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A MASTERPLAN FOR SUSTAINABLE COASTAL, MARINE TOURISM AND MINING ACTIVITIES TOWARDS CONSERVATION OF AQUATIC BIODIVERSITY AND ENVIRONMENTAL PROTECTION IN KENYA

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ACRONYMS

ABE	African Blue Economy
ABES	African Blue Economy Strategy
AfDB	African Development Bank
AIMS	Africa's Integrated Maritime Strategy
AU	African Union
AU-IBAR	African Union Inter- African Bureau for Animal Resource
BAF	Blue Action Fund
BE	Blue Economy
CBD	Convention on Biodiversity
CMT	Coastal and marine tourism
EIA	Environmental impact Assessment
EMP	Environmental Management Plan
JKIA	Jomo-Kenyatta International Airport
MIA	Moi International Airport
EU	European Union
GDP	Gross Domestic Product we
GEF	Global Environment Facility
ICZM	Integrated Coastal Zone Management
IFAD	International Fund for Agricultural Development
LME	Large Marine Ecosystem
MICE	Meeting, Incentive Travel, Conferences and Exhibitions
MS	Member State
MSP	Marine Spatial Planning
NDCs	Nationally Determined Contributions
NGO	Non-Governmental Organisation
OGM	Oil and Gas, and Mineral Mining
PFRS	Policy framework and reform strategy
PPPs	Public Private Partnerships
SAP	Strategic Action Programme
SDGs	Sustainable Developmental Goals
SEA	Strategic Impact Assessment
SOLSTICE-WIO	Sustainable Oceans, Livelihoods and Food Security through Increased Capacity in Ecosystem Research in the Western Indian Ocean
SSA	Sub-Sahara Africa
SWIOfish2-	Second South West Indian Ocean Fisheries Governance and Shared Growth Project
TMP	Tourism Master Plan
UN	United Nation
UNCSD	United Nations Conference on Sustainable Development, Rio+20
UNCTAD	United Nations Conference on Trade and Development
UNCTAF	United Nations Conference on Trade and Development

UNECA	United Nations Economic Commission for Africa
UNEP	United Nation Environment Programme
UNESDOC	United Nations Decade of the Ocean
SIDA	Swedish International Development Cooperation Agency
NCW	National Consultative Workshop
UNIDO	United Nation Industrial Development Organisation
UNWTO	United Nation World Tourism Western Indian Ocean Organisation
WIO	Western Indian Ocean
WIOSAP	Implementation of the Strategic Action Programme for the Protection of the WIO from Land-based Sources and Activities
KMFRI	Kenya Marine and Fisheries Research Institute
MTP	Medium Term Plans
NAP	National Action Plan
UN	United Nations
KTB	Kenya Tourist Board
KES	Kenya Shillings
COVID-19	Covid-19 Corona Virus Disease of 2019
KNBS	Kenya National Bureau and Statistics
WTTC	World Travel and Tourism Council
USD	United States Dollar
AIMS	Africa Integrated Maritime Strategy
PFRS	Policy Framework and Reform Strategy (for Fisheries and Aquaculture in Africa)
SDG	Sustainable Development Goal
ICZM	Integrated Coastal Zone Management
EMCA	Environment Management and Coordination Act (EMCA 2016)
KCGS	Kenya Coast Guard Service
TPU	Tourist Police Unit

1. BACKGROUND

1.1 The African Union Inter-African Bureau for Animal Resources (AU-IBAR)

With a mandate to support and coordinate the utilization of livestock, fisheries, aquaculture and wildlife as resources for both human wellbeing and economic development in the Member States of the African Union, the AU-IBAR - a specialized technical office of the Department of Agriculture, Rural Development, Blue Economy and Sustainable Environment (DARBE) of the African Union Commission (AUC)- is currently undertaking intervention in the fisheries, aquaculture sector. This intervention is guided by the Policy Framework and Reform Strategy for fisheries and aquaculture in Africa (PFRS), which aims at improving governance of the sector for increased sustainable contribution to food security, livelihoods and wealth creation. Deriving from the framework of the African Union 2063, the Africa Blue Economy Strategy (ABES) provides guidance for the development of an inclusive and sustainable blue economy that significantly contributes to continental transformation and growth, through advancing knowledge on marine and aquatic biotechnology, environmental sustainability, marine ecosystem utilization, management and conservation and carbon sequestration, the growth of an Africa-wide shipping industry, the development of sea, river and lake transport, the management of fishing activities on these aquatic spaces, and the exploitation and beneficiation of deep sea mineral and other marine resources.

1.2 The Implementation of ABES

In order to support the implementation of Africa Blue Economy Strategy, AU-IBAR, with support from the Swedish International Development Cooperation Agency (SIDA), is implementing a three-year project on "Conserving Aquatic Biodiversity and Ecosystems in African Blue Economy'.

The overall objective of the Project is to enhance the policy environment, regulatory frameworks and institutional capacities of AU member states and regional economic communities to sustainably utilize and conserve aquatic biodiversity and ecosystems. The specific objectives of the project are as follows:

a. Ratify and/or align relevant international/ regional instruments related to blue economy themes (with specific reference to protecting and conserving biodiversity);
b. Optimizing conservation and sustainable use of biodiversity while minimizing conflicts among blue economy sub-themes;
c. Strengthening measures for mitigating the negative impacts of coastal and marine tourism oil, gas, deep sea mining and climate change on aquatic biodiversity and environment; and
d. Strengthening gender inclusivity in aquatic biodiversity conservation and environmental management.

1.3 Background and Rationale for the Masterplan

As part of the mechanism for implementation of ABES, a strategic direction to ensure environmentally sustainable and climate resilient economies and empowered communities through the conservation of aquatic biodiversity and ecosystems for Coastal and Marine Tourism (CMT) and mining activities was proposed. In this regard, the Project conducted studies to identify priority issues and actions for sustainable coastal, marine tourism and mining activities for aquatic biodiversity conservation and environment protection. The studies culminated in the development of a framework for sustainable environmental coastal and marine tourism, oil and gas exploration and mineral mining for the AU member states and regional economic communities. Further to the developed framework for sustainable

environmental coastal and marine tourism, oil and gas exploration and mineral mining was the support to selected AU member states for the formulation of national master plans and to strengthen regulatory frameworks to ensure environmental sustainability and biodiversity conservation in the development of coastal and marine tourism, oil and gas exploration and mineral mining.

In this regard, Kenya was selected for support to Blue Economy through development of master plan as well as strengthen polices and regulatory frameworks that would guide and promote sustainable development of coastal and marine tourism; oil and gas exploration as well as mining activities.

1.4 The National Consultancy and its Deliverables

A national consultant was recruited by AU-IBAR, under the provisions of the Swedish aquatic biodiversity project, a consultancy service was procured, amongst others, to conduct the following tasks:

a. Review and strengthen national regulatory frameworks for sustainable coastal, marine tourism and mining (oil, gas and minerals) activities towards aquatic biodiversity conservation and environmental management in Kenya;
b. Support the national consultative workshop; and
c. Develop a national masterplan for sustainable coastal, marine tourism and mining (oil, gas and minerals) activities in Kenya;

As contained in the terms of reference, the following are deliverables of the Consultancy:

a. National consultative workshop facilitated;
b. Priority issues and actions for sustainable coastal, marine tourism and mining activities identified;
c. Masterplan for sustainable coastal marine tourism, mining activities (including oil, gas, mineral exploration) developed for Kenya;
d. Policy guidelines and regulatory measures developed to strengthen environmental sustainability and aquatic biodiversity conservation in the development of coastal and marine tourism in Kenya;
e. Policy guidelines and regulatory measures developed to strengthen environmental sustainability and aquatic biodiversity conservation in mining activities, including oil and gas exploration in Kenya;
f. Implementation mechanisms developed in the master plan for rolling out the guidelines in Kenya; and
g. A comprehensive report on the consultancy.

1.5 Methodology and Approach to the Consultancy:

The consultancy was implemented in a participatory manner to ensure quality delivery of expected outcomes of the assignment and engender ownership. Under the guidance of an AU-IBAR team and in line with given terms of reference, the approach adopted to undertake this consultancy included:

a. Detailed briefings with relevant personnel at AU-IBAR on the tasks;
b. Extensive consideration of the report on the developed framework for sustainable environmental coastal and marine tourism, oil and gas exploration and mineral mining and references endorsed by the African Union, including the ABES;
c. Identification of information repository relevant to the subject within Ministries, Departments and Agencies (MDAs);
d. Desk review of relevant national regulatory, policy related documents from MDAs responsible for environment, the tourism and

mining sectors (Oil, Gas, Deep sea, Mineral sector), aquatic biodiversity (including fisheries and aquaculture);

e. Conduct of a gender-inclusive stakeholder identification and mapping exercise to identify relevant stakeholders to participate in the consultative workshop from the three sectors of interest – tourism; oil and gas; and mining in Kenya;
f. Facilitation of a physical national consultative workshop with relevant sectorial stakeholders on development of national masterplans and strengthening regulatory frameworks for environmentally sustainable coastal and marine tourism; oil and gas exploration and mineral mining;
g. On the basis of the outcomes of the national consultative workshop, priority issues and actions were then identified for the development of a national master plan; and
h. As part of the deliverable of the consultancy, regulatory and policy guidelines to strengthen environmental sustainability in the development of coastal and marine tourism, oil and gas exploration (mining) and practices in Kenya were developed including a detailed report of the whole consultancy.

1.6 The Development of a National Masterplan for Sustainable Coastal, Marine Tourism and Mining (Oil, Gas and Minerals) activities in Kenya

The consultancy deployed a participatory and inclusive methodology in the development of the national masterplan for sustainable coastal, marine tourism and mining (oil, gas and minerals) activities in Kenya through Stakeholders' Consultation workshop.

1. In-depth analysis of the Consultancy report on the continental frame work on priority issues for sustainable coastal, marine tourism, oil, gas and mineral exploration by Professor Adetola Jenyo-Oni, Professor, of Coastal Wetland Biodiversity and Fisheries Ecology, University of Ibadan, Nigeria
2. Desk Study was conducted to review existing instruments relating to coastal, marine tourism, oil, gas and mineral exploration to mainly determine gaps vis a visa the continental framework
3. A stakeholders' expert consultative workshop, involving delegates from relevant public policy sectors, academia, private sector, Non-State actors etc, top identify priority issues and actions relating to coastal, marine tourism, oil, gas and mineral exploration

A consulted Agenda for the engagement of relevant stakeholders was adopted at the workshop to essentially guide the flow of the presentations in plenary sessions, discussions, breakout into working groups and reporting back into plenary. Three thematic groups covering the focus areas were utilized, with each group making submission arising from their discussions and receiving feedback for input into their final submissions. A communiqué was presented in plenary for further consideration by the Stakeholders prior to adoption

2. KENYA'S COASTAL AND MARINE TOURISM

Tourism remains a major sector in Kenya's economy. The country has been a key tourism destination over several decades, boasting of both rich coastal and marine tourism sector as well as a natural heritage. Kenya is home to the "Big Five" comprising African bush elephants, Savannah lions, African buffaloes, rhinos and leopards. Additionally, Kenya is home to other iconic native wildlife species, including hippos, zebras, and giraffes among others. Lying on the eastern coast of Africa, Kenya meets the Indian Ocean to the east, hence marine mammals also constitute a bigger portion of the wildlife found in the country.

Kenya has enjoyed high tourism numbers since the 1990s with about 34,211 hotel beds with a 44% occupancy rate in 1995. In 2000, the number of tourists visiting the country stood at 1,036,628 visitors pushing tourism receipts to ≈US$257 million. By 2018, the number of tourists had shot to 2,025,206 increasing slightly to 2,048,334 in 2019, with 128,222 tourists jetting directly to the coast. During this period, both Jomo-Kenyatta International Airport (JKIA) and Moi International Airport (MIA) showed significant growth in tourist numbers, at 6.1% and 8.6%, respectively, earning the country ≈US$1.6 billion in revenues. However, these earnings are not commensurate with the number of visitors, compared to coastal states and small island states which have focussed on promoting sustainable coastal and marine tourism while safeguarding aquatic biodiversity and ecosystem conservation. For example, Seychelles earned ≈ US$ 1,739 per tourist visiting this small island state in 2020, compared to US$1,363 for Kenya during the same year.

Consequently, there is need for a more proactive approach to planning and marketing of Kenya's coastal and marine tourism, oil, gas and mining to ensure sustainability while conserving aquatic biodiversity and ecosystems health. Consequently, there is need to ensure cooperation and good working relationship between the sectors; Coastal and marine tourism, oil and gas exploration and, mineral mining to ensure developments of the highest standards, improved master planning and creation of strategies for aquatic biodiversity and ecosystem conservation.

In this view, AU-IBAR in collaboration with the Republic of Kenya held a consultative workshop in Nairobi, Kenya from 22nd to 24th March 2023, to obtain data and information to contribute to the development of a Masterplan for Sustainable Coastal and Marine Tourism and Mining activities to strengthen regulatory Frameworks towards Aquatic Biodiversity and Ecosystems Conservation in Kenya. The workshop, in line with the project "Conserving Aquatic Biodiversity in African Blue Economy" implementation activity under Output 3.2. "Strategies for an integrated strategic framework for sustainable coastal and marine tourism and mining". The project is implemented by AU-IBAR with funding from the Swedish International Development Cooperation Agency (SIDA). The overall objective of the project is to enhance policy environment, regulatory frameworks and institutional capacities of AU Member States and Regional Economic Communities to sustainably utilize and conserve aquatic biodiversity and ecosystems.

The overall objective of the National Consultative Workshop (NCW) was to a develop national master plan for sustainable coastal, marine tourism and mining activities towards aquatic biodiversity and ecosystems conservation in Kenya, and thereafter formulate regulatory framework (policies, regulations) for the country. Specifically, the NWC was aimed at: i) Creating awareness on key issues, impacts of coastal and marine tourism,

oil and gas exploration on aquatic biodiversity, environment including socio-economy impacts; ii) Identifying national priority issues and actions for the development of sustainable coastal, marine tourism, oil, and gas exploration; iii) Developing national master plans for sustainable coastal, marine tourism, oil, and gas exploration; and, iv) In line with the provisions of the national master plan, developing regulatory and policy guidelines for sustainable mining and oil and gas exploration policy and practice in Kenya.

3. COASTAL AND MARINE TOURISM, OIL, GAS AND MINERAL MINING IN KENYA

The economic significance of Kenya's coastal and marine tourism can be measured in terms of its contribution to gross domestic product (GDP). Foreign exchange earnings, employment and government revenues. Furthermore, has strong linkages with transport, food production, retail and entertainment in addition to its close association with beautiful coastal beaches, coral reefs, abundant wildlife (including the 'big five' game); national parks & game reserves; tropical climate; beautiful geographical landscapes; Savannah grasslands among others. It also has potential to forge strong linkages with other economic sectors to bring substantive economic benefits to the local and coastal communities. Additionally, being the most popular business, investors in coastal and marine tourism have the opportunity to leverage several programmes to attract investment into the industry; establishment of resort cities, branding of premium parks, development of high value niche products and MICE tourism facilities, and the construction of new internationally branded hotels, among others. Consequently, sound policy and regulatory frameworks must be put into place to allow the sector remain sustainable and continues to contribute to the gross domestic product (GDP). Foreign exchange earnings, employment and government revenues.

On the other hand, Kenya's oil discoveries though small, are likely impact on the environment can not be underestimated. Economically, Kenya's estimated fiscal revenues are ≈US$9bn annually, calculating to about 3.4% of Kenya's $264 billion GDP (2022 estimate). Therefore, the continued effort to explore and extract oil and gas from Kenya's oil blocks in Turkana and Lamu requires proper planning by way of a master plan in order for the resource to be

sustainable in the long-term. Although the mining sector (oil, gas, minerals) sector only contributes a meagre 1% of the GDP, it was given prominence in the 2nd MTP (2013-2017) as key contributor to the envisaged and sustained GDP growth of 10% per year to the end of 2030. However, the sector has continued to stagnate between KES 22,000 -32,000 Million, suggesting the need for more concerted efforts towards a grand master plan to revamp the sector. In place are the "National Action Plan for Artisanal and Small-scale Gold Mining in Kenya, developed in accordance with the Minamata Convention on Mercury" in 2017

3.1 Contribution to Gross Domestic Product (GDP)

Kenya boasts a rich marine ecosystem that is key to the economic wellbeing of the over 4.0 million people that live in the country's coastal communities. It's home to coastal forests, mangrove forests, seagrass, coral reefs, sand dunes and sandy beaches, among other habitats. Kenya's coastal and marine tourism is the largest Blue Economy sector, accounting for about 65% of the total Blue Economy contribution to GDP. Yet this represents only a fraction of the potential of coastal and marine tourism in Kenya. For example, the sector accounted for ≈8.2% of total GDP in 2019 (pre-covid-19 period) but currently, the UN Habitat estimates that Kenya's marine ecosystems contribute at just ≈4.0% of the country's GDP, equivalent to US$2.5 billion per year. Other sectors analysed, as key contributors to Kenya´s blue economy, include coastal and offshore oil and gas and renewable energy; coastal agriculture; coastal and marine forestry and offshore coastal mining and extractives.

3.2 Contribution to Foreign Income Earnings

Tourism contributes 5% to total GDP, and when factoring in all linkages within the sector, tourism contributes ≈11.6%, making it the country's third-largest contributor to GDP. The sector contributes 18% to total foreign exchange earnings, between 52% and 68% of which is derived from coastal and marine tourism activity. The sector has also been strong in recent years, with arrivals increasing from 814,000 in 1990 to over 2 million in 2007 and revenue increasing from KES 56.2 billion to KES 65.4 billion between 2006 and 2007, representing an 11.6% growth rate.

By 2018, the tourism sector still remained one of the leading foreign income earners in Kenya with the sector contributing ≈27% of foreign exchange, equivalent to 12% of the country's national Gross Domestic Product (GDP). The country's blueprint Vision 2030, aims at making the country among the top 10 overhaul tourist destinations in the world. According to Kenya Tourist Board (KTB), of the tourists coming to Kenya, about 65% visit Kenyan Coast making tourism an important part of the city's economy.

However, 2019 witnessed a slump in the sector caused by the global Covid-19 pandemic and travel restrictions. However, the sector has surged 83% in 2022 to record KES 268 billion (US$2.13 billion) revenue as the Covid-19 related restrictions eased, with visitors rebounding to 72% of the pre-pandemic levels in 2019, outpacing the rest of the continent which stands at 65% of the pre-pandemic level. The Unites States was the main source of visitors during the year 2022, followed by Uganda, Britain and Tanzania. The sectoral earnings are projected to hit to 425 billion shillings (US$3.37 billion) in 2023, before increasing to KES 540 billion in 2027.

3.3 Contribution to Food and Employment

According to the Kenya National Bureau and Statistics (KNBS), the tourism sector made up 4% of total employment in the country, providing about 483,000 jobs surging to about 1.1 million jobs in 2018. Furthermore, tourism creates linkages with other sectors of the economy, adding to about 1.6 million jobs, or 8.5% of total employment (WTTC, 2020). According to the Kenya Tourist Board (KTB), of the tourists coming to Kenya, about 65% visit the Kenyan coast making tourism an essential part of the coastal economy. In addition, the ocean/sea and associated coastal and marine biodiversity provide significant benefits in terms of food and nutrition security from fisheries, economic and social development from fisheries, marine and coastal tourism, shipping, mining, energy; and, ecosystem services such as carbon sequestration, water filtration, atmospheric and temperature regulation, protection from erosion and extreme weather events.

3.4 Government revenues from CMT and Oil, Gas and Mining

Government revenues from the tourism sector, one of the key economic drivers in Kenya were estimated at 8.8% of the country's GDP, worth USD 7.9 billion in 2018. The total global domestic travel and tourism spending was US$ 3,971 billion in 2017 (WTTC, 2018). The domestic tourists' bed-night occupancy accounts for more than 50% of the bed occupancy from 2015-2018 with the number of domestic tourists' bed-nights increasing from 2.95 million in 2014 to 4,56 million in 2018. In 2021, travel and tourism contributed US$ 5.4 billion to Kenya's GDP. and KES 268 billion in 2022, calculating to KES 160.8 billion for the coastal and marine tourism.

On the other hand, Kenya's oil discoveries are small, but the likely impact on the environment can not be underestimated. Economically, it is estimated fiscal revenues from oil are about $9bn annually or ≈ 3.4% of Kenya's $264 billion GDP (2022 estimate). Therefore, continued efforts to explore and extract oil and gas from Kenya's oil blocks in Turkana and Lamu requires proper planning by way of a master plan in order for the resource to be sustainable in the long-term. Effort were made by government to clean up operations in the other minerals sector to make it more transparent and attract more investment; e.g. titanium ore (Base Titanium) which exported the first batch February, 2014. The sector has continued to grow, adding KES 68.9 billion to the GDP in 2018, rising to KES 72.7 billion, 76.3 billion and 91.8 billion in 2019, 2020 and 2021, respectively.

3.5 Investment in CMT and Oil, Gas and Mineral Mining

The investments in the Kenya's CMT are still low, and largely underdeveloped compared to international peers in the region. For example, Seychelles has a luxury and upscale focus, but still accounts for 20 beds/km of coastline compared to Kenya's 21 beds/km. Comparatively, Zanzibar attracts 265 visitors against its 50 beds / km of coastline in a given month, while Kenya only gathers 158 tourists with ≈70% of Kenya's coastal visitors centred around Mombasa.

In terms of infrastructure, Kenya had ≈22,500 available rooms in star-rated hotels during 2021, an increase from 20,100 in 2018; with this upward growth trend, it is estimated that the country has 23,800 hotel rooms as at 2023. Taita-taveta boasts about 13 star-rated hotels with a combined capacity of over 1000 beds while Kwale has a total of ≈11 star-rated hotels (over 37 together with non-rated facilities) with bed capacity of ≈3,053 to 7127 beds, respectively. Mombasa is home to ≈53 star rated hotels and lodges (over 200 including non-rated

hotels) with a total bed capacity of about ≈8,000 beds extending to ≈10,300 beds together with the non-rated facilities. Kilifi county boasts over 40 star-rated hotels and lodges with a combined capacity of ≈6249 beds, in addition to over 100 non-rated facilities bringing the available bed capacity to over 15,000 beds. To the northern coast lies Lamu with less than 10 star rated facilities and a combined bed capacity of over 275 beds. Additionally, there are numerous investments especially post-covid period, into the furnished apartment facilities which can hold 8-10 beds per unit. Other areas of investment include tour and guided safaris, boating and water sports, sport fishing, kite surfing and sky diving especially in Watamu and Diani coasts. Evidently therefore, the investment levels in the coastal and marine tourism are fairly massive, estimated at ≈USD 108.7 billion, though with huge room for expansion owing to the high demand, especially during the tourism peak season in summer.

4. STATUS OF COASTAL AND MARINE TOURISM IN KENYA

4.1 Diversity of Kenya's Coastal and Marine Tourism

The Coastal and Marine Tourism in Kenya is highly diverse, and remains a cornerstone of the country's Vision 2030. Coastal tourism can be defined as mainly the land-based tourism activities including swimming, surfing and sun-bathing, while maritime tourism refers to sea-based activities such as boating, yachting and cruising. On the other hand, includes sea-based activities such as boating, yachting, cruising, nautical sports, as well as their land-based services and infrastructures including the hotels, jetties etc. Cruising and sailing have increasingly become popular with increased cruise ship traffic in the recent past while ocean sports, comprising of a diverse range of sports activities are well established in Mombasa, Malindi, Watamu and Diani. The marine wildlife tourism is supported by some of Kenya's richest marine ecosystems with diverse sea flora and fauna within the marine protected areas (MPAs) spanning from Kiunga, Malindi, Watamu, Mombasa, Kisite-Mpunguti in addition to several marine reserves and community managed areas such as Diani-Chale, Wasini Mwiro, Funzi and Kinondo in the South coast and, Kuruwitu along the Kanamai coast. Additionally, the coastal and marine heritage and cultural tourism thrives well from the country's rich history, with several cultural and heritage attraction sites such as Fort Jesus, the Gede ruins, the coastal sacred Kaya forests such as Kinondo, the Shimoni slave caves and the Devil's Kitcheni in Marafa, in north coast Kenya, among others. Lastly, Kenya is known for its vibrant recreational (sport) fisheries in the Shimoni-Pemba Channel and the Vanga coast, Diani-Kinondo, Watamu Malindi and the waters off Mombasa Island, as well as far north in the North Kenya banks and Kiunga, towards the boarder with Somalia.

4.2 Tourism Infrastructure

In terms of infrastructure, Kenya had ≈22,500 available rooms in star-rated hotels during 2021, an increase from 20,100 in 2018; with this upward growth trend, it is estimated that the country has 23,800 hotel rooms as at 2023. The total capacity is distributed as follows; Taita-Taveta (≈13 star-rated hotels), Kwale (≈11 hotels), Mombasa (≈53 hotels), Kilifi (≈40 hotels) and Lamu with about 10 star-rated facilities. The total investment in the sector stands at ≈USD 108.7 billion. There has been relatively little investment in the hotel and lodges sector over recent years, with the entry and trending of furnished apartments and Airbnb facilities which appear to have taken the bulk of recent investments.

Additionally, there are numerous restaurants in the coastal region and especially within Ukunda, Diani, Mombasa, Malindi and Lamu all offering assorted

local delicacies to tourists in addition to numerous licenced ground tour operators

4.3 CMT Impacts on Aquatic Biodiversity and Ecosystems

Globally, coasts present transitional areas between the land, often characterized by a very high biodiversity. Furthermore, they include some of the richest and most fragile ecosystems on earth, like mangroves, seagrass beds and coral reefs. Sadly, the coasts are under very high population pressure due to rapid urbanization processes noting that over half of today's world population lives in coastal areas. The situation is augmented by the fact that coastal areas are also among the most visited areas (by tourists) presenting a major economic activity and source of livelihood for a wider coastal populace. In many of the major coastal villages in Kenya, including Old town, Diani, Shimoni, Bamburi, Mtwapa, Kanamai, Watamu and Malindi among others, tourism presents the major livelihood, probably only second or at par with fisheries. Consequently, the impacts of coastal tourism and the numbers of tourism on aquatic biodiversity and ecosystem conservation efforts cannot be overstated.

On the marine front, support structures including large infrastructure developments including such as ports, beach hotels, jetties and railways and bridges continue to present a major threat to the integrity of marine ecosystems due to the various aspects of dredging, dumping of waste, risks of oil spills and pollution.

Coastal and marine tourism are major often contributors to coastal degradation and loss of aquatic biodiversity and ecosystem integrity through many ways, including coastal zone urbanization, fisheries and aquaculture, port development and shipping, land reclamation for tourist facilities, land-use conversion (agriculture, industrial development) and climate change impacts and and sea level rise. Moreover, the impacts are augmented by the additional impacts of pollution from discharges of the various rivers and streams draining the major basins in the country, including the Athi-Galana-Sabaki River system, and the Sagana-Chania-Tana River system.

4.4 OGM Impacts on Aquatic Biodiversity and Ecosystems

Kenya is a signatory to the United Nations, which set the UN Sustainable Development Goals (SDGs), alongside the Convention for Biological Diversity's 2020 Strategic Plan, laying out ambitious conservation agenda i.e. the Aichi targets; SDG14-Conservation and sustainable use the oceans, seas and marine resources for sustainable development and SDG15-Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss. Figure 1 below illustrates the impacts of oil and gas exploration and mineral mining on biodiversity, through diverse pathways and across spatial scales. It should be noted that traditional, site-based conservation approaches are likely to have limited effect in preventing biodiversity loss against an increasing mining footprint. Therefore, initiating dialogue between mining companies, policy-makers and conservation organizations is long overdue, given the suite of international agendas simultaneously requiring more minerals but less biodiversity loss.

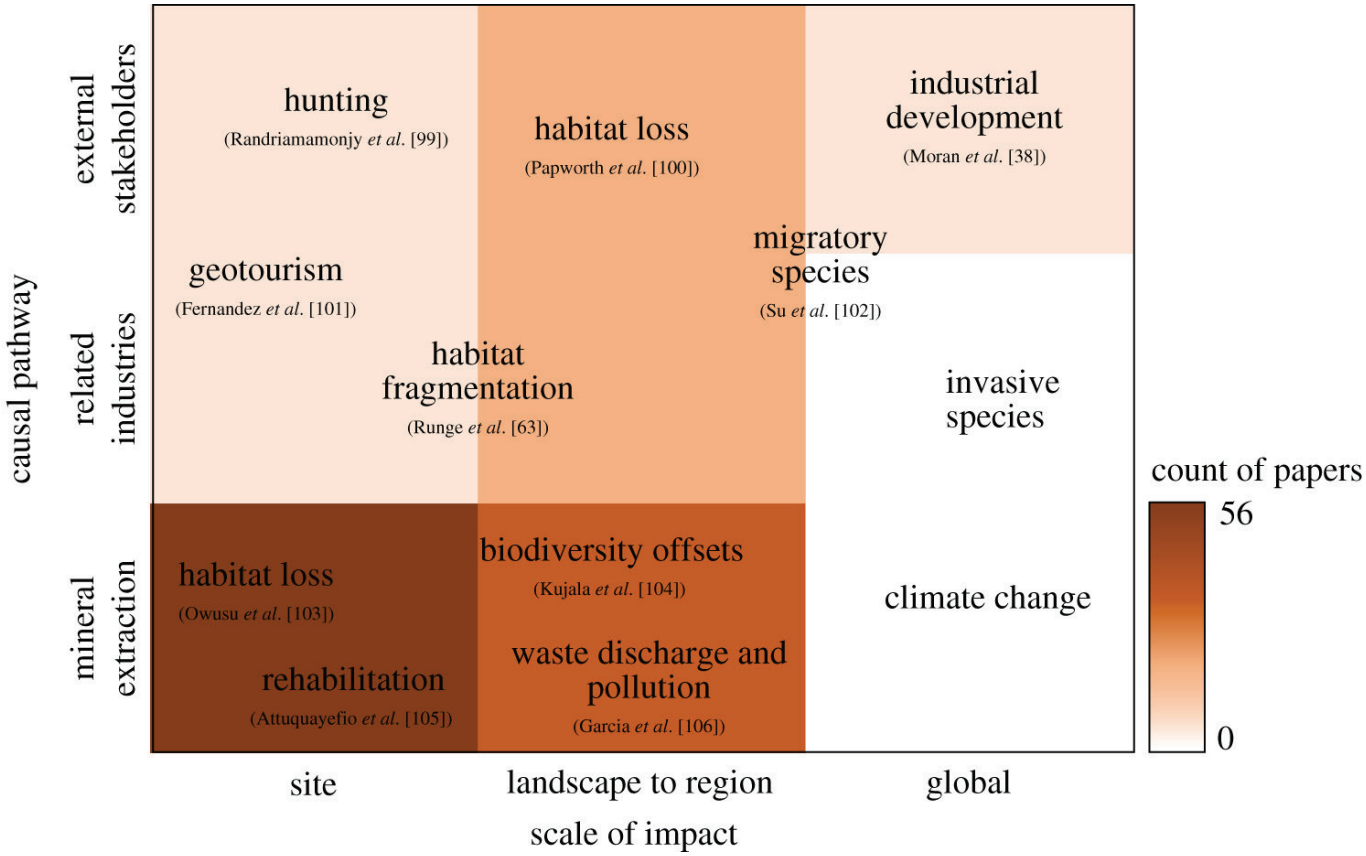


Figure 1: *Impacts of Oil, Gas and Mineral mining on habitats, biodiversity at varying spatial and temporal scales*

The threats posed by oil and gas exploration and mineral mining vary widely depending on the mining methods employed; extracting sub-surface alluvial gold deposits largely impacts riparian ecosystems and downstream ecosystems, whereas high-value thermal coal is associated with agricultural lands which are already highly threatened, and thus likely to have more impacts on aquatic biodiversity and ecosystem conservation. Furthermore, different materials are extracted using different techniques with varying consequences for biodiversity; e.g. stone, sand and gravel mining moves most earth, while the geochemistry of metal ores and reagents used process them often causes greater harm than mined. Additionally, threats by mining differ among species and ecosystems but the full consequences of mineral extraction are not well understood, with some mining permanently removing entire ecosystems, particularly where biota have co-evolved with mineral substrates. In other cases, biodiversity is unaffected by mining, or the mining may cause less damage than alternative land uses.

Lastly, threats to biodiversity may be affected by socio-economic and political contexts- where capital, such as infrastructure to extract, process and transport minerals, and manage potential impacts exists, it can reduce impacts of new mines on biodiversity. However, if not planned for in a biodiversity-friendly manner, such ventures may cause additional impacts. Mineral governance is another key factor, and sadly, emerging economies (often with high proportions of world's rare earths) rarely have strong governance in terms of environmental regulations and environment capabilities, and are prone to corruption and conflict, which can further exacerbate threatening processes.

Generally, oil and gas exploration and mineral mining can pose serious and highly specific threats to aquatic biodiversity and ecosystem conservation. However, mineral mining still presents the biggest threat noting that the resources exist in all significant biodiversity areas. As a result, conservation priorities and tensions between mining and conservation are likely to intensify as

human populations grow. Notwithstanding, oil and gas exploration and mineral mining can provide a means for financing alternative livelihood paths that, over the long-term, are likely to prevent biodiversity loss. Consequently, there is a need to mainstream biodiversity into the energy (oil and has) and mining (mineral) sectors as key components in strategic planning for biodiversity, and master plans for design of sustainable coastal, marine tourism and mining activities, and strengthening regulatory frameworks geared towards aquatic biodiversity conservation and ecosystems in Kenya.

4.5 An Integrated and Prospective Approach to Coastal and Marine Tourism Development

Kenya, like most other coastal states, boasts a vast natural and undisturbed resource base that is attractive to coastal and marine tourism- one of the key sectors that contribute immensely towards the development of the oceans and blue economy. However, despite the enormous economic benefits derived from the sector, it remains overly dependent on natural resources and engenders considerable damage to the environment. For instance, the additional demand of already scarce resources such as water, energy and food increases pressure on local territories and communities, leading to overfishing, reduced water availability to local communities, as well as expensive electricity and cooling/heating costs. The coastal and marine sector also generates indirect land activities linked to infrastructure development that are responsible of considerable amounts of pollutants and destruction of natural habitats and vegetation, leading to huge losses in biodiversity and degradation of habitats, including the mangroves and sea grasses.

Consequently, the development of coastal and marine tourism should be done from an integrated and prospective approach that aim to conserve and sustain the coastal and marine ecosystems, including development of national master plans on sustainable coastal, marine tourism; oil and gas exploration and, mining development with reference to biodiversity conservation and environmental protection. In this regards, blue ecosystems services should be taken into consideration in national policies in order to increase their resilience and, to better contribute to climate change adaptation and mitigation while regional strategies should be employed to harness the available sustainable mechanisms of action to enhance productivity and economic development.

At the continental level, Kenya can borrow a lot from the Africa Blue Economy Strategy (ABES, 2019) which is also consistent with the AU's Agenda 2063; the 2014 Africa Integrated Maritime Strategy (2050 AIMS); the 2014 Policy Framework and Reform Strategy (PFRS) for Fisheries and Aquaculture in Africa; the 2015 United Nations Agenda-2030 Sustainable Development Goals (SDGs); and the 2016 African Charter on Maritime Security and Safety and Development in Africa (Lomé Charter): " for the socio-economic transformation of the continent over the next 50 years refers specifically to the Blue and Ocean Economy".

In ensuring that the development of coastal and marine tourism, oil and gas exploration and, mineral mining are conducted in a sustainable manner than assures aquatic biodiversity and ecosystem conservation, there are a number of instruments available. The categories of legislation available for regulation of the sector, include national level instruments such as the Tourism Act 2011 and the Wildlife Conservation and Management Act, 2016 supported by various frameworks and institutions such as Kenya Utalii College, Kenya Tourism Fund, the Kenya Tourism Research Institute and Monitoring Mechanism, the Kenya Tourism Protection Service, Kenya Tourism Board, Bomas of Kenya and the Kenya Safari Lodges and Hotels among others.

The Tourism Act (2011) establishes the Tourism Regulatory Authority as the state corporation in charge of formulating and prescribing measures to ensure establishments to realize sustainable tourism development throughout the country.

Although the Country does not have an ICZM legislation, the Environment Management and Coordination Act (EMCA 2016), presents the primary legislation for the management of the environment in Kenya and foundation for the development of an ICZM framework. Other legislative frameworks such as the Kenya National Spatial Plan 2015 to 2045 also provide a national spatial structure that defines how the national space is utilized to ensure optimal and sustainable use of land and land-based resources. However, it does not adequately address tourism activities that emanate from such developments. Other instruments include the Physical and Land Use Planning Act of 2019; the Land Act No. 6 of 2012 (Revised Edition 2019): Kenya Coast Guard Service Act No. 11 of 2018 (revised 2020); the Tourist Police Unit (TPU); and the Maritime Zone Act Cap 371.

Lastly, traditional knowledge from local communities, though likely to be place specific, and requiring resources to collect and scale up, it is often underrepresented in coastal and marine tourism and oil, gas and mining governance processes. Strategic efforts must be put in place to ensure its integrated into governance frameworks.

Therefore, inorder for Kenya to achieve sustainable and progressive tourism, the country must focus on a number of areas of intervention and priority actions to over-come the challenges faced by the coastal and marine tourism, oil, and gas exploration and mining activities towards conservation of aquatic biodiversity.

5. A MASTERPLAN FOR SUSTAINABLE COASTAL AND MARINE TOURISM, AND MINING ACTIVITIES (INCLUDING OIL, GAS EXPLORATION AND MINERAL) FOR KENYA

5.1 Objectives of the Master Plan

The overall objective of the Masterplan for Kenya is to "Promote Sustainable Coastal, Marine Tourism and, Mining Activities (including oil, gas exploration and mineral mining), and Strengthen Regulatory Frameworks towards Aquatic Biodiversity Conservation and Sound Environmental Management in Kenya.

The specific objectives of the Masterplan are to:

i. Identify key stakeholders in the development of coastal and marine tourism, oil and gas exploration, and mineral mining;
ii. Identify priority issues and actions to enhance sustainable coastal, marine tourism and mining activities (oil and gas exploration and. Mineral mining) to ensure conservation of aquatic biodiversity and sound environmental management;
iii. Identify priority issues and actions to support informed policy formulation geared towards definition of sustainable coastal, marine tourism and, mining activities (including oil, gas exploration and mineral mining)
iv. Identify priority issues and actions and aid definition and strengthening of regulatory frameworks geared towards aquatic biodiversity conservation and environmental management in Kenya
v. Enhance knowledge and awareness on priority issues and needed actions for sustainable coastal, marine tourism and mining activities for conservation of aquatic biodiversity and environment management; and
vi. Conserve, Protect and Enhance Kenya's unique natural capital and heritage within the coastal and marine environmental to strengthen the associated tourism sectors, local and national economies through foreign exchange earning

5.2 Purpose of the Master Plan

As a planning framework, the Master Plan for Kenya Coastal and Marine Tourism;

a. Provides regulatory and policy guidelines to the Republic of Kenya to strengthen environmental sustainability in the development of coastal, marine tourism and mining (oil, gas and mineral mining) and optimize the sectors' contribution to the national economy, socio-economic growth and coastal development while safeguarding aquatic biodiversity and environmental protection;
b. Provides an avenue for focused and rationale intervention for the maximization of tourists' satisfaction and attractions through enhancing the healthy coastal and marine ecosystems, and sound environmental conservation;
c. Provides mechanism for advocacy protection and compensation of project affected persons (PAPs) and communities in the event impacts attributable to the activities and/or development of coastal marine tourism and, oil, gas and mineral mining;
d. Provides advocacy towards environment friendly coastal and marine tourism with regards spatial and temporal planning and siting of infrastructure and activities (including festivals, water sports, skydiving etc.) while minimizing impacts on aquatic biodiversity and environments for sustained social economic growth.

5.3 *Kenya- a brief on Geographical Setting*

Kenya lies on the Eastern coast of Africa, straddling latitude 0.0236° S and longitude 37.9062° E. Its terrain rises from a low coastal plain on the Indian Ocean to mountains and plateaus in the hinterland, with the capital city Nairobi, the capital, sitting at altitude of 1,700m. to the West of capital city Nairobi, the land descends to the Great Rift Valley, a 6,400-km tear in the Earth's crust. Within this valley in the deserts of northern Kenya lies the magnificent jade-green waters of the Lake Turkana.

The country is bordered by Sudan and Ethiopia to the north; Uganda to the west; Tanzania to the south, and to the southeast by the Western Indian Ocean waters. The country covers an approximate area of 582,646 sq. km.

Figure 2: *A map of Kenya showing the 47 counties, and the six (6) coastal Counties which border the Indian Ocean*

Generally, the climate of Kenya is tropical, hot and humid, especially in the low-lying counties along the coast. On the plateau and the highlands, the climate is more temperate, with western Kenya and most parts of Nyanza experiencing heavy convectional rainfall with two seasons; long rains from April to June and the short rains from October to November. Consequently, the warm climate that Kenya boasts is very favourable for tourism especially during the drier season between September and March.

Kenya, is famed for its scenic landscapes and vast wildlife preserves both in the terrestrial marine protected areas (MPAs) and reserves as well in the several marine MPAs and reserves spanning from Kiunga Marine National Reserve (KMNR) near the northern border with Somalia, to the southern Kisite-Mpunguti Marine Park and Reserve (KMMPR) near the Tanzanian border. Others include Malindi, Watamu, and Mombasa Marine Parks and Reserves, in addition to community conservancy areas (CCAs) scattered along the entire coast with the oldest, Kuruwitu running 20 years today. Along the entire Kenya coast are some of the Africa's finest beaches, with predominantly Muslim Swahili cities such as Mombasa, a historic centre that has contributed much to the national and cultural heritage of the country. Other historic towns include Lamu, a UNESCO heritage site, Malindi, Watamu, Kilifi, Diani, Shimoni and Vanga.

The hinterland is a heritage of rich animal species, including lions, elephants, cheetahs, rhinoceroses, and hippopotamuses. Kenya's western provinces, marked by lakes and rivers, are forested, while a small portion of the north is characterized by desert and semi-desert. The country's rich and diverse wildlife, both terrestrial and marine, and panoramic geography is a major attraction to thousands of European, American, Asian and even Africa tourists, making Kenya, and in particular the coastal and marine ecosystems, and the coastal strip terrestrial

fauna and flora within the coastal forests such as Arabuko-sokoke, the Shimba hills and the historic kaya sacred forests, as well as the game-rich Tsavo national park and reserve, and the associated wildlife conservancies such as the Galana, Tsavo and others, shepherded by leading conservationists such as the Sheldrick Wildlife Trust (SWT) which has remained a haven for orphan an elephant and rhino rescue and rehabilitation, globally. The rich heritage within the coastal and hinterlands

Kenya boasts an idyllic coastline, with stretching kilometres of soft white sand fringed by palm trees, abd baya and embayments fringed by mangrove forests, opening out into the rich open waters and marine seas. Along scattered areas of the coast are turtle rockery beaches backed by tall dunes where sea turtles clamber to nest. The country also boasts many offshore marine parks protect long coral reefs. The northern coast is home to the beautiful Lamu archipelagos, with rich mangrove fridges and the deserted sands of Kiwayuu. To the south are Funzi islands and creeks with rich mangrove channels and sandbanks.

The climate of the Kenya is hot and humid tropical climate. Overall, the mean annual rainfall ranges from 900 mm to 1200 mm (Glover et al. 1954; Moomaw 1960; Burgess et al. 1998; Burgess and Clarke 2000). The mean temperature ranges between 25°C during the long rain season (April-September) to 30°C during the dry season (December-March), with relatively cooler temperatures in the southern coast.

The coastal forests of Kenya fall within the Eastern African coastal forests- characteristic tropical forests known for their rich biodiversity and high levels of endemism, including a concentration of rare and threatened taxa and high diversity of endemic plant and animal species (Luke 2005; Azeria et al. 2007). The forests are significant as global biodiversity hotspots (Burgess et al. 1998; Myers et al. 2000; Hobohm et al. 2019). The forests are characterised isolated patches of evergreen to semi-evergreen closed canopy forests, presenting unique remnants of indigenous ecosystems which are part of the North Zanzibar-Inhambane Regional Mosaic, extending from southern Somalia through coastal Kenya to southern Tanzania, including the islands of Zanzibar and Pemba (Burgess et al. 1998, Burgess and Clarke 2000; Githitho 2004; Peltorinne 2004; Luke 2005), and part of the biodiversity hotspot known as the Eastern Arc and Coastal Forests of Kenya and Tanzania (Myers et. al. 2000). They stretch from the north to south along the Kenyan coast, and are mostly found on ancient coral reef bed rocks formed as a result of sea level drops, over a variety of altitudinal gradients and climatic zones.

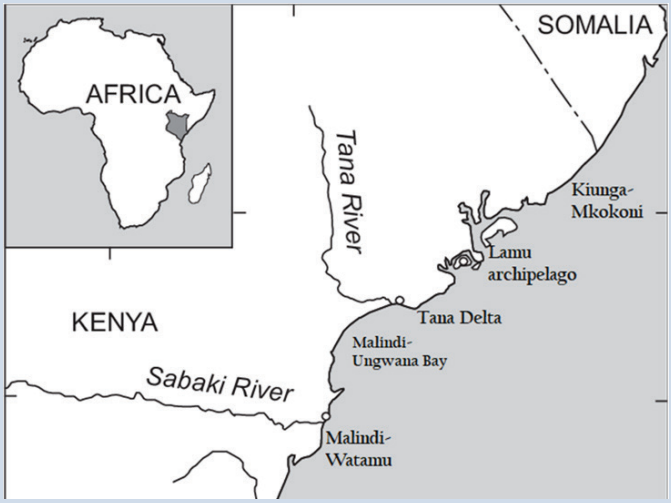
5.4 CMT and Socio-Economic Development in Kenya

The Kenya Coast is endowed with numerous resources that support livelihoods and economic development in the region and country as a whole. The resources include mangroves and other coastal forests; estuaries; coral reefs; marine species; and open sea marine resources among others, and are critical in maintaining the health and function of marine and coastal ecosystems. Key tourist attractions include beaches, cultural heritage and marine based habitats. According to Kenya Tourist Board (KTB), of the tourists coming to Kenya, about 65% visit Kenyan Coast making tourism an important part of the coastal economy. Figure 3 shows the main tourism circuits in Kenya.

The Country's coastal and marine Tourism remains one of the leading foreign income earners in Kenya; accounting for about 27% of foreign exchange earnings and 12% of the country's national GDP. The country's blueprint Vision 2030, aims at making the country among the top 10 overhaul tourist

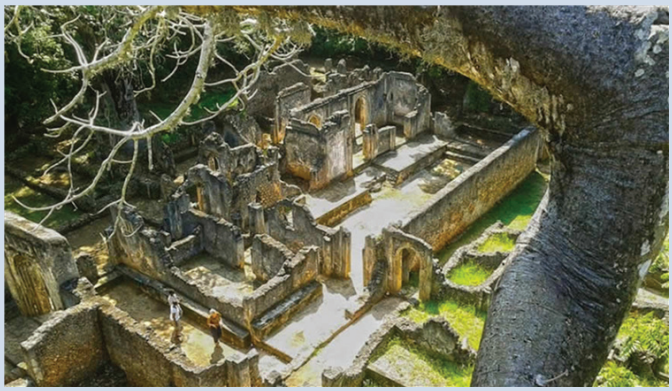
destinations in the world. Together with travel, the coastal and marine tourism contributes about US$ 5.4 billion to the country's Gross Domestic Product (GDP) (Statistica, 2023). Figure 4a and 4b highlight the main attraction sites along the coastal and marine tourism circuit.

Figure 3: *A map of Kenya showing the main tourism circuits, with Mombasa and its environs covering the coastal and marine circuit.*



A Map of Africa (Inset) Showing Kenya's Northcoast

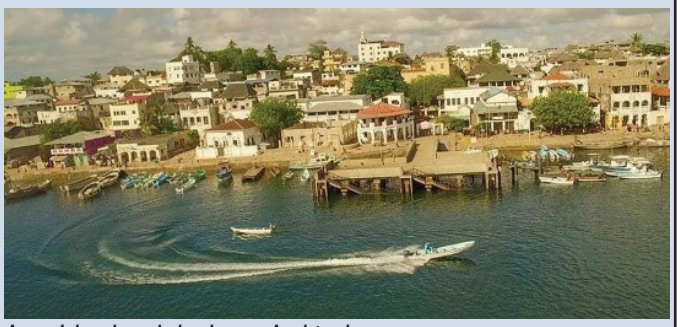
Malindi-Mambrui coast's white sandy beaches



The Gedi National Monuments (ruins); early remnants of a 12th Century Swahili village in Gede, Watamu

Mtwapa-Kikambala-Vipingo coast (an expansive coastline)

Kiunga Marine Park & Reserve

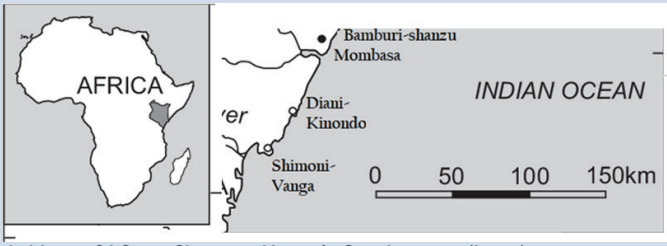


Amu Island and the Lamu Archipela

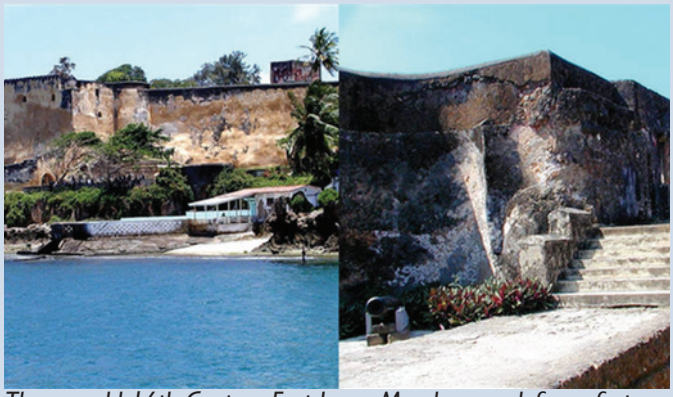
Kipini and the Tana Delta

Watamu Beaches & Coastal Waters; Home to Diverse Marine Life & Sport Fisheries

Figure 4: *A map of Kenya showing the major tourist circuits along the North Coast*



A Map of Africa, Showing Kenya's South coast (Inset)



The age old 16th Century Fort Jesus, Mombasa; a defence fortress built by the Portuguese in 1593-1596

Kisite-Mpunguti Marine Park, south coast Kenya; a major attraction for Dolphin watching and Water sports

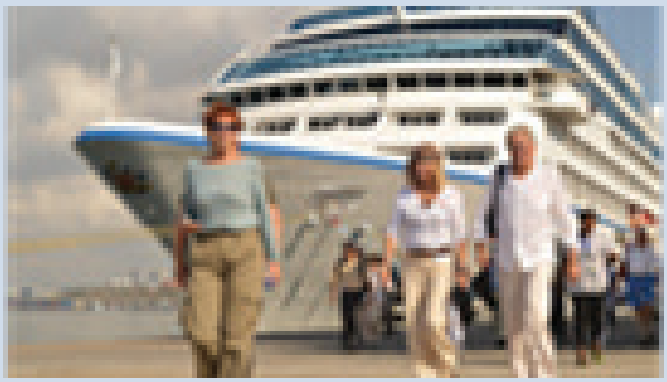
The Shimoni Slave Caves:A Rugged 5-km Cave used as holding pens for Slaves from hinterland, a Clear Embodiment of the Infamous Slave Trade in East Africa.

Wasini Island, a Paradise across the Shimoni Caves, South coast Kenya

Jumba-la-Mtwana ruins; remains of a 14th Century Swahili Village, Mtwapa

Jomo-Kenyatta (Pirates) Public Beach, Mombasa- a major for local tourism

Diani-Kinondo sandy beaches, south coast; for skydiving & Kite Surfing



A cruise ship landing at the Port of Mombasa

Figure 5. *A map of Kenya showing the major tourist circuits along the Central and South Coast*

However, both travel and the tourism exert huge pressure on the sustainability of the supporting habitats, ecosystems and resources, especially with regards to destruction and degradation of critical marine flora & fauna; seismic noise that affects marine mammals; disturbance of underwater heritage sites; habitat loss and degradation; loss of breeding and spawning habitats; disruption of food chains and food webs; potential of oil spills; degradation of water quality (suspended sediments); gas flares; contamination and bioaccumulation of toxic/hazardous material; disruption fishing and recreation (snorkeling, diving, sport fishing) activities; disruption along navigation routes; competition for maritime space; unequitable benefit sharing with locals and maritime disputes among others.

Evidently, Kenya's coastal and marine tourism development has been a journey through the wilderness, with numerous threats emanating from civil strives, terrorism and more recently, the global pandemics including Covid-19. notwithstanding, all has never been lost, and the coast has hosted various successful events including docking of cruise ships at the port of Mombasa, the Lamu Cultural Festival, the Mombasa Carnival, the Safaricom International Jazz Festival, the Classic East African Safari Rally and the Magical Kenya Open Safari among others, gaining international accolade and a boost to the coastal and marine tourism.

In order to catapult Kenya's coastal and marine tourism to greater heights, a number of issues were identified, ranging from environment, ecological, socio-economics and governance have been identified. The key identified issues include habitat degradation, pollution from industrial effluents, sewage effluents, encroachment and grabbing of marine coastline, effluent/discharge from ships and oil spills from boats, coastal and marine debris, ocean mining including dredging of ports and harbours, dumping of dredged materials, offshore exploration of oil and gas, poorly planned coastal and marine infrastructure development, invasive species introduction through ballast water, bio-piracy, non-sustainable use of marine resources, coastal erosion, maritime insecurity

Table 1: *Issues, Challenges, Priority Actions and Proposed Institutional Arrangements for sustainable Coastal and Marine Tourism to support Aquatic Biodiversity and Ecosystem Conservation*

Key issues in CMT	Challenges to Identified issues	Priority actions	Institutional Arrangements
1. Environment	• Habitat degradation • Industrial effluents pollution, sewage effluent from hotels, encroachment and grabbing of marine coastline, • Maritime transport: • discharge from ships and oil spills from boats, • Littering of coastal beaches by the public due to uncontrolled dumping of wastes /marine debris, • Lack of receptor facilities for ships, • Ocean mining: dredging of ports and harbours, dumping of dredged materials • Offshore exploration of oil and gas • Unplanned urban and infrastructure development	• Creation of environmental awareness • Develop vulnerability, sensitivity inundation maps to mitigate sea level rise • Incorporate climate change models • development of ocean governance policy • Enforcement of the compliance mechanism for plastic materials • Compliance to international agreements • Enforcement of national laws • Promotion of indigenous and protection of cultural sites.	• NEMA • Ministry of Environment, climate change and forestry • Ministry of interior • Ministry of Tourism and wildlife • Ministry of Agriculture • Ministry of Mining Blue Economy and maritime affairs • County Governments • Private Sector • Other government institutions • Development partners

Key issues in CMT	Challenges to Identified issues	Priority actions	Institutional Arrangements
	• Climate change; sea level rise, sea temperature rise, cyclones, hurricanes		
2. Ecological	• Destruction of natural habitats-mangroves, coral reefs, sea grass, • Introduction of invasive species through ballast ship • Climate change: Rising sea levels, adverse weather conditions e.g. cyclones and hurricanes. • Displacement of species range. • Shift in intertidal habitats • IUU fishing: illegal gear, • Human activities and pollution limiting growth and reproduction of coastal flora and fauna e.g. coral, reefs, microbes and sea animals • Bio-piracy	• Restoration of mangroves: shoreline change, ecotourism, absorbing carbon, sediment prevention, breeding ground for fish • Preservation of Kaya forest • Discouraging deforestation • Protecting the sea grass • Antifouling painting of ships in conformity with existing global conventions • Regional and international collaboration to develop harmonized protocols and frameworks to prevent IUU • Removal of illegal fishing gear • Sensitization and awareness creation • Capacity building and knowledge transfer • Investing in technology for research, monitoring and surveillance.	• NEMA • Ministry of Environment, climate change and forestry • Ministry of interior • Ministry of Tourism and wildlife • Ministry of Agriculture • Ministry of Mining Blue Economy and maritime affairs
3. Socio economics	• Unsustainable exploitation of mangroves as a source of livelihood. Limiting regeneration • Erosion due to coastal encroachment. • Destruction of coastal infrastructure and displacement of people due to sea level rise, cyclones and hurricanes. • Loss of income for communities engaging in blue carbon credits • Loss of income due to change of habitat range caused by rise in sea temperature. • Poor sanitation and pollution that can lead to health problems • Maritime insecurity • Drug trafficking • Cross cutting issues -Social vices, poverty, moral and socio-cultural changes	• Development of compensation regimes E.g Payment of Ecosystem Services, Polluter Pays Principle, compensation of loss of livelihoods • Enhancement of safety and security • Enforcement of existing laws and regulations • Compliance with national and international laws • Community involvement in decision making processes • Sensitization and awareness creation • Capacity building and knowledge transfer • Create enabling environment for local investment into sport fishery.	• NEMA • Ministry of Environment, climate change and forestry • Ministry of interior • Ministry of Tourism and wildlife • Ministry of Agriculture • Ministry of Mining Blue Economy and maritime affairs
4. Governance	• Overfishing • Weak Legal policy and institutional frameworks for CMT • User conflicts • Lack of capacity building • Weak interagency collaborations • Inadequate information • Increasing competition for maritime space	• Fishing effort control and development of appropriate fisheries management measures • Capacity building • Lobby for ecotourism at a government level • Multi sectoral approach/one government approach • Goodwill from the government • Marine Spatial Planning • Database management System for data collation	• NEMA • Ministry of Environment, climate change and forestry • Ministry of interior • Ministry of Tourism and wildlife • Ministry of Agriculture • Ministry of Mining Blue Economy and maritime affairs

5.5 Oil and Gas Mining (OGM) and Socio-Economic Development in Kenya

Kenya's oil, gas and petroleum resources are largely unexploited although petroleum exploration in the country dates back to the 1950s initially within the Lamu Basin. However, it was only in 2012 when the first commercially viable oil discovery was made in the Tertiary rift, followed by significant gas discoveries in offshore Lamu basin. To date, over 86 wells have been drilled with a majority within the Tertiary Rift. More recently, an additional ≈ 4 billion barrels of crude oil reserves were discovered in the Lokichar sub-basin, with recovery oil estimated to be 750 million barrels. The major areas explored include the Lamu Basin, Tertiary Rift Basin, Mandera Basin and the Anza Basin to the east of Lake Turkana. Although there is virtually no ongoing extraction in the petroleum, oil and gas sub-sectors, the National Oil Company through its National Data Centre (NDC) project, has an inventory of all petroleum exploration data including seismic data, well logs etc. obtained in the country in addition, the corporation has set up cores and drill-cuttings storage facility which holds samples retrieved during drilling from 1960 to date. Furthermore, the National Oil Company is currently setting up a Seismic Processing centre and a Geochemical-Petrophysical analysis laboratory in Kawi House in Nairobi.

In the oil and gas mining sector, the specific areas of concern include destruction and degradation of critical marine flora & fauna; seismic noise that affects marine mammals; disturbance of underwater heritage sites; habitat loss and degradation; loss of breeding and spawning habitats; disruption of food chains and food webs; potential of oil spills; degradation of water quality (suspended sediments); gas flares; contamination and bioaccumulation of toxic/hazardous material; disruption fishing and recreation (snorkeling, diving, sport fishing) activities; disruption navigation routes; competition for maritime space; unequitable benefit sharing likely to drive social unrest, grievances, and agitations; outsourcing (foreign) technical/professional jobs; outsourcing of oil and gas exploration, and maritime disputes among others.

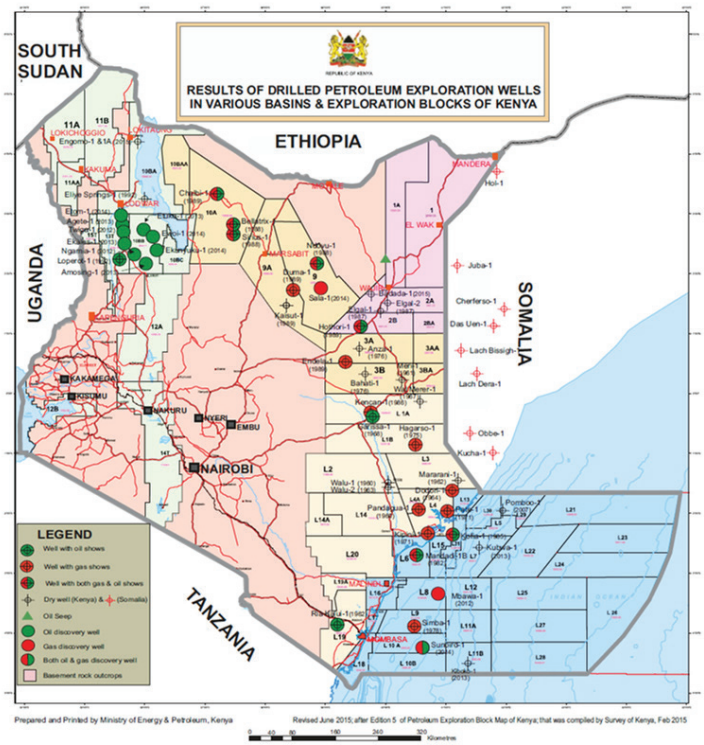


Figure 6: *Locations and results of drilled petroleum exploration wells in various basins and exploration blocks of Kenya*

Table 2: *Issues, Challenges, Priority Actions and Proposed Institutional Arrangements for Sustainable Oil and Gas Exploration and Mining to support Aquatic Biodiversity and Ecosystem Conservation*

Key issues in Oil & Gas Exploration/ Mining	Challenges to Identified issues	Priority actions	Institutional Arrangements
1. Environmental	• Destruction and degradation of critical marine flora & fauna • Seismic noise that affects marine mammals • Disturbance of Underwater heritage sites	• Develop a robust Marine Spatial Planning (MSP) (on-going) • Marine mammal and fisheries monitoring and observation any time there is a seismic operation • Identify migratory routes, seasons and biodiversity hotspots e,g, MPAs • Collect baseline data (bathymetry, seafloor and ecological habitats, valuation of marine ecosystems) • Regular bio-monitoring • Marine aerial census	• KMFRI • KeFS • KFS • KWS • NEMA • KCGS • State Dept. of Petroleum • NOCK • NMK • CDA • Kenya Navy • Appropriate NGOs and CBOs • Universities/ Academia
2. Ecological	• Habitat loss and degradation • Loss of breeding and spawning habitats • Disruption of food chains and food webs	• Collect baseline data (bathymetry, seafloor and ecological habitats, value of marine ecosystems) • Identify and monitor breeding and spawning habitats0 • Valuation of marine ecosystems • Minimize and mitigate against oil spillage e.g., National Oil Spill Response Committee (NOSRCP) • Enforce EMCA (e.g. polluter pay principle)	• NEMA • KMA • KMFRI • KPA • NMK • Universities/ Academia • KeFS • KWS • NGOs & CBOs • KCGS - KFS
3. Pollution	• Potential of Oil spills • Degradation of water quality (suspended sediments) • Gas flares • Contamination and bioaccumulation of toxic/hazardous material • Reduction of primary production	• Enforce EMCA (e.g., polluter pay principle) • Managing, maintaining, exercising, and periodically reviewing and updating the National Oil Spill Response Contingency Plan and maximize Kenya's marine pollution response capability • Coordinate oil spill response drills and exercises • Conducting pollution inspections of Kenyan ports and navigable waterways. • Conducting public awareness campaigns on ship source and land-based oil/chemical pollution. • Carrying out environmental impact assessment on offshore projects and review of environmental impact assessment reports.	• National Oil Spill Response Committee • KPA • KMA • NEMA • NOCK • Ministry of Energy/ Petroleum

Key issues in Oil & Gas Exploration/ Mining	Challenges to Identified issues	Priority actions	Institutional Arrangements
		• Implementation of IMO's marine environment protection conventions and other national and regional instruments relating to prevention of pollution in Kenyan navigable waters by waterborne transport activities. • Utilization of by-products of oil & gas exploration and drilling including gas • Establish baseline data • Monitoring and enforcement of maritime laws e.g., EMCA • Infrastructural design to prevent Oil spills	
4. Economic	• Disruption fishing activities • Disruption of recreation activities (snorkeling, diving, sport fishing etc.) • Disruption navigation routes • Competition for maritime space • Incorporation of land locked countries to benefit from the Area common heritage of mankind	• MSP • Establishment of Compensation schemes in lieu of disruptions	• KCGS • KWS • KMFRI • KeFS • KMA • NGOs • Investors and developers (hoteliers)
5. Socio Equity and Gender and PWD disparities	• Unequitable Benefit sharing • Social unrest, grievances, and agitations • Technical/Professional jobs given to expats/ foreigners	• Collect baseline data • Compensation for loss of livelihoods and ecosystem services • Affirmative action • Develop grievance address mechanisms/systems • Local capacity building in technical and professional skills • Sensitization and awareness creation • Conduct ESIA	• Ministry of Public Service, Gender & Affirmative Action • KMFRI • KeFS • Universities & TVETs
6. Inadequate or Lack of Marine Resources Data	• Outsourcing of oil and gas exploration/data collection • Lack of data sharing policies/moratoriums	• Data collection -GIS, Location based data • Introduce data policies (collection, sharing, intellectual property) with outsourced, investing foreign companies or governments • Sensitization of existing database • Integration data from different agencies	• KMFRI • KIPI • Ministry of energy/ petroleum • NOCK • KMA • Ministry of information • Ministry of foreign affairs
7. Lack/inadequate Coastal and Marine Resource partition /delineation	• Maritime Disputes	• Delineate Transboundary Resources	• International Court of Justice

5.6 *Mineral Mining and Socio-Economic Development in Kenya*

Despite celebrating its 60th anniversary of self-governance since 1963, Kenya is still in early exploration of its mineral potential, owing to the initial mapping of the country as an agricultural zone, leading to reduced exploration for minerals. Consequently, the country is vastly under-explored for minerals, and the mining sector is dominated by the production of non-metallic commodities including soda ash, with the country third globally and, seventh as producer of fluorspar.

The metallic minerals produced in the country include titanium, gold and iron ore, with export statistics for showing a constantly growing sector. In 2014, for instance, Kenya exported 281,503 Mt of ilmenite, 52,465 Mt of rutile and 23,000 Mt of Zircon, and with increased development, the country could contribute substantially to annual global supply. With further exploration and uptake of mineral rights then, it is estimated that Kenya will have the capacity to position itself as a regional mining sector hub for Eastern Africa. Over the last decade, Kenya started the mining of world class deposits of rare earth elements (including titanium) in the coastal region estimated at ≈US$ 62.4 billion, and are expected to propel Kenya to the list of top five countries with rare earth deposits in the world. In addition, the country has the world's top six deposits for Niobium, in addition to commercial deposits of coal in the north eastern region of the country which are currently under review for potential uses and production.

Today, a number of global mining companies have operations in Kenya mining for Magadi in the Great RiftValley with an annual production of about 360,000 Mt of Soda Ash; Fluorspar mining in the Rift Valley System since 1971 with an estimated production of 100,000 Mt annually; since its establishment in 1942, diatomite has been exploited in Gilgil, north west of Nairobi, for export with estimated deposits of good quality diatomite at over 6 million Mt. Furthermore, the diatomite in Gilgil is the only known viable quality deposits of diatomite in Kenya.

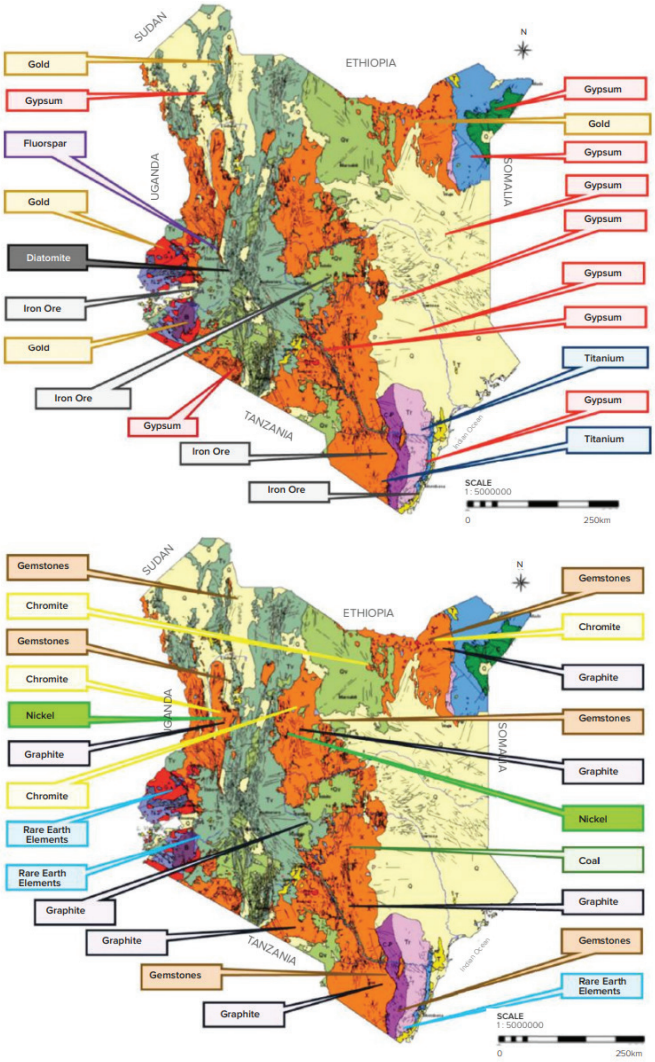


Figure 7: *Map of Kenya showing types and locations of the mineral occurrences in Kenya [Source: Ministry of Mining, Kenya]*

In this sector, there are several key issues, spanning across illegal mining, over-exploitation, compensation, environmental, socio-Economic, artisanal mining, technology, mining from seawater (salt etc.), offshore exploration and mining, information/data (in) availability, natural disasters, as well as cultural and, health and safety concerns. Specifically, the key issues highlighted include the illegal mining of manganese, sand, building stones; non-compliance and lack of capacity to enforce standards and regulations; low level of education and awareness/sensitization; poor implementation of land owners compensation

and resettlement; poor revenue sharing between national government/counties/community; poor remuneration of workers; biodiversity loss; physical land alteration and poor rehabilitation of degraded lands; poor management of erosion, storm-water and sedimentation; abandoned structures in mined sites; pollution from dust emissions, oil spills and other chemicals; poor / lack of mine waste management; poor mine design; lack of mine closure and rehabilitation; lack of social equity, high poverty levels, child labour and gender issues (inclusion & parity); drug and substance abuse; social ills including prostitution; lack of access to financing, markets and technology for small scale miners; in adequate information on the effect on marine ecosystem; intrusion of sea water into ground water; environmental and biodiversity disruption; and conflicts between community heritage sites and mining activities among others

Table 3: *Issues, Challenges, Priority Actions and Proposed Institutional Arrangements in Mineral Mining to Support Aquatic Biodiversity and Ecosystem Conservation*

Key issues in Oil & Gas Mining	Challenges to Identified issues	Priority actions	Institutional Arrangements
1. Legal	• Illegal mining – manganese, sand, building stones, • Non-compliance – lack of capacity to enforce standards and regulations. • Education and awareness/ sensitization.	• Enforcement of the Mining Act • Community sensitization. • Formalization of artisanal mining activities.	• SDM (Mining Act, 2016) • Counties • NEMA
2. Over-exploitation	• Over-exploitation in disregard of mining guidelines and regulations	• Regular audits/Inspections and penalties	• SDM (Mining Act, 2016)
3. Compensation	• Landowners compensation and resettlement • Revenue Sharing between National government/Counties/ Community • Poor remuneration	• Community Engagement • Establishment and implementation of benefit sharing framework.e.g CDA • Integrate land owners in the BE dialogue for mineral/land compensations.	• SDM (Mining Act, 2016)
4. Environmental	• Biodiversity loss. • Physical land alteration. Erosion. Storm-water. Sedimentation. • Abandoned structures in mined sites. • Pollution- Dust emissions, Oil spills and other chemicals. • Lack of mine waste management • Lack of mine design. • Lack of mine closure and rehabilitation.	• ASIA/EIA • Environmental rehabilitation plans. • Biodiversity conservation and management Plans. • Formalization and training of artisanal miners • Mine waste management Plan.	• Mining companies/ Individuals • SDM (Mining Act, 2016) • NEMA
5. Socio-Economic	• Poverty in communities around mineral/mining sites – Kilifi-manganese/salt/limestone • Child labour. • Gender issues – inclusion & parity. • Land encroachment by communities. • Land ownership/tenure.	• Community integration in BE process development & minerals • Sensitization/enforcement of Children's Act/ Penalties • Enforce Gender Constitutional requirement • Sensitization/Community Engagement	• SDM (Mining Act, 2016) • Social Protection Services (Children's Act) • State Department for Gender and Affirmative Action. CBOs

Key issues in Oil & Gas Mining	Challenges to Identified issues	Priority actions	Institutional Arrangements
6. Artisanal Mining	• Social- • Child labour, • Abuse • Gender Issues • Drugs and substance abuse • Prostitution • Financial- • Financial Illiteracy • Lack of access to financing • Lack of access to markets – middlemen taking advantage • Lack of technology/expertise • Environmental • Pollution • Land Degradation/abandoned mines	• Formalization of Artisanal Miners • Sensitization/enforcement of Children's Act/ Penalties • Enforce Gender Constitutional requirement • Sensitization/Community Engagement	• SDM (Mining Act, 2016) • Social Protection Services (Children's Act) • State Department for Gender and Affirmative Action • NEMA • MSMEs • CBOs
7. Technology	• Innovation • Limited technology to drive exploration and mining. • Inappropriate use of approved Technology- e.g. blasting.	• Encourage innovation • Training and capacity building	• Academia/ SDM/ KMFRI/ Mining Companies
8. Mining from seawater	• Sand harvesting • Harvesting of Salt and other minerals - in adequate information on the effect on marine ecosystem • Intrusion of sea water into ground water	• Studies on the effects of seawater mining required	• Academia/ SDM/ KMFRI
9. Offshore Exploration and Mining	• Environmental and biodiversity disruption.	• Strengthening and sensitization of the regulation and Policies • Adherence to and continuous improvement exploration and mining standards.	• Multi agency - tbc
10. Information/Data Availability	• Underutilization of indigenous knowledge – e.g. Appreciation knowledge from Sea farers • Inadequate geological data – quantities, distribution, quality of minerals, reserves, longevity-volumes • Data sharing	• Documentation of useful data and information relevant local communities • Geological mapping and Mineral exploration	• SDM (Mining Act, 2016) • NMK
11. Natural disasters	• Vulnerability of mining sites to natural disasters (Land Slides, Tsunamis, earthquakes, sedimentation, coastal erosions)	• Mapping out vulnerable areas to geological/natural disasters. • Develop disaster resilience plans	• SDM (Mining Act, 2016).
12. Cultural	• Conflicts between Community Heritage sites and Mining activities	• Community integration. • Gazettement of heritage sites	• NMK/SDM/ Community
13. Health and Safety	• Poor working conditions - PPEs • Lack of capacity	• Develop capacity for H&S in mining.	• OSHA

5.7 Contraints to Sustainable CMT, OGM and Mining Activities for Conservation of Aquatic Biodiversity and Environment

The following have been identified as key constraints to a sustainable coastal and marine tourism, oil and gas exploration and mineral mining activities that support conservation of aquatic biodiversity and Environment.

a. Lack of robust policy and regulatory framework to support the development of International standard business environment for tourism and also integrate modern safeguards and management practices in the sector;
b. Lack of a framework to integrate sustainability mechanisms to safeguard environmental, health, and social risks and impacts into Masterplan, to meet international standards;
c. Insecurity- The north is known to have some of the major mineral deposits. Due to the persistent plague of terrorism and tribal conflicts, mining activity in these areas has slackened;
d. Loss of revenue to the Government as a result of artisinal and illegal mining activities and smuggling;
e. Widespread environmental degradation, poor resources conservation, social and health problems and economic loss to legal mining corporations;
f. Absence of advance mining tecnology and capability resulting in low productivity;
g. Over exploitation of the richest areas leading to wastage of minerals;
h. Exploitation of only shallow surface and sub-surface deposits and dumping the wastes often on potential Ore bearing grounds;
i. Illegal selling of unprocessed minerals;
j. Marine pollution from land-based, marine-based and atmospheric sources – runoff from watersheds;
k. Removal of coastal vegetation, including sea grasses, that binds sediments and assists in prevention of beach erosion;
l. Introduction of invasive species that have devastating effects on coastal ecosystems and fisheries; and
m. Back-filling, dredging and land reclamation especially in mangrove areas to make way for commercial and residential development, and use of mangrove trees for fuel and other human requirements.

5.8 Policy Intervention, Strengthening of Legal Frameworks

In view of the current status of the coastal and marine tourism in Kenya, and the oil and gas, and mineral mining sub-sectors, there is need for policy interventions while strengthening existing legal, regulatory and institutional frameworks to ensure sustainability while support conservation of aquatic biodiversity and environment in Kenya. The key policy reforms, strategies and action steps together with the required institutional arrangements are highlighted in the tables below for Coastal and Marine Tourism, Oil and Gas, and Mineral Mining subsectors.

Table 4: *Policy Interventions, Strategies and Action Steps for Sustainable Coastal and Marine Tourism Sector for Conservation of Aquatic Biodiversity and Environment*

Priority actions / Policy Area	Baseline / Context	Policy objective	Expected Outcomes	Strategies and Actions	Existing Policy/ documents	Existing Legislative (regulations)frameworks	Proposed Actions & Timelines
Sensitization and creation of environmental awareness	Inadequate information dissemination mechanisms	To increase public awareness & information sharing	Enhanced awareness	• Information packaging targeting all stakeholders (Newspaper, Seminars, workshops, Publications) • Capacity building workshops.	• National Environment Policy 2013 • National Oceans and Fisheries Policy 2008 • Tourism Policy 2006 • Sessional Paper No. 1 of 2020 on wildlife policy	• EMCA ACT 1999 (Rev 2012) • Wildlife conservation and Management Act 2013 • Forest Conservation and Management Act 2016 • Fisheries Management Act 2016	• Revision of the tourism Policy 2006 • Revision of the Museum Act ** Short-term
Develop ocean governance policy	Inadequate policies on ocean governance	To strengthen ocean governance frameworks	Enhanced ocean governance	Develop Ocean governance policies	• National Oceans and Fisheries Policy 2009 • East African Community Vision 2050 • Kenya Vision 2030 • Kenya Kwanza Bottom-up Economic Transformative Agenda	• The Fisheries Management Act2016 • Africa Integrated Maritime Strategy 2050 • African Charter on Maritime Transport Safety and Security 2016 • The Shipping Act of 2015 • The Kenya Coast Guard Services Act 2018	• Develop an Integrated Maritime Policy • Blue Economy Policy ** Short-term
Compliance mechanism on plastic use and management	Low compliance on plastic use and disposal	To strengthen compliance to plastic use and disposal guidelines	Enhanced compliance to plastic use and disposal regulations and guidelines	• Enforce plastic use and disposal regulations and guidelines • Adoption of Circular Economy on use of plastics	• National Environment Policy 2013	• Ban on Single Use Plastic 2020 • Plastic Bag Control and Management Regulations 2018 • Plastic Bag Ban for Secondary Packaging 2017 • National Sustainable Waste Management Bill 2019 • EMCA 1999 (Rev 2012)	• Implement Marine Environmental Protection Convention (Annex VI) ** Short-term

Priority actions / Policy Area	Baseline / Context	Policy objective	Expected Outcomes	Strategies and Actions	Existing Policy/ documents	Existing Legislative (regulations)frameworks	Proposed Actions & Timelines
Compliance to international agreements	• Inadequate compliance framework mechanisms	• Strengthen compliance and enforcement mechanisms	• Enhanced compliance	• Regional and international collaboration	Ballast Water Management Convention	• The Fisheries Management Act2016 • Africa Integrated Maritime Strategy 2050 • African Charter on Maritime Transport Safety and Security 2016 • The Shipping Act of 2015 • The Kenya Coast Guard Services Act 2018	
Enforce national laws	Weak enforcement of existing laws	To enhance compliance	Enhanced compliance	Interagency approach to enforcement	• National Oceans and Fisheries Policy 2009 • East African Community Vision 2050 • Kenya Vision 2030		
Promotion of indigenous knowledge & protection of cultural sites.	Minimal regard of indigenous knowledge in decision making processes	Integrate local community indigenous knowledge in decision making	Community based management	Incorporate the community in decision making organs		• National Museums and Heritage Act2006	• Revision of National Museums and Heritage Act 2006 ** Short-term
Restoration of mangroves, shoreline change, ecotourism, absorbing carbon, sediment prevention, breeding ground for fish	Mangrove deforestation	Mangrove forest restoration	Recovery of mangrove forest stands	Conduct mangrove rehabilitation and seedling planting campaigns	• African Convention on the Conservation of Nature and Natural Resources 1968 (Rev 2003) • International Convention on oil pollution preparedness, response & cooperation 1990	• Forestry Conservation and Management Act 2016 • National Mangrove Ecosystem Management Plan 2017 - 2027 • National Museums and Heritage Act 2006 • Energy Act 2006 • CDA • Water Act 2002 • Physical Planning Act 2012 • Crops Act 2013 • Vision 2030	

Priority actions / Policy Area	Baseline / Context	Policy objective	Expected Outcomes	Strategies and Actions	Existing Policy/ documents	Existing Legislative (regulations)frameworks	Proposed Actions & Timelines
					• Convention for the protection management & development of the marine and coastal environment of the East African Region with its protocols 1985 • Rotterdam Convention on the Prior Informed consent procedures for certain hazardous chemicals and pesticides in international trade 1998 • Global Program of Action for the Protection of the Marine Environment From land-based Activities 1995		
Protection of coral reefs	Vulnerable and degraded corals	Restoration and protection of corals	Restored and protected coral reef ecosystem	Enforce existing laws and regulations on corals	• Sessional Paper no. 01 of 2020 on Wildlife Policy • National Oceans and fisheries Policy	• Wildlife Management and Conservation Act 2013 • The Fisheries Management and Development Act 2016	• Approve Draft Kenya National Coral Reef Restoration Protocol 2018 ** Short-term

Priority actions / Policy Area	Baseline / Context	Policy objective	Expected Outcomes	Strategies and Actions	Existing Policy/ documents	Existing Legislative (regulations)frameworks	Proposed Actions & Timelines
Preservation of Kaya forest	Encroachment of Kaya forests	Conservation & restoration of Kaya Forest	Preserved & protected Kaya forests	• Conduct awareness campaigns • Introduce afforestation programs • Control forest fires • Sustainably utilize Kaya Forest Resources	• National Policy on Culture and Heritage 2009 • African Convention on the Conservation of Nature and Natural Resources 1968 (Rev. 2003) • International Convention on oil pollution preparedness, response and cooperation 1990 • Convention for the protection management & development of the marine & coastal environment of the East African Region with its protocols 1985 • Global Program of Action for the Protection of the Marine Environment From land- based Activities 1995 • UNESCO World Heritage Convention of 1972	• National Museums and Heritage Act 2006 Cap 216 (Rev 2012) • Forestry Conservation and Management Act 2016 • • • Environment Protection Act 1986	
Protection of seagrass beds	Degraded seagrass beds	Restoration of seagrass beds	Healthy seagrass beds	• Address upstream impacts • Enforce existing laws and regulations regarding destructive fishing and other human activities on seagrass beds			

Priority actions / Policy Area	Baseline / Context	Policy objective	Expected Outcomes	Strategies and Actions	Existing Policy/ documents	Existing Legislative (regulations)frameworks	Proposed Actions & Timelines
Antifouling painting of ships in conformity with existing global conventions	Non-conformity with antifouling paint standards by ships	Compliance with antifouling paint standards	Use of recommended antifouling paints	Enforce antifouling paint standards	• International Convention on the Control of Harmful Anti-fouling Systems on ships 2001 • Rotterdam Convention on the Prior Informed consent procedures for certain hazardous chemicals and pesticides in international trade 1998	• Merchant Shipping Act • EMCA 1999 (Rev 2012)	
Regional and international collaboration to develop harmonized protocols and frameworks to prevent IUU fishing and use of illegal fishing gear	Low regional and international cooperation and Rampant use of illegal fishing gears and methods	• Promote participation in regional and international processes • Increase enforcement actions • Promote voluntary compliance	Enhance compliance in regional and international processes	Facilitate participation in regional and international processes and Enforce existing laws and regulations		• The Fisheries Management and Development Act No. 35 Of 2016 • Fisheries (Beach Management Unit) Regulations, 2007	
Sensitization and awareness creation	Low compliance and adherence to conservation regulations and best practises	Promote informed participation in conservation efforts	Enhance capacity and levels of knowledge	Conduct capacity building, training and multi-stakeholder packaged information dissemination			

Priority actions / Policy Area	Baseline / Context	Policy objective	Expected Outcomes	Strategies and Actions	Existing Policy/ documents	Existing Legislative (regulations)frameworks	Proposed Actions & Timelines
Develop compensation regimes including Payment of Ecosystem Services, Polluter Pays Principle, compensation of loss of livelihoods	• Inadequate incentives for conservation of resources due to poverty. • Lengthy compensation processes	Provide incentives for monitoring & co-management of resources	Enhance ecosystem conservation	All-inclusive mobilization/ facilitation of resources from government and stakeholders for compensation purposes		• International Oil Pollution Compensation Fund • Merchant Shipping Act 2009	Develop regulations to bring into force the (OSCF) ** Short-term
Enhancement of safety & security	Inadequate safety & security frameworks & measures to counter transboundary crimes, illegal trafficking	Establish security posts & involve community in policing activities	Enhanced safety and security & reduced reported incidences of insecurity & threats	Maritime Risk Register. Develop Maritime Risk Strategy. workshops and seminars	• Safety of Life at Sea (SOLAS 1974) • International ship and Port Facility Security (ISPS Code) • Djibouti Code of Conduct (JEDDAH Amendments) • International Convention on Civil Liability for oil Pollution Damage 1992	National Security Act Border Management Control (BMS) Coast Guard Act 2018	Review and develop regulations on safety and security related matters Fast track the approval of the Maritime Risk Register ** Short-term
Community involvement in decision making processes	Weak engagement mechanisms with community in implementation processes	To enhance participation of the community in project cycle	Improved level of community involvement				

Priority actions / Policy Area	Baseline / Context	Policy objective	Expected Outcomes	Strategies and Actions	Existing Policy/ documents	Existing Legislative (regulations)frameworks	Proposed Actions & Timelines
Capacity building and knowledge transfer	Inadequate capacity building and knowledge. High levels of ignorance	To improve knowledge and knowhow	No. of persons involved in capacity building	Capacity building workshops and seminars held	Vision 2030		
Lobby for eco-tourism at a government level	Inadequate ecotourism promotion	To promote ecotourism	Enhanced eco-tourism & employment opportunities		Vision 2030		
Multi-sectoral approach/one government approach	Inadequate sectoral approach in handling issues	To enhance collaboration & cooperation among the Ministries, Departments and Agencies (MDAs)	Enhanced levels of sectoral approaches in tackling issues	Increased levels of collaboration & cooperation			

Table 5: *Policy Interventions, Strategies and Action Steps for Sustainable Oil and Gas Sector for Conservation of Aquatic Biodiversity and Environment*

Priority actions / Policy Area	Baseline / Context	Policy objective	Expected Outcomes	Strategies and Actions	Existing Policy/ documents	Existing Legislative (regulations)frameworks	Proposed revisions / Actions if any
Marine Spatial Plan	-Existing conflicts in resource use -Lack of planned resource use	Develop and establish a robust MSP	• Reduced conflicts • Better managed oil and gas resources	Establish an MSP inter-agency & Multi-sector MSP workgroup	• State of the coast Report • State of the environment • Draft EAC BES • ABES • Tourism masterplan • Kenya Natural resources map	Petroleum Act	
Biodiversity Sustainability / protection	• Habitat degradation • Biodiversity loss • Species migration, extinction • Loss of breeding & spawning • recruitment failure • Disruption of food chains and webs	Map and identify living aquatic resources and their habitats for long-term sustainability	Ecosystem/Habitat integrity	• Collect location-specific baseline data (species, habitats,) • Map out species migratory routes • Conduct marine mammal census • Monitor the distribution of species and habitats • Fast-tracking, domestication, implementation international conventions related to biodiversity conservation	• Marine protected areas management plans • Integrated Coastal Zone Management (ICZM) • Kenya BE strategy • EABES	• Convention on Wetlands (Ramsar convention (1976) • Sessional Paper No. 01 of 2020 on Wildlife Policy • IUCN • CITES • CBD • Convention on migratory species • Nagoya Protocol ABS • Convention for protection, management, & development of the coastal environment of East African region • Constitution 2010	• Establish offshore MPAs ** Mid to Long-term

Priority actions / Policy Area	Baseline / Context	Policy objective	Expected Outcomes	Strategies and Actions	Existing Policy/ documents	Existing Legislative (regulations)frameworks	Proposed revisions / Actions if any
Oil Spill prevention & mitigation	• Oil spills (frequency, magnitude) • Proximity to critical habitats • Loss of ecosystems services and biodiversity	• Establish an environment friendly oil & gas explo-ration & mining (e.g. ecofriendly infrastruc-tural design • Promote transition from fossil fuel to green energy sources by ships	• Minimized oil spills occurrence • -Minimized impact on marine habitats	• Enforce EMCA (e.g., polluter pay principle and huge penalties) • Managing, maintaining, exercising, and periodically reviewing and updating the National Oil Spill Response Contingency Plan and maximize Kenya's marine pollution response capability • Enhance ship inspections to guarantee seaworthiness • Conduct public awareness campaigns on ship source and land-based oil/chemical pollution. • Ensure proper environmental impact assessment on offshore projects and review of environmental impact assessment reports.	• IMO guidelines • EMCA • Regional & Global best practices	• Merchant Shipping act • IMO conventions e.g., MARPOL • UNCLOS • Petroleum Act • Energy Act 2019 • Constitution 2010	• Finalize regulation on exploration, production, development & abandonment incl. Health, Safety & Environment (HSE) under Petroleum Act • MCS systems ** Short-term
Developing compensation schemes for loss of livelihoods and ecosystem services	• Competition for maritime space • Social unrest • Unequitable resource sharing and benefits	• Establish compen-sation schemes • Economic Valuation of ecosystems	• Equitable resource sharing and benefits	• Sensitization and awareness creation • Identify potential social impacts • Set up compensation fund/authority • Advance implementation on Access and Benefit Sharing	• Affirmative action on Gender, PWD	• Nagoya Protocol ABS	

Priority actions / Policy Area	Baseline / Context	Policy objective	Expected Outcomes	Strategies and Actions	Existing Policy/ documents	Existing Legislative (regulations)frameworks	Proposed revisions / Actions if any
Local capacity building in marine technical and professional skills	• Outsourcing of technical and professional jobs • Low employment of local people	• Technical training skills in oil & gas to the local people	• Increased local capacity • Reduction in unemployment	• Develop curricula local institutions, TVETs and Universities to producing quality skill	• ABES • Vision 2030 • AU Africa Integrated Maritime Strategy (AIMS 2050)	• - TVETs Policy • -	
Data sharing and management	• Lack of data sharing policies • Inadequate knowledge of resource distribution and their conditions • Inadequate data for planning, management, enforcement	• Develop comprehen-sive data policy • Enrich/Up-date avail-able data (distribution, status, oc-currence)	• Better planning, management, enforcement	• Develop inter-agency data sharing protocols • Establish an open source data access platform/repository	• Vision 2030 • ABES • AU Africa Integrated Maritime Strategy (AIMS 2050)	• ICT policy • Constitution 2010	Developing Data policy (collection, sharing, intellectual property) ** Short to Mid-term
Safeguard Intellectual Property (data, resources, knowledge/ know-how)	• Inefficiencies, wasted resources and lost opportunities • Loss of cultural and genetic resources	• Develop a national intellectual policy • Promote, protect, and enforce laws on intellectual property	• Curb illegal bio-prospecting • Curb trafficking of aquatic resources	• Multi-Agency enforcement (e.g., exit ports) • Awareness creation on why we should conserve our national heritage. • Strengthen inter-agency border management committee • Enhance community policing on marine resources	The intellectual Property Bill-2020 (to confirm)	• Industrial Property Act 2001 • Trademark Act • Copyright Act • Anticounterfeit Act • CITES • CBD • Nagoya protocol on ABS	
Promote use of by-products and enhance waste recycling and re-use	• Pollution • Accidents/fires • Acid rain • Health hazards	• Utilization of by-products of oil & gas exploration and drilling	• Clean and healthy environment • Promotion of circular economy • Sustainable biodiversity	• Identify the by-products and their alternative uses • Environmental monitoring • Enforcement for compliance	• Vision 2030 • ABES • AU Africa Integrated Maritime Strategy (AIMS 2050) • Oceans & Fisheries Policy (2018)	• EMCA • WCMA 2013 • FMDA • Merchant Shipping Act • MARPOL conventions • Science, Technology and Innovation Act No. 28 of 2013	

Table 6. Policy Interventions, Strategies and Action Steps for Sustainable Mineral Mining Sector for Conservation of Aquatic Biodiversity and Environment

Priority actions / Policy Area	Baseline / Context	Policy objective	Expected Outcomes	Strategies and Actions	Existing Policy/ documents	Existing Legislative (regulations)frameworks	Proposed revisions / Actions if any
Sustainable mining	• Illegal mining (sand, building stones) • Non-compliance – lack of capacity to enforce standards and regulations. • Inadequate Education & awareness/sensitization	To achieve full compliance with regulations & guidelines for sustainable extraction of minerals	Sustainable mining practices	• Enforcement of the Mining Act • Improve community sensitization. • Formalization of artisanal mining activities. • Regular control audits/ Inspections & penalties. • Monitoring & Evaluation.	• Mining & minerals Policy 2016. • Vision 2030. • National Land Policy 2009.	• The Mining Act No. 12 of 2016. • The Constitution of Kenya 2010. • EMCA 1999 • Physical and Land Use Planning Act 2019.	Inclusion of sand as a mineral in schedule 1 of the Mining Act 2016. ** Short-term
	Over-exploitation in disregard of mining guidelines and regulations	To ensure sustainable utilization of minerals resources	Socio-economic development & environmental sustainability	• Increase Regular audits/Inspections and penalties. • Monitoring and Evaluations.	• Mining & minerals Policy 2016. • Vision 2030.	• The Mining Act No. 12 of 2016. • The Constitution of Kenya 2010??	• Make adequate financial provisions & allocation to facilitate effective audits and inspections.
Compensation	• Conflicts between Land owner's compensation and resettlement • Revenue/benefit sharing mechanism between National government/Counties/ Community not harmonized. • Poor remuneration	To ensure fair & equitable compensation and benefit sharing within the mineral value chain beyond the CSR boundary.	Improved livelihoods and reduced conflicts	• Community Engagement • Establishment and implementation of benefit sharing framework e.g. Community Development Agreements (CDA) • Integrate land owners in the BE dialogue for mineral/land compensations.	• Mining & mineral Policy 2016. • Vision 2030. • National Land Policy 2009.	• Mining Act 2016 • Lands Act No.6 of 2012. • Treasury – Finance Act. • County Gov. Act 2012.	• Align CDA structure to the Africa BE strategy. • Implement the Revenue/ benefit sharing formula e.g. 70/20/10. ** Short to Mid-term

Priority actions / Policy Area	Baseline / Context	Policy objective	Expected Outcomes	Strategies and Actions	Existing Policy/ documents	Existing Legislative (regulations)frameworks	Proposed revisions / Actions if any
Environmental Degradation	• Increasing biodiversity loss and alteration of physical landscape. • Uncontrolled erosion, Storm-water. Sedimentation. • Abandoned structures in mined sites. • Pollution- Dust emissions, Oil spills and other chemicals. • Lack of mine waste management. • Lack of mine design. • Lack of mine closure and rehabilitation.	To achieve an acceptable balance between mining and environmental conservation for sustainable ecosystem services.	Sustainable Ecosystems Services and improved livelihoods.	• Enforcement of ASIA/EIA • Environmental rehabilitation plans. • Biodiversity conservation and management Plans. • Formalization and training of artisanal miners • Mine waste management Plan.	• Mining and minerals Policy 2016. • Vision 2030. • State of the Coast Report. • ICZM Policy.	• The Mining Act No. 12 of 2016. • The Constitution of Kenya 2010?? • EMCA 1999.	• Embrace a multi-agency approach to conservation of marine ecosystems during offshore mineral exploration and mining. ** Short-term
Socio-Economic empowerment	• Cycle of poverty in communities around mineral/mining sites • Child labour. • Gender issues – inclusion & parity. • Land encroachment by communities. • Land ownership/tenure.	• To ensure that accrued mining benefits are maximized for greater socio-economic development. • To enhance mechanisms for participation, ownership and decision-making by women, youth and disadvantaged groups for equity and inclusion. • To protect the vulnerable population and children within the mining communities for improved livelihoods.	• Socio-economic growth	• Community integration in BE process development & minerals • Sensitization/enforcement of Children's Act/ Penalties • Enforce Gender Constitutional requirement • Sensitization/Community Engagement.	• Mining and minerals Policy 2016. • Vision 2030. • National Land Policy 2009. • Kenya National Social Protection Policy 2011	• The Mining Act No. 12 of 2016. • The Constitution of Kenya 2010?? • EMCA 1999 • County Government Act 2012 • The Childrens' Act.	Adequate provisions and allocation of resources to facilitate the implementation of policies and regulations for Socio-economic empowerment. ** Short to Mid-term

Priority actions / Policy Area	Baseline / Context	Policy objective	Expected Outcomes	Strategies and Actions	Existing Policy/ documents	Existing Legislative (regulations)frameworks	Proposed revisions / Actions if any
Formalization of Artisanal Miners	• Social Issues; Child labour, Abuse Gender Issues; Drugs and substance abuse Prostitution • Financial; Lack of access to financing; Lack of access to markets (avoid middlemen taking advantage); Lack of technology/ expertise; Financial Illiteracy • Environmental; Pollution; Land; Degradation/ abandoned mines	• To mainstream formalization of artisanal mining operations in order to support livelihoods and entrepreneurship in communities with the BE. • To mitigate the negative effects of artisanal and small-scale mining for environmental integrity. • To develop adequate financial and human capacity in artisanal mining for environmental conservation and rehabilitation.	• Sustainable artisanal mining for improved livelihoods	• Formation and gazettement of Artisanal Mining Committees. • Sensitization/enforcement of Children's Act/ Penalties • Enforce Gender Constitutional requirements. • Sensitization/Community Engagement	• Mining and minerals Policy 2016. • Vision 2030. • Kenya National Social Protection Policy 2022	• The Mining Act No. 12 of 2016. • The Constitution of Kenya 2010?? • EMCA 1999. • County Gov. Act 2012.	• Accelerate formation and gazettement of Artisanal Mining Committees in order to improve management of artisanal Miners. ** Short to Mid-term
Mining from sea water	• Sand harvesting • Harvesting of Salt and other minerals - in adequate information on the effect on marine ecosystem • Intrusion of sea water into the ground water	To minimize disruption and degradation of marine ecosystem from sea water mining for sustainable blue economy.	Ecological integrity of the marine ecosystem	Research to provide information on the impact of various sea water mining activities for decision making.	• Mining and minerals Policy 2016. • Vision 2030. • National Land Policy 2009. • Kenya National Social Protection Policy 2011	• The Mining Act No. 12 of 2016. • The Constitution of Kenya 2010?? • EMCA 1999. • Science, Technology and Innovation Act of Kenya 2013.	• Funding provisions to support research for science-based data for decision making in BE. • Mainstream Research and Academic institutions in sea water mining. ** Short-term

Priority actions / Policy Area	Baseline / Context	Policy objective	Expected Outcomes	Strategies and Actions	Existing Policy/ documents	Existing Legislative (regulations)frameworks	Proposed revisions / Actions if any
Offshore Exploration and Mining	Environmental and biodiversity disruption	To Strengthen offshore exploration and mining regulations and Policies for minimized negative impact on coastal and marine biodiversity for sustainable BE.	Environmental integrity for improved resilience of the marine ecosystem.	• Strengthening and sensitization of the regulation and Policies • Adherence to and continuous improvement exploration and mining standards.	• Mining and minerals Policy 2016. • Vision 2030. • National Land Policy 2009. • Kenya National Social Protection Policy 2011	• The Mining Act No. 12 of 2016. • The Constitution of Kenya 2010?? • EMCA 1999.	• Develop marine exploration and mining spatial Plan. • Develop a Marine Exploration and mining Strategy. ** Mid to Long-term
Information/ Data Availability	• Underutilization of indigenous knowledge – e.g. Appreciation knowledge from Sea farers • Inadequate geological data – quantities, distribution, quality of minerals, reserves, longevity-volumes	To enhance collection, collation and information sharing for enhanced and effective decision making.	Harmonized and readily accessible information for decision making for development of the BE	• Documentation of useful data and information relevant to local communities • Geological mapping and Mineral exploration	Mining and minerals Policy 2016. Vision 2030.	• The Mining Act No. 12 of 2016. • The Constitution of Kenya 2010?? • County Governments. • National Museums and Heritage Act.	Develop a data sharing structure for BE ** Short- to Mid-term
Natural disasters and Climate Change	Mining sites vulnerable to natural disasters (Land Slides, sedimentations, coastal erosions).	To develop disaster resilience management and response guidelines	Preparedness to reduce severity of impact of disasters	• Mapping out vulnerable areas to geological/natural disasters. • Develop disaster resilience plans.	• National Disaster Risk Management Policy 2017.	• Disaster Management Act • The Mining Act No. 12 of 2016. • EMCA 1999	• Provide resources for Mapping of disaster Vulnerability in coastal and marine Zones. • Implement the recommendations. ** Short- to Mid-term

Priority actions / Policy Area	Baseline / Context	Policy objective	Expected Outcomes	Strategies and Actions	Existing Policy/ documents	Existing Legislative (regulations)frameworks	Proposed revisions / Actions if any
Cultural	Conflicts between Community and under water Heritage sites and Mining activities	• To achieve an acceptable balance and harmony between mining, heritage and preservation of culture.	• Preserved cultural heritage and biodiversity hotspot/ significant ecosystems.	• Community integration. • Gazettement of heritage sites	• National Policy on Cultural Heritage 2009? • UNESCO. •	• National Museums and Heritage Act. • County Gov. Act 2012.	• Map out and document heritage sites ** Short-term
Health and Safety	Poor working conditions – PPEs. Lack of capacity	• To achieve Zero harm or lose of property	• Healthy and safe work systems within the mineral value chain that ensures quality of life for both employees and community at large.	• Develop capacity for H&S in mining. • Continuous audits and inspections with aim of improving conditions.	• Mining and minerals Policy 2016. • Vision 2030. • Health and Safety Policy. • Kenya Health Policy 2014-2030. • National Environment Policy	• OSHA • WIBA-Work Injury Benefit Act. • Mining Act No.12 of 2016.	• Provide funds for capacity building in H&S. • Provide incentives for Best Practice in H&S. ** Short- to Mid-term

6. CONCLUSIONS AND RECOMMENDATIONS

In conclusion, the Coastal and Marine sector faces several challenges including inadequate information dissemination mechanisms; Inadequate policies on ocean governance; Low compliance augmented by absence of compliance frameworks; mechanisms, weak enforcement, low regard of indigenous knowledge; Low compliance and adherence to conservation regulations and best practises augmented by inadequate incentives, lengthy compensation processes; Inadequate safety & security frameworks & measures to counter transboundary crimes, illegal trafficking; Inadequate capacity building and knowledge, ecotourism promotion and sectoral approach in handling issues.

The proposed strategies and actions include; Enhanced information packaging targeting all stakeholders, Capacity building workshops, Development of sound ocean governance policies, enhanced Interagency approaches to enforcement while incorporating community knowledge in decision making organs; Mangrove rehabilitation campaigns; Stronger enforcement existing laws and regulations on reefs and coral ecosystems especially with regards to destructive fishing and related human activities; Enact stricter antifouling paint standards; Facilitate participation in regional and international processes and Enforce existing laws and regulations; All-inclusive mobilization/facilitation of resources from government and stakeholders for compensation purposes; Develop Maritime Risk Register and Strategy.

In the Oil and Gas sector, the key issues were identified as lack of spatial planning leading to conflicts in resource-use, Habitat degradation, Biodiversity loss, Loss of ecosystems services and biodiversity, Increasing competition for maritime space; Unequitable resource sharing and benefits, Loss of cultural and genetic resources; and Pollution. The proposed policy interventions include; Establishment of an MSP inter-agency & Multi-sectoral MSP Working Group, Establishment of location-specific baseline Database for habitats, ecosystems and species; Mapping of species migratory routes, conduct marine mammal census; Fast-tracking, domestication, implementation international conventions related to biodiversity conservation, stricter enforce of existing regulations- e.g. EMCA's polluter pay principle; Manage, maintain, exercise, and periodically review and update the National Oil Spill Response Contingency Plan; Maximize Kenya's marine pollution response capability; Conduct public awareness campaigns on ship source and land-based oil/chemical pollution; Ensure proper environmental impact assessment (EIA) on offshore projects with Enhanced review of environmental impact assessment reports; Enact a compensation fund/authority and advance implementation on Access and Benefit Sharing; Develop curricula local institutions, TVETs and Universities to producing quality skill; Develop inter-agency data sharing protocols and Establish an open source data access platform/repository

In the Mineral Mining sector, the biggest challenges exist in illegal mining especially with regards to de-classified materials such as sand and building stones; Non-compliance due to low capacity to enforce standards and regulations; Over-exploitation in disregard of mining guidelines and regulations; increasing conflicts between land owner's compensation and resettlement; Lack or harmonization in revenue/benefit sharing mechanism between National government/ Counties/Community not harmonized augmented by poor remuneration; all leading to increasing biodiversity loss and alteration of physical landscape, uncontrolled erosion, Storm-water. Sedimentation; Pollution from dust emissions, oil spills and other chemicals; Poor mine-waste management practices;

Use of child labour, gender issues relating to lack of inclusion and parity, Poor access to financing; Lack of direct access to markets; Lack of technology/ expertise especially in the artisanal mining sector; Environmental pollution; Land degradation, Intrusion of sea water into the ground water; Inadequate geological data on quantities, distribution, quality of minerals, reserves, longevity-volumes and Conflicts between community and non-documented heritage sites.

The proposed strategies include: Enhanced enforcement of the Mining Act; Improve community sensitization, Formalization of artisanal mining activities; Establishment and implementation of benefit sharing framework e.g. CDA; Integrate land owners in the BE dialogue for mineral/land compensations; Enforcement of ESIA/EIA; Enhance environmental rehabilitation plans, Biodiversity conservation and management Plans, Mine waste management Plan, Community integration in BE process development & minerals; Formation and gazettement of Artisanal Mining Committees; Sensitization/enforcement of Children's Act/ Penalties; Enhanced research to provide information on the impact of various mining activities (including sea water mining) for sound policy formulations; Adherence to, and continuous improvement exploration and mining standards; Geological mapping and Mineral exploration; Mapping out of Sensitive habitats and development of disaster resilience plans; Gazettement of heritage sites; Develop capacity for health and safety mining, and Continuous audits and inspections with aim of improving conditions.

In all the three sub-sectors; Coastal and Marine Tourism, Oil and Gas Exploration and Production, and Mineral Mining and Extractives, there is a need to Conduct revision and updating of existing policies e.g. Kenya Tourism Policy 2006, the National Museums and Heritage Act (Cap. 216) of 2012, Enhance Public Participation in the Fisheries Management and Development Act of 2016 (recently declared null); Develop Integrated Maritime and Blue Economy Policies; Implement Marine Environmental Protection Convention (Annex VI); Enact the Draft Kenya National Coral Reef Restoration Protocol 2018; Develop regulations to bring into force the (OSCF); Fast track the approval of the Maritime Risk Register; Establish offshore MPAs and Finalize regulation on exploration, production, development & abandonment (incl. Health, Safety & Environment, HSE) under Petroleum Act; Enhance MCS through development of Data policy (collection, sharing, intellectual property); Inclusion of sand as a mineral in schedule 1 of the Mining Act 2016; Make adequate financial provisions & allocation to facilitate effective audits and inspections; Implement the Revenue/ benefit sharing formula (e.g. 70/20/10) between National, County and Communities; Embrace a multi-agency approach to conservation of marine ecosystems during offshore mineral exploration and mining; Accelerate formation and gazettement of Artisanal Mining Committees in order to improve management of artisanal Miners; Funding provisions to support research for science based data for decision making in BE and mainstream Research and Academic institutions in sea water mining; Develop marine exploration and mining spatial Plan and Strategy; Develop a data sharing structure for BE while providing resources for Mapping of disaster Vulnerability in coastal and marine Zones, with document heritage sites, and Establish proper funding for capacity building in all sectors while providing incentives for Best Practices and Standards.

Lastly, for successful implementation of the Masterplan, the following is recommended:

a. There is need to adopt and incorporate modern technology into marine and coastal tourism development, oil and gas exploration; mining activities;
b. All actors in the coastal marine tourism; oil and gas exploration; and minerals mining

should adopt biodiversity conservation friendly technologies and approaches in their operations;

c. There is a need Identify and document all actors for engagement while integrating all Civil Societies (CSOs) and Community Based Organization (CBOs) to tap the much-needed indigenous knowledge;
d. Develop sound Marine Spatial Plans (Coastal marine tourism, oil and has, Mineral mining, shipping and maritime logistics, Conservation (MPAs), Security etc.);
e. Enhance Monitoring, Control and Surveillance (MCS), with adequate funding linked/drawn from the blue economy sectors;
f. Enhanced Environmental awareness programmes, and enactment of the Polluter-Pays-Principles; Coastal and Marine clean-up programmes for debris and plastics;
g. Modernization of Disaster preparedness systems including Oil spills, Port pollution, fires, etc. with stronger regulatory/punitive measures for infringements;
h. Regularize artisanal mining esp. coral mining, cut stone, shell collectors etc. to curb the destruction caused to aquatic ecosystems and enhance the OSH of the miners
i. Strengthen synergies between Community, Primary, High School, TVET institutional, and Tertiary Education and training to incorporate enhanced Conservation studies into the system;
j. Enhance inter and intra institutional (National, County and Local governments; Ministries, Departments, Community Based Organizations and Civil Society collaborations, among other Actors to strengthen Multi-agency conservation approaches;
k. Gender mainstreaming in All sectors of the Blue Economy is crucial with stronger emphasis on the key sectors of this Master plan including Coastal and Marine Tourism, Livelihoods, Livelihood Restoration Programmes among others;
l. Enhance interproject linkages to ensure synergy within the Blue Economy Sectors e.g. programmes such as the Aquatic Biodiversity and Environmental Conservation of the AU, the Go-Blue Initiative of the EU, and the Country's Blue Economy initiatives should all find synergy to ensure prudent use of resources with greater results etc.;

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