$115.7m in 2019/20 financial year which is 65% of Kenya's total mineral output value. Direct taxes, royalties and VAT in the last financial year from titanium mining amounted to \$32.5m (Base Titanium, 2021).



### 3. Contribution of Ocean Sectors to Kenya's GDP

#### *Contribution of coastal and marine forestry to GDP*

Coastal forests are important tourist destination areas (Shimba Hills and Arabuko-Sokoke forests)

The Wasini boardwalk generates more than US\$ 25,000 annually through mangrove tourism

The mangrove forests along the coast also offer excellent opportunities for bird-watching such as those of Mida Creek, Ramisi and Kipini.

The coastal forests of Kenya have globally unique biodiversity values with more than 554 endemic plants (40% of the total endemic plants in the forests of Kenya) and 53 endemic animals.

Arabuko-Sokoke forest is ranked the second most important forest for conservation of bird species in Africa, with over 230 bird species recorded in the area, including six globally threatened species



### 3. Contribution of Ocean Sectors to Kenya's GDP

#### *Contribution of coastal and marine forestry to GDP*

Coastal forests indirectly contribute to the country's GDP through regulating services such as coastal protection and carbon sequestration, & supporting fisheries and tourism. Coastal tourism contributes about \$1.5 billion annually, a 4% contribution to the country's GDP (GoK, 2020).

The indirect economic contributions of coastal forests may, in some cases, exceed the direct contributions to GDP. E.g. the mangroves in the South coast of Kenya are valued at US\$ 6.5 million with 59% of the value on average derived from regulating services (Huxham et al., 2015).



### 3. Contribution of Ocean Sectors to Kenya's GDP

#### *Contribution of coastal and marine forestry to GDP*

Mangrove forests also play an important role in shoreline protection. They diminish the energy of incoming waves, lessening the risk of flooding to the communities living behind the mangroves.

Currently, the value of mangroves to shoreline protection in Kenya has been estimated at US\$ 1,200 per hectare annually (Kairo et al., 2008; GoK, 2017).

The value of mangroves to fisheries in Kenya has been estimated at US\$ 95 per hectare annually (Kairo et al., 2008).

More than 85% of fishing activities along the coast are carried out by artisanal fishermen in the shallow inshore areas within and adjacent to the mangroves. This sector directly employs more than 20,000 fishers





### 3. Contribution of Ocean Sectors to Kenya's GDP

#### *Contribution of coastal and marine forestry to GDP*

Coastal forests help in fight of climate change, by acting as carbon sinks.

Mangrove forests are capable of storing 10 times as much carbon as their terrestrial forests. The carbon captures by these ecosystems could be accounted for and sold in international carbon markets

The MikokoPamoja community group in Gazi bay, KwaleCounty, has successfully been able to trade mangrove carbon credits in the voluntary carbon market generating an annual income of US\$24,000.

Activities of MikokoPamoja have been replicated in Vanga Blue Forest, in Vanga; where the community are receiving double the income in Gazi through sale of mangrove carbon credits.



### 3. Contribution of Ocean Sectors to Kenya's GDP

#### *contribution of offshore coastal mining and extractives to GDP*

**Mining currently contributes to slightly less than 1% of Kenya's GDP but employ more than 296,700 Kenyans in the private sector and 700 in the public sector in the year 2019 (KNBS, 2020)**

**In the coastal region, key mining activities include Kwale heavy sands, cement manufacturing using locally available limestone, coral limestone and sand mining, both for the local and export markets**

**The value of exports for the coastal minerals was Ksh. 0.77 billion for stone, sand and gravel; Ksh. 3.87 billion for salt; and Ksh. 13.85 billion for titanium ores and concentrates (KNBS, 2020).**



### 3. Contribution of Ocean Sectors to Kenya's GDP

#### *contribution of offshore coastal mining and extractives to GDP*

**Exports:** Mining is a good contributor of Kenya's Exports. E.g. exports salt to Tanzania, Uganda, Rwanda, Burundi, DR Congo, North Malawi and South Sudan.

**Employment creation:** According to the Malindi Public Inquiry Audit report of 2006, Local communities have received direct employment from companies and organisations involved in this sub-sector.

Being a key sector to Kilifi's economy, the Salt industry employs over 1,100 workers directly from the community thereby reducing the levels of unemployment among the locals.

**Revenue to Coastal Counties:** Mining companies also generate revenue to their counties. An example is Tana River county which collected revenue from gypsum related operations amounting to Ksh. 3.607 million, in the year 2016 (Tana River CFSP, 2016).



### 3. Contribution of Ocean Sectors to Kenya's GDP

#### *contribution of offshore coastal mining and extractives to GDP*

#### ***Infrastructure development:***

Through exploration or exploitation of minerals and extractives, coastal communities have immensely benefited from infrastructural development especially the electricity, road and rail transport and telecommunication, particularly in the areas adjacent to the mining areas.

#### ***Increased manufacturing in the***

***Country-Most*** of the salt manufacturing companies are situated in the Kenyan north coast namely: Kensalt Ltd, Kurawa Industries Ltd, Malindi Salt Works, Krystalline Salt Ltd and Kemu Salt Packers Production Ltd. The country's production meets domestic demand with the excess being exported to neighboring countries (Rasowo et al., 2020).



### 3. Contribution of Ocean Sectors to Kenya's GDP

#### *contribution of offshore coastal mining and extractives to GDP*

**Royalties:** According to the ministry of mining and petroleum, Titanium – 10%, Gemstones – 5%, Industrial minerals – 1%, Cement mineral levy 140/= per tonne

**Foreign direct investments:** Some of the companies that are involved in mining at the coast are of foreign nationalities, one big example being Base titanium which is of Australian nationality, resulting in foreign exchange to the economy

**Other Benefits:** Minerals and extractives have become an alternative to the overexploited terrestrial mining resources. Equally, related programs have promoted environmental awareness through rehabilitation programs.



### 3. Contribution of Ocean Sectors to Kenya's GDP

#### *contribution of offshore coastal mining and extractives to GDP*

***Formation of Community Support Initiatives:*** Community support initiatives include SACCOs such as Nyumba Sacco limited that financially empowers employees of the Mombasa Cement Limited company located in Vipingo, Kilifi County among other companies. Financial empowerment has the capacity to offer credit to employees for entrepreneurship, investments and their further development which indirectly contributes to the GDP.

***Community and Environmental Programs:*** Base Titanium for instance, has partnered with other organizations like 'Cotton on Group' from Australia and 'Business for development' in order to promote the agricultural sector in the community



### 3. Contribution of Ocean Sectors to Kenya's GDP

#### *contribution of offshore coastal mining and extractives to GDP*

Base titanium contributed the blood bank building in Msambweni which was launched in December 2018. The Blood Bank Center was constructed at a cost of KSh. 32 million, of which Sh15 million was from Base Titanium Company (Kwale County Fiscal Paper 2019).

Kensalt Company provides education scholarships to local students. Such a project breeds empowered locals who later in life are educated and financially empowered.



## 4. Values Of Ocean Sectors & Potentials For Further Development & Investment

### *Coastal and deep sea fisheries, mariculture and aquaculture*

Coastal and deep sea fisheries contributes over 10% of the total annual national fishery production in Kenya, estimated to be about 146,500 MT.

Production declined during the 1990s and stabilized at about 9,000 MT annually, with a value of KSh.1.8 billion (Kimani et al., 2018).

A recent approximation was 23,000 MT, and can still be revised upwards since the catches from the Exclusive Economic Zone (EEZ) by the Distant Water Fishing Nations (DWFN) are often under-reported (Kimani et al., 2018).

Consequently, aquaculture has grown quite fast globally with an annual growth of 5.8 % over 2001-2016 with its contribution jumping from 25.7 % in the year 2000 to 46.8 percent in the year 2016 (FAO, 2018).





## 4. Values Of Ocean Sectors & Potentials For Further Development & Investment

### *Coastal and deep sea fisheries, mariculture and aquaculture*

The large expanses of brackish water at the River Tana delta and Athi-Sabaki River estuary, other rivers and small water bodies can also be utilized for coastal aquaculture. The potential can be tapped as part of Blue Economy development, which recognizes the productivity of healthy freshwater and maritime based economies, and promotes the conservation, sustainable use, and management of associated marine resources (UNECA, 2016).

Development of mariculture in Africa, has remained low and unable to realize sustainable increases in production (Brummett and Williams, 2000)

There is however potential for mariculture as demonstrated by the prawn and mud crabs projects in Kilifi



## 4. Values Of Ocean Sectors & Potentials For Further Development & Investment

### *Value and Potential for development and investment in coastal and marine tourism*

The realization of improved values of the coastal and marine potential is foreseeable and achievable, but some limiting factors like the Covid-19 pandemic restrictions on travel and human interactions slow down the speed. These opportunities blue economy presents need to be explored and challenges surmounted if more goods and services, and additional value is to be extracted from the sector

*Value of coastal and marine tourism:*  
***Cruise ship tourism*** attracts high net worth tourists, with industry experts pointing out that 400 cruise tourists are equivalent to 4000 air travel tourists. Kenya Ships Agent's Association notes that with only 40 cruise ships calling at the Kenya coastal destination, the country could earn up to 20 million US dollars.  
To realize this development of key infrastructure is critical such as cruise ship terminal at the Mombasa port



## 4. Values Of Ocean Sectors & Potentials For Further Development & Investment

*Value and Potential for development and investment in coastal and marine tourism*

***Water sports tourism:*** Kenya has great potential for water-based tourism activities. The country has extensive beaches and coastal lines protected by the continental shelf, making it relatively safe for water sports tourism.

*There is Skydiving at Diani Beach, snorkeling at Malindi, windsurfing, Kite surfing, and jet skiing, already taking place*

***Cultural Tourism /Heritage tourism:*** The Kenyan coast has a long and exotic history. Cultural heritage resources include historical sites and monuments, ethnographic resources, arts and crafts religious centres, traditions and festivals.



## 4. Values Of Ocean Sectors & Potentials For Further Development & Investment

*Value and Potential for development and investment in coastal and marine tourism*

***Thematic Itineraries:***  
*Diversification and integration of coastal and inland attractors, including cultural, religious, or ancient trade routes. The Kenyan Coast is among the oldest trade ports where early explorers, missionaries, merchants, and sailors docked for supplies and rest as they continued with their missions at sea and inland*

***Health and Spa:*** *Health and spa facilities are expanding along coasts, including alleged medicinal and therapeutic qualities of the sands and clays and thermal waters. Upgrading the facilities to ensure international standards could help attract more tourists to the coast*



## 4. Values Of Ocean Sectors & Potentials For Further Development & Investment

*Value and Potential for development and investment in coastal and marine tourism*

***Complimentary Activities:*** By expanding activities such as wine-tasting, gastronomy (food and culture), conferencing, special events, festivals, health, and well-being. Although most of these activities have been compromised by the Covid-19 pandemic, this area could prove vital for the sector recovery once the world returns to normalcy.

***Underwater hotels and sea-floor/floating resorts:*** are being developed in many parts of the world. The Kenyan tourism industry can learn from advances in construction know-how developed by other emerging ocean industries



## 4. Values Of Ocean Sectors & Potentials For Further Development & Investment

*Value and Potential for development and investment in coastal and marine tourism*

***Deep-sea tourist expeditions:***  
*Locations range from shipwrecks to hydrothermal vents and other beautiful deep-ocean ecosystems. Kenya is host to the Malindi marine national park with exciting sea flora and fauna. Embracing technology to open access to these parks without disturbing the ecosystems can enrich coastal and marine tourism*

***Marine Ecotourism:*** *Marine Parks, underwater archaeological parks, coral reefs, and other locations with archaeological, ecological, or historical value can be exploited sustainably. Kenya is host to such resources that remain unexploited.*



## 4. Values Of Ocean Sectors & Potentials For Further Development & Investment

*Value and Potential for development and investment in coastal and marine tourism*

*Others include Recreational boating and Yacht Tourism and deep sea sport fishing sea safari, and mountain trips- These are areas with huge potential for example, it is only in Malindi where you can catch five different types of billfish in a day; broadbill, swordfish, black, blue, and striped marlin, and sailfish*

*Potential areas of further improvement in coastal and marine tourism: Capacity Building, Education and Training; Improved level of innovation; Streamline licensing, regulations and taxation; Collection and management of information/data; Tackle climate change; Reduce financial constraints; Reduce leakages and offshoring; Manage pollution; Improve safety and security; strengthen tourism marketing; Reduce language barriers;*



## 4. Values Of Ocean Sectors & Potentials For Further Development & Investment

*Value and Potential for development and investment in coastal and marine tourism*

*Reduce coastal land alteration; Manage global communicable diseases; Improve coastal infrastructure; Upgrade water and sanitation services; Improve hospitality and other related services; Reduce pressures on resources; Enforcement of fisheries regulations as well as low compliance by the artisanal fishers; & Improve marine ecosystem health*

*Other opportunities such heritage tourism, recreational boat tourism , yacht tourism among other need to be explored to unleash their potential*





## 4. Values Of Ocean Sectors & Potentials For Further Development & Investment

*Values of Ports, Harbours and maritime transport and opportunity for further investment*

*Value of ports, harbours and maritime transport*

***Increased Export/Import Trade:*** According to the Kenya Economy Survey 2020, in 2019, Africa remained the leading destination of the Kenya's exports accounting for 37.6 per cent of the total exports at Kshs 224.2 billion. These facilities play a critical role in expanding Kenya's export potential.

***Increased Connectivity and Market Capture:*** The number of vessels visiting a port is dependent on several things among them port connectivity as well as market capture.

***Increased throughput:*** The overall cargo traffic at Mombasa Port has been increasing due to growth of the Kenyan economy and landlocked countries as well



## 4. Values Of Ocean Sectors & Potentials For Further Development & Investment

*Values of Ports, Harbours and maritime transport and opportunity for further investment*

*Value of ports, harbours and maritime transport*

***Increased Containerization:*** Container traffic at the port continued to increase in tandem with the worldwide increase in the rate of containerization of seaborne trade. Container traffic increased from a total of 436.7 thousand TEUs in 2005 to about 1,076.1 thousand TEUs in 2015, an increase of 12.6% on average.

***Increased Transited Cargo:*** Transit cargo has registered an upward trend over the years

***Container Depots:*** The Port of Mombasa also operates the inland container depots (ICDs) in Nairobi, Kisumu and Eldoret with the Nairobi ICD being the busiest



## 4. Values Of Ocean Sectors & Potentials For Further Development & Investment

*Potential for further investments of ports, harbours and maritime transport*

**Increased berth performance:** The causes of the high berth occupancy rates include: insufficient berths; few or unreliable gantry cranes, and insufficient, inadequate or unreliable container yard equipment, among others.

**Reduce Ships waiting time:** The average waiting time per ship is predominantly high, at 2.5 days per ship, but this trend is also characterized by large variations. Cargo handling is not only inefficient but also unreliable and unpredictable

**Reduceship turnaround time:** Ship turnaround is an important indicator of overall port efficiency and is influenced mainly by arrival rates, waiting times and cargo off-take. A comparison with other ports in the world indicates that the Mombasa Port needs to address this issue in order to compete competitively.



## 4. Values Of Ocean Sectors & Potentials For Further Development & Investment

*Potential for further investments of ports, harbours and maritime transport*

***Increase productivity at the port:*** On average, dry cargo handled per ship working day increased from 3,477 tons in 2011 to 5,036 tons in 2015. This rate increased by 7.4% in 2012, decreased by 1.6% in 2013, increased slightly by 1.9% in 2014 and its now on an upward trend. These unpredictable changes in productivity suggest that there some fundamental issues related to productivity that need attention

***Increased berth length for calling vessels:*** Most of the ships visiting the port are longer than the designed berth LOA. This is true across most of the berths. This implies that the berths cannot be efficiently and productively used due the inadequate length.

***Mombasa Port Expansion:*** It is evident that throughput has been increasing steadily and such increments need expanded port area capacity



## 4. Values Of Ocean Sectors & Potentials For Further Development & Investment

*Potential for further investments of ports, harbours and maritime transport*

**Increase equipment:** Port stakeholders who have raised issues on several platforms about equipment shortage, which slows down quay and yard operations, sometimes even hampering delivery operations, especially for ICD bound cargo.

**Enhance ICT infrastructure:** ICT needs to be enhanced, especially because of the push for paperless trading and introduction of systems to improve processes and service delivery at the port

**Automation of operations:** In a bid to improve service delivery, ports across the globe are adapting to automation. KPA should follow suit, albeit in phases

**Increase qualified staff:** KPA needs to maintain optimum levels of staffing to ensure that all critical areas are manned adequately, and avoid instances where they may be short of staff, hampering service delivery.



## 4. Values Of Ocean Sectors & Potentials For Further Development & Investment

*Potential for further investments of ports, harbours and maritime transport*

***Service Port or Landlord Port:*** At present KPA owns the entire port infrastructure and undertakes all port operations. There is no separation between public and private sector roles. Subsequently, it becomes quite difficult to strategically plan port management and development. The way out of this institutional dilemma is to undertake an administrative reform that ensures that the port is migrated from a Service Port to a Landlord Port.

***Development of port infrastructure, equipment, multimodal transport, ICT and others:*** This will improve the sub-sector connectedness with other sectors such as agriculture, aquaculture and forestry, tourism, manufacturing, mining, energy, and water and environment, inter alia.

***Implementation of a new international port development study in order to cope with the existing and forecasted demand for port and maritime transport services.***



## 4. Values Of Ocean Sectors & Potentials For Further Development & Investment

*Potential for further investments of ports, harbours and maritime transport*

*Guarantee security and safety of both persons and goods within the maritime transport, harbors and ports to encourage more investments and utility of the Maritime transport and its hinterland connections.*



## 4. Values Of Ocean Sectors & Potentials For Further Development & Investment

*Potential for further investments in coastal offshore oil, gas and renewable energy*

The Government does not have adequate financial resources and technical capacity to undertake coastal and offshore oil and gas exploration on its own.

The inadequacy in technical capacity is mainly in the areas of marine geology, petro-chemical fields and technological sphere. Further, there are limited capabilities in engineering, construction, logistics, and supplies, health and safety.

Efforts should be put in advancing understanding about the oil and gas resources, the associated environment and the social aspects in order to address the pressures and opportunities created by oil and gas exploration activities.

It is also important for the country to ensure oil pollution preparedness and insurance for compensation of any eventual loss of livelihoods that could be associated with eventual drilling.





## 4. Values Of Ocean Sectors & Potentials For Further Development & Investment

*Potential for further investments in coastal offshore oil, gas and renewable energy*

**Develop and promote renewable energy alternatives for coastal Kenya, and supplies, health and safety.**





## 4. Values Of Ocean Sectors & Potentials For Further Development & Investment

### *Value and potential for future investments in coastal agriculture*

***Value of coastal agriculture:*** It offers the following benefits to local people; Reduced transport costs; Reduced pressure on the coastal fisheries and wetlands; Increased demand for agricultural inputs and services and consumption goods and services; Increased supply of food and export crops; Increased industrial raw materials which prompt construction of processing factories and industries in the areas leading to local economy and stimulate growth and employment;

*and Livestock are a source of food, a storage of wealth, a means of transport, provide manure for agriculture and serve as means of exchange*



## 4. Values Of Ocean Sectors & Potentials For Further Development & Investment

### *Potential for future investment in coastal agriculture*

***Availability of natural resources such as land and water:*** All the 6 counties in the coastal area have huge unoccupied lands especially in the rural areas as people in the coastal area segregate in villages, towns, around the beaches and urban areas. These could be exploited for improve agricultural production.

***Irrigation exploitation opportunity:*** . Desalinization of ocean water would be a key in solving the largest problem of the water scarcity. This coupled with high adoption of water harvesting technologies for surface runoff through water pan excavation, earth dam construction, negarims, shallow wells, zai pits among others would provide the needed water for irrigated agriculture and livestock.



## 4. Values Of Ocean Sectors & Potentials For Further Development & Investment

### *Potential for future investment in coastal agriculture*

*Empowering and supporting the women and youth in the role they take in agriculture. According to FAO (2014) 70% of the agricultural work force is provided by women. However, the women are deprived the power of decision making and secure tenure to the land they work in. This needs to be couple with awareness creation to the farmers on available government assistance institutes and personnel.*

*Emerging focus on value addition activities: could lead to diversifying of agricultural products in the market as well as reducing post harvesting losses*  
*Existence of new technologies: There are many emerging innovations of technologies and approaches ranging from hydroponics to metal silos and use of technology such as mobile phone systems and TV and radio based farmers training which could be exploited by coastal farmers for improved production.*



## 4. Values Of Ocean Sectors & Potentials For Further Development & Investment

### *Potential for future investment in coastal agriculture*

*Existence of collaborating institutions such as learning institutions, research organizations, UN and other international bodies could be harnessed for improved research, awareness creation, funds facilitation and training of agricultural professionals*

*Availability of national, regional and global markets*

*Kenya has accreditation and membership to various regional and international bodies such as ICA, WOCCU, ACCOSCA, ICA AFRICA, OIE, IBAR, IFAD, FAO, Desert locust organization. This allows Kenya to get accreditation and standardization for various agricultural products and also partnership to trade and negotiate produce.*

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## 4. Values Of Ocean Sectors & Potentials For Further Development & Investment

### *Potential for future investment in coastal agriculture*

*Identification of agriculture by the Vision 2030 to drive the economic pillar: This has put agriculture in focus and centre of research and development and increased the allocated budget by the government*

*Increased supportive incentives and favorable political climate in the last few years: These incentives include the ongoing allocation of title deeds to the land occupants in all the all the six coastal counties through the county governments and traditional leadership system*

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## 4. Values Of Ocean Sectors & Potentials For Further Development & Investment

### *Potential for future investment in coastal agriculture*

*Improvement in education, health, security and infrastructure such as roads and communication in the coastal region especially in the interior areas being undertaken by the government which will enable lead to more awareness and knowledge in agriculture dispersed to the communities and easy access to the markets for sale of agricultural products*

*Agribusiness - Kenya has an active and innovative system that has a history of offering micro loans in remote rural areas coupled with mobile banking. This can be used by farmers to allow access to credit for farm inputs (FAO, 2014).*

*Expansion of irrigation will lead to increased number of direct employments. According to AFA (2017) irrigation alone has the potential of employing 15 persons per acre.*



## 4. Values Of Ocean Sectors & Potentials For Further Development & Investment

### *Potential for future investment in coastal agriculture*

*Encourage greater participation of the locals, especially women, who actually do the farming.*

*Extensive awareness creation by the county governments, NGOs and Community Based Organizations among the locals on improved, modern agricultural methods, which includes post-harvest management*

*Coastal County governments should consider providing farmers with quality farm inputs at subsidized prices. Such farm inputs include fertilizer and the right seeds varieties which adapt well with coastal weather conditions*

*The county governments in collaboration with the Ministry of Agriculture should set up a collection point with efficient storage facilities like granaries for farm production so as to buy directly from the locals at a fair price to eliminate the middlemen who hoard farm products at the expense of the farmers.*





## 4. Values Of Ocean Sectors & Potentials For Further Development & Investment

### *Potential for future investment in coastal agriculture*

*Stakeholders in the agricultural sector should set up manufacturing factories in order to add value to agricultural produce. Value added products fetch higher returns for the farmers and will create Jobs for coastal communities*

*Enhance finance for agriculture from different sources for production and investment in value addition activities*

*Improve research, especially demand driven research, coupled with ineffective extension and delivery system of research findings*

*Improve infrastructure including rural roads, markets and transport systems. This will reduce high transactions costs for farmers and ease accessibility to input and output markets*



## 4. Values Of Ocean Sectors & Potentials For Further Development & Investment

### *Potential for future investment in coastal agriculture*

**Exploitation regional market potential:** *The regional markets that have resulted from regional integration, e.g. the East African Community (EAC), Common Market for Eastern and Southern Africa (COMESA), and trade liberalization are yet to be exploited to a significant level.*

**Improve agricultural practices:** *There is siltation, pollution and eutrophication correlated to an excessive use of pesticides, fertilizers, and poor farming methods and farming*

**Address Climate change:** *the varying temperatures and rainfall are affecting the traditional farming patterns but also leading to increased flooding, erosion, drought periods, inundation, sea water intrusion, rising salinity, storm surges which affect the farms located near the different water bodies*



## 4. Values Of Ocean Sectors & Potentials For Further Development & Investment

### *Potential for future investment in coastal agriculture*

*Invest in inputs quality control and inspection personnel to discourage unscrupulous businessmen from selling and stocking substandard and low quality seeds and other farm inputs which causes low productivity to the farms discouraging the farmers.*

*Improved access to affordable credit. The high interest rates regime, with very short grace period are a drawback to finance procurement of inputs and capital investment in areas such irrigation infrastructure, value addition technologies, farm inputs general farm development. This also makes agriculture become relatively unattractive*



## 4. Values Of Ocean Sectors & Potentials For Further Development & Investment

### *Values of coastal and marine forests and Opportunity for future investment*

***Value of coastal forestry:*** The main goods derived from this forest are medicine, honey, fuelwood, timber, carving logs, water, snakes, poles and even pasture for livestock. Services include habitat for biodiversity, catchment for water, shoreline and erosion protection, an attractive tourists' destination, and carbon sequestration.

*They also play a key role in culture as they are used for worship, as burial areas, ceremonial sites and meeting places for special occasions by the communities. This forests are also rich in minerals like Titanium, lead, silica sand, limestone, coral blocks, iron ore, rubie, barites, galena, gypsum and even salt.*



## 4. Values Of Ocean Sectors & Potentials For Further Development & Investment

### *Opportunities for future investments in coastal forestry*

***They include** :Inclusion of indigenous knowledge in conservation and management; Potential for the development of pharmaceutical and industrial products ; Involvement of institutions and stakeholders as partners; Establish REDD+ to reduce deforestation in coastal forests through the conservation;*

*and Kenya is signatory to a number of international agreements. As a signatory to the Convention of Biological Diversity, the country has committed to protect and enhance biodiversity*



## 4. Values Of Ocean Sectors & Potentials For Further Development & Investment

*value of coastal and offshore mining and extractives and potential for future investment*

***Value of coastal and offshore mining and extractives:*** According to Murton report of 2000, the continental shelf area of Kenya has 1,039,100 tonnes of Manganese, 41,564 of copper, 10,391 of Nickel and 10 tonnes of cobalt all unexploited to date.

*Coastal mining; quarrying of coral rock and limestone for cement manufacturing and coarse aggregates for concrete and road building; artisanal sand mining; informal removal of sand from beaches and foredunes; formal mining of minerals from titaniferous sands; and, production of sea salt from saltpans typically located on estuary flood plains. The types of mineral occurrence in the deep sea are; polymetallic sulphides, cobalt rich ferromanganese crusts and polymetallic nodules*



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*Kenya has not yet tapped into offshore mining.*

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## 4. Values Of Ocean Sectors & Potentials For Further Development & Investment

*Potential for future investment in coastal and offshore mining and extractives*

*Kenya can tap into the valuable resources in the deep sea like cobalt-rich ferromanganese crusts, polymetallic manganese nodules and polymetallic sulphides.*

*Challenge is Deep-seabed mining is capital intensive requiring complex infrastructure, appropriate technology and skills*

*More research should be done on the potential of commercialization of marine biotechnology in Kenya. The Kenya government launched the National Biosafety Authority in May 2010 whose aim was to regulate research and commercial activities involving GMOs with a view to ensuring safety of human and animal health and provision of an adequate level of protection of the environment (NBA).*





## 4. Values Of Ocean Sectors & Potentials For Further Development & Investment

*Potential for future investment in coastal and offshore mining and extractives*

*Dispute resolution mechanism: The frequency of land disputes between formal mining companies and local Kenyan communities. In the case of Tiomin, the challenges could not be resolved on timely basis leading to closure of operations at the Coast by Tiomin, a Canadian mining company*

*Improve infrastructure in mining areas: Much of the areas where locals undertake mining have poor or lack infrastructural facilities. This has led to high cost of transportation, unregulated, uncontrolled and unmonitored mining activities by the mining authorities*



## 4. Values Of Ocean Sectors & Potentials For Further Development & Investment

*Potential for future investment in coastal and offshore mining and extractives*

*Increase support to promote small scale artisanal miners who dominate the mining industry and promoting offshore mining. Reduce the use of rudimentary techniques such as use of hazardous substances blasting and mining which undermines the health of the miners as they get exposed to materials mercury, zinc vapour, cyanide, dust and fine particles, large amounts of noise, lead to high number of accidents and possible pollution of the natural resources*

*Invest in technological development in the country to promote the exploration of offshore mining*

*Invest in technical personnel and institutions offering technical and vocational education in the mining extractive sectors especially the offshore*

*Enhance and standardize the mineral supply chain: There is low price for the minerals due to lack of a concrete supply chain and or standardized market*



## 4. Values Of Ocean Sectors & Potentials For Further Development & Investment

*Potential for future investment in coastal and offshore mining and extractives*

***Ensure rehabilitation of mine areas:*** *The coast region has numerous abandoned quarries with no rehabilitation actions taking place. The current mining areas equally lack rehabilitation measures in place.*





## 5. POLICY AND GOVERNANCE GAPS OF OCEAN SECTORS

### Policy and Governance gaps in Coastal and deep sea fisheries, mariculture and aquaculture

There are gaps, omissions and loopholes in the current legal and policy framework governing the fisheries industry, for example, the fish feed certification, mechanisms to monitor compliance to fish feed production (Munguti et al, 2014)

Generally, the regulations and policies are outdated and hence they are not in line with international requirements, the constitution and other relevant laws and policies.

Gaps include the lack of an integrated national ocean law, lack of an ocean fisheries and mariculture policy and law and specific legal framework dealing with exploration of ocean fisheries and deep sea fisheries management (JICA, 2018; Okemwa, 2019).

Gaps are also created by taking too long to develop regulations required to support specific laws.



## **5. POLICY AND GOVERNANCE GAPS OF OCEAN SECTORS**

### **Policy and Governance gaps in Coastal and deep sea fisheries, mariculture and aquaculture**

**Above issues are aggravated by the ineffective enforcement of fisheries laws and regulations caused by sufficient number of staff to ensure enforcement, lack of involvement of the stakeholders who are expected to play a role in implementation (JICA, 2018).**

**The laws, policies addressing the utilization of ocean resources are contained in various fragmented pieces of legislation**

**Institutions mandated to implement the fisheries regulatory framework are faced with the challenge of inadequate resources**

**To ensure effective and efficient implementation it is necessary to update the institutional structure of some of the existing fisheries agency. This is to align them with the current realities facing the sector.**



## **5. POLICY AND GOVERNANCE GAPS OF OCEAN SECTORS**

**Policy and Governance gaps in Coastal and deep sea fisheries, mariculture and aquaculture**

**Lack of consistency in the institutional governance over aquaculture**

**The laws, policies addressing the utilization of ocean resources are contained in various fragmented pieces of legislation**

**There is mandate overlaps in regulation of the maritime environment**





## **5. POLICY AND GOVERNANCE GAPS OF OCEAN SECTORS**

### **Policy and Governance gaps in Coastal and marine tourism**

**For effective implementation of United Nations Convention on Law of the Sea (UNCLOS) Kenya needs to strengthen its capacity to acquire knowledge of both its living and non-living resources in their jurisdictions for effective management exploitation and conservation**

**There is mandate overlaps in regulation of the maritime environment**

**Fisheries resources are directly and indirectly interlinked with the use of land, water, environment, wildlife and forestry and therefore interlinked with laws or Acts that manage these sectors and their institutions. It is thus clear that the institutional mandates provided by the different Acts cause various degrees of overlaps in their mandates and therefore weaken enforcement besides causing inefficiency. Gaps include:**



## **5. POLICY AND GOVERNANCE GAPS OF OCEAN SECTORS**

### **Policy and Governance gaps in Coastal and marine tourism**

**The Fisheries Act requires to be fully reviewed to empower it with coordination role since it has been weakened by various overlaps in institutional mandates of institutions that directly or indirectly interlink with fisheries resources and its environment**

**There is need for a specific Ocean Fisheries and Mariculture Policy and Law is required to coordinate and implement fisheries activities**

**The policy and legal gaps need to be bridged, capacity and skill fissures need to be addressed, the infrastructural development ought to be sped up, provision of adequate and powerful equipment such as deep-sea boats also need to be addressed as some of the opportunities lie deep in the sea.**





## **5. POLICY AND GOVERNANCE GAPS OF OCEAN SECTORS**

### **Policy and Governance gaps in Coastal and marine tourism**

**Deep-sea sport fishing is already happening in Mombasa, Kilifi, and Watamu. However, there is a need to tap into the domestic market as most of the deep-sea sport fishing tourists are international making the subsector susceptible to seasonality.**

**Marine Ecotourism is another frontier with potential to contribute to the sector's growth and conservation of marine resources. With robust marine spatial planning in place, marine ecotourism potential could be realized**

**Heritage and cultural tourism, gastronomy, among other exciting activities, do not require much investment to actualize. The tourism sector players must, however, create a conducive environment for such activities. Policy and legal framework and incentives to the private sector investors need to be aligned with these activities**



## 5. POLICY AND GOVERNANCE GAPS OF OCEAN SECTORS

### Policy and governance gaps of ports, harbours and marine transport

**Ministerial alignment:** The linkages in the functions of the State Department for Maritime and Shipping Affairs and the State department for Fisheries, Aquaculture and the Blue Economy illustrate the need for a multi-sectoral approach between the two institutions.

Other related administrative, policy, legal and institutional coordination issues need urgent attention in order to optimize the contribution of Ports, Harbours and Maritime Transport to Kenya's GDP and to Kenya's BE

**Support to KNSL:** KNSL currently falls under the State Department for Shipping & Maritime Affairs. Over the years, it has been extensively reported that KNSL had almost reached an insolvent status due to lack of business, despite reported attempts to revive it



## 5. POLICY AND GOVERNANCE GAPS OF OCEAN SECTORS

### Policy and governance gaps of ports, harbours and marine transport

**Enhance KMA and KPA roles as environmental leaders:** There is need to enhance the monitoring, evaluation and management of offshore and onshore environment and implement proactive measures against potential concerns of pollution control, waste management, global warming prevention, and occupational health and safety in coordination with the relevant authorities

**Undertake an administrative reform that ensures that the port is migrated from a Service Port to a Landlord Port.**



## 5. POLICY AND GOVERNANCE GAPS OF OCEAN SECTORS

### Policy and governance in offshore oil and gas mining and renewable energy

The country needs to sign and ratify all International Maritime Organization (IMO) Conventions relevant to oil and gas exploration, adhere to the conditions of the Nairobi Convention, promote regional coordination on planning of transboundary issues such as oil spill contingency measures, piracy and security.

Enhance awareness raising and capacity building covering environmental regulators and negotiators in the energy sector.

Promote effective management and governance of the oil and gas resources, and promote participation of the civil society organizations

The government should also ensure that bilateral agreements made with prospecting companies are designed to provide direct and indirect benefits to the local people and the country at as a whole



## 5. POLICY AND GOVERNANCE GAPS OF OCEAN SECTORS

### Policy and governance gaps in coastal agriculture

**There is need to harmonize policies and laws governing this sector to avoid duplication and sub-optimal use of resources**

**Lack of a Comprehensive Land Use Policy:** the country lacks a clearly articulated land policy with the result that issues like land use, management, tenure reforms and environmental protection are inadequately addressed through the existing systems

**Ban of certain traditional farming practices:** e.g. shifting cultivation.

**Public Expenditure:** in 2016/17, Kenya's allocation to the agriculture sector was less than two percent of total expenditure, well below the average for sub-Saharan Africa of 4.5 percent (World Bank, 2018)

**The sector is characterized by weak vertical integration, made worse by weak institutions and support services for agricultural exports**



## 5. POLICY AND GOVERNANCE GAPS OF OCEAN SECTORS

### Policy and governance gaps in coastal forestry

There still exists some gaps and failures in policies regarding coastal forests in Kenya. For instance, the Shimba Hills forest is gazetted both as a forest reserve and a national reserve. This creates conflict in terms of the prosecution of offenders and even the development of new programs and activities within the forest

The Forest Policy does not give much recognition to farm forestry but to redeeming and protection of natural forests, while sustainable use of biodiversity in forests is largely ignored

In wildlife management, there are legal gaps that lead to Land use conflicts leading to encroachment into the wildlife protected areas which arise from poor local and national land use planning. There is also need for innovative approaches e.g. devolved participatory wildlife management to enlist support from private sector, NGOs and CBOs.



## **5. POLICY AND GOVERNANCE GAPS OF OCEAN SECTORS**

### **Policy and governance gaps in coastal forestry**

**The social responsibility of the tourism industry to local communities is weak and not commensurate with the level of revenue generation derived from the ecological areas and cultural zones where they operate**

**There is need to review the Fisheries Act to harmonize the regional and international conventions, and agreements into Kenyan law for their efficient implementation**



## 5. POLICY AND GOVERNANCE GAPS OF OCEAN SECTORS

### Policy and governance gaps in coastal and offshore mining and extractives

Inadequate comprehensive, clear and harmonized mining policies and guidelines coupled with poor law enforcement in the mining sector.

**Gender discrimination:** very few miners participating in the rampant artisanal mining activities are women.

There is a general lack of appropriate policy frameworks and strategies to drive the industrialization, value addition and benefaction agenda

There is inadequate regulations to govern the activities of artisanal Miners leading to conflicts.

The definition of who consists the community is ambiguous. This needs to be clarified especially in matters of public participation and benefit sharing

There is lack of clear, streamlined procedures, imprecise methods for offshore mining that put into consideration ecological and social impacts.





## 5. POLICY AND GOVERNANCE GAPS OF OCEAN SECTORS

### Policy and governance gaps in coastal and offshore mining and extractives

There are institutional overlaps and conflicting mandates which need to be ironed out for improved performance of the subsector.

There is lack of clear, streamlined procedures, imprecise methods for offshore mining that put into consideration ecological and social impacts

There is inadequate national legislation on offshore mining that is coherent with the regional laws and policies thus resulting to use of international law



## 6. POLICIES AND TOOLS FOR SUSTAINABLE BLUE ECONOMY IN KENYA

### **Integration of marine spatial planning:**

Marine spatial planning (MSP) is a tool to plan, manage, and improve marine environments

**Financing the blue economy:** Financing will be required if Kenya's blue economy is to achieve the intended goals

### **Involvement of the private sector:**

The majority of the coastal and marine tourism businesses are owned and operated by private investors. However, to exploit the potential of the "sleeping" subsectors sustainably, the state must play its role to help attract investment in the conservation of the blue economy and create policies that establish a business case for the sector



## 6. POLICIES AND TOOLS FOR SUSTAINABLE BLUE ECONOMY IN KENYA

### **Ecosystem management tools:**

According to the Mombasa Master Plan, the planned port infrastructural developments will lead to the clearing of 36 ha of mangrove in the DongoKundu area which is a significant loss of biodiversity and associated ecological services

**Integrated coastal zone management scheme (ICZM) plan** has been developed to promote the protection of these coastal resources while ensuring the economic empowerment of the local coastal communities.

**Blue Economy strategy:** There is need to develop an all-inclusive blue economy strategy that brings on board all the relevant stakeholders.

**Establish better equipped Institutes for Blue Economy and Oceans Studies** to undertake research and offer technical assistance and capacity building in all matters relating to the ocean, and the sustainable use of its resources.



## 7. Conclusions

the blue economy comprises of a number of subsectors which include, among others, ports, harbours and marine transportation, coastal and marine tourism, coastal and marine agriculture, coastal mining .

Each of the individual subsectors in the blue economy is contributing to the overall economic growth in a number of ways including, offering good and services, contributing to employment, and contributing to government revenue

The growth of the blue sector will not achieve the intended goals if the governance frameworks is not streamlined.

Finally, a number of tools and frameworks have been proposed to help boost the development of the blue economy. Example is marine spatial planning (MSP), which will help situate the different subsectors along the coast and ease their development.



*End*

2021